



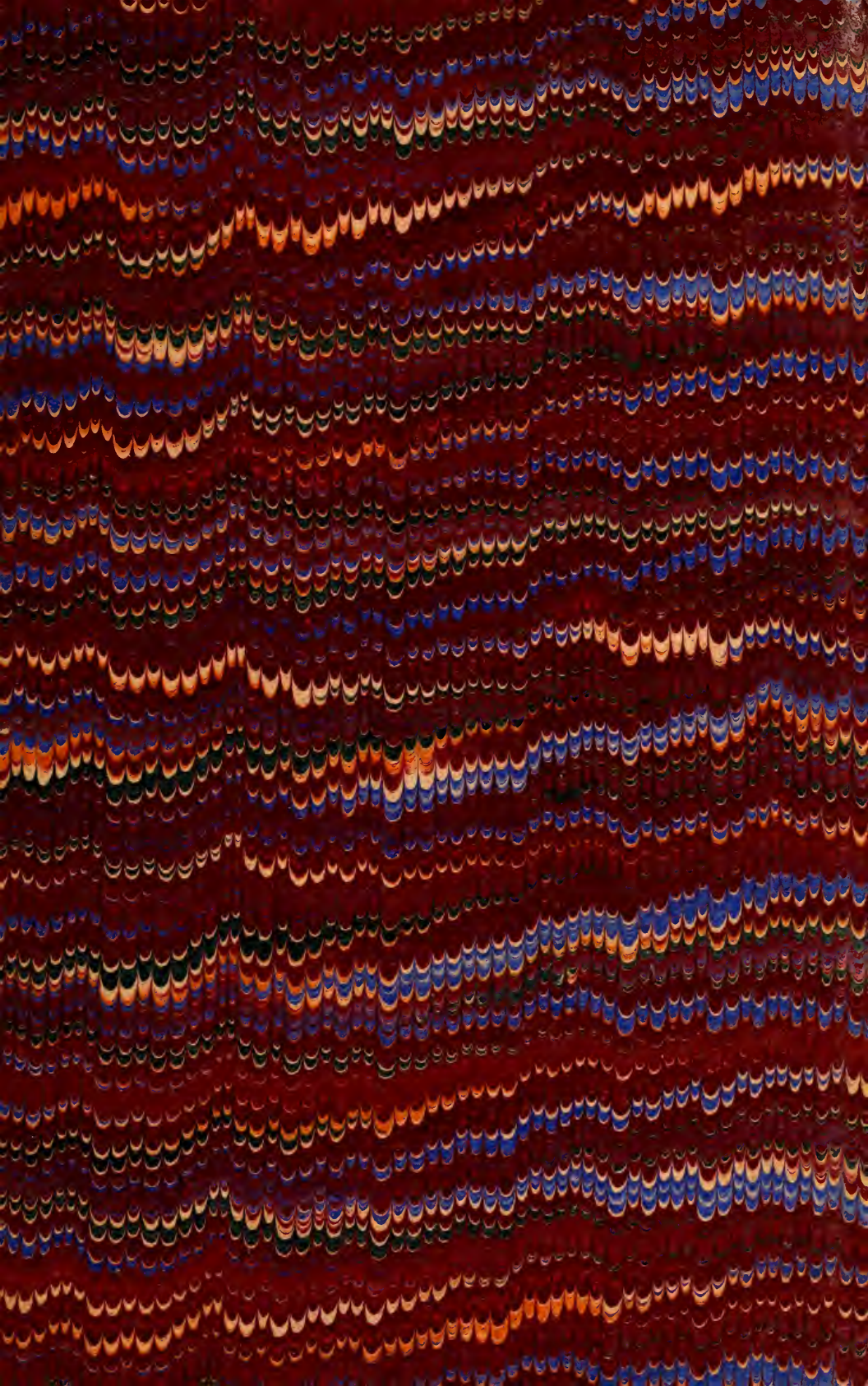
University of Scranton  
The Library



Gift of  
Roger J. Howell

For Reference

Not to be taken from this room



Reference

Blouse



REPORT

OF THE

DEPARTMENT OF MINES

OF PENNSYLVANIA

---

ANTHRACITE REGION

---

1903

---

WM. STANLEY RAY  
STATE PRINTER OF PENNSYLVANIA

1904

2  
TN  
805  
P4  
A3  
1943  
v. 1





## LETTER OF TRANSMITTAL

Department of Mines,

Harrisburg, Pa., April 25, 1904.

To His Excellency, Samuel W. Pennypacker, Governor of Pennsylvania:

Sir: In compliance with the acts of Assembly of June 2, 1891, and April 14, 1903, I beg to submit herewith for transmission to the General Assembly, Volume I of the report of the Department of Mines for the year ending December 31, 1903. This report covers in detail the operations of the fifteen Anthracite Districts as returned by the respective inspectors, with tabulated deductions made in this Department. Some observations and suggestions relative to accidents, child labor, care of injured employes, election of inspectors, and the general conditions and prospects of the coal industry are also submitted and respectfully called to your attention.

This is the first report made under the act of 1903, by which the Department of Mines was created to supersede the Bureau of Mines, created by the act of July 15, 1897. For the sake of convenience the operations of the two great coal regions of the Commonwealth are published under separate covers, designated as Volume 1, Anthracite, and Volume 2, Bituminous. As there are now fifteen inspection districts in each region, it was deemed advisable to adopt this method of presenting the data.

Respectfully submitted,

JAMES E. RODERICK,

Chief of Department of Mines.



# REPORT

OF THE

# DEPARTMENT OF MINES

---

## INTRODUCTION

---

The year 1903 was one of remarkable prosperity in the coal industry of Pennsylvania. New records of production were established in both the anthracite and bituminous regions, and for employer and employe alike the period was one of unprecedented success. The production in the anthracite region, with which this part of the report has to deal, amounted to 67,171,951 gross tons. The long and disastrous strike of 1902 had depleted the supply of coal to such an extent that it required full and continuous work at the mines for the first ten months of 1903, to restore the normal conditions of the trade in this country and Canada. During November and December, however, the production was greatly curtailed, owing to a cessation in the demand, and most of the operations closed down completely on the 24th of the latter month. Had the same ratio continued throughout the year, the production would have been about 73,000,000 tons. As stated in former reports, it is evident that the high water mark in the daily production of anthracite coal has been reached, although the annual production may be increased. The number of working days, however, can hardly exceed 250 in a year, as the repairs to the mines, inside and outside, require many weeks, and the loss of several weeks more is caused by various accidents, explosions, flooding and caving-in of mines, and breaking of machinery. Taking 250 as the maximum number of working days, and

320,000 tons as the maximum daily production, we find the possible production for the year to be 80,000,000 tons.

It is also probable that the cost of mining anthracite coal will increase each year, for the reason that the most accessible and most easily worked seams are rapidly being exhausted, necessitating the working of deeper seams and in many cases much thinner ones. The cost of producing coal from a two foot seam is considerably greater than from a six or eight or ten foot seam.

Of the 67,171,951 tons produced during the year, 60,231,104 tons were shipped to market, 5,710,341 tons used for fuel at the collieries, and 1,230,506 tons sold to local trade. The increase in production over 1902 was 30,260,397 tons, and over 1901, the banner year, 7,266,000 tons.

### Accidents

In producing the vast tonnage of 1903, 518 lives were lost in and about the mines, 426 inside and 92 outside. Besides this great loss of life, 1,127 employes were injured inside the mines and 198 outside. The number of widows caused by these fatalities was 269, and the number of orphans 592. For every life lost 129,676 gross tons of coal were produced; for every injury 50,696 tons, and for every fatal accident inside the mines 157,681 tons. In order that fair comparisons may be made with the accidents in the bituminous region, it is necessary to confine the computations to the casualties that occur inside the mines, as the great number of surface employes in the anthracite region do not produce coal; they simply prepare it for market. During the year there were 92 lives lost outside the mines in the anthracite region, by machinery, cars, etc. This is 17.76 per centum of the total number.

The total number of employes in and about the mines during the year was 151,827, and the number of fatal accidents per 1,000 was 3.41. The number employed inside the mines was 102,055 and the number of fatal accidents per 1,000 was 4.17. The number employed outside the mines was 49,772, among whom the fatalities per 1,000 were 1.85.

It is pleasant to call attention to a slight decrease in the fatal accidents inside the mines. In 1899 the percentage per 1,000 was 4.22; in 1900, 4.26; in 1901, 4.47, while for the year covered by this report it is 4.17.

It will be seen by reference to Table B that 210 fatal accidents, or 49.30 per cent. of the total number inside the mines, were caused by "falls;" 70, or 16.43 per cent. by cars; 26, or 6.10 per cent. by explosions of gas; 55, or 12.91 per cent. by powder and blasts; 31 or 7.28 per cent. by falling into shafts and slopes; 12, or 2.82 per cent.

by mules and by suffocation; 22, or 5.16 per cent. by miscellaneous causes. "Falls" and cars caused nearly 66 per cent. of the fatal accidents inside, and it is a lamentable fact that perhaps half of these could have been avoided by ordinary precaution on the part of the victims. Of the 92 fatal accidents on the surface, 64, or nearly 70 per cent. were caused by cars and machinery. To carelessness on the part of the victims may be attributed at least one-half of these accidents.

The occupations of the 426 persons killed inside were as follows: miners and miners' laborers 312, or 73.24 per cent.; drivers and door-boys 58, or 13.61 per cent.; all other occupations 56, or 13.15 per cent. Of the 102,055 inside employes, 64,356, or about 63 per cent. were miners and miners' laborers, among which class over 73 per cent. of the fatal accidents occurred. For every 1,000 miners employed 5.49 lost their lives, and for every 1,000 miners' laborers employed 4 lost their lives. These figures indicate clearly that the occupation of the miner and his laborer is of an extra hazardous nature.

A comparison with the figures contained in the Annual Railway Report of the Secretary of Internal Affairs, shows that the percentage of accidents among anthracite mine employes is considerably greater than among the employes of the steam railways. For the year ending June 30, 1901, the railways of the State reported 335,865 employes and 987 fatal accidents; for the year ending June 30, 1902, 377,798 employes and 1,137 fatal accidents; for the year ending June 30, 1903, 419,581 employes and 1,323 fatal accidents. Taking the total number of employes for the three years as 1,133,244 and the total number of fatal accidents as 3,447, we find that for every 1,000 employes the percentage killed was 3.04, while the percentage among the mine employes was 4.16.

In my report for 1902 the following remarks appear, which were appropriate then and are equally so at the present time.

"During the past twenty years more than fifty per cent. of the accidents were caused by 'falls,' but there is no reason why the number from this cause should not be reduced by at least 50 per cent. If as much care were taken to guard against falls of coal, roof and sides, as is taken in regard to ventilation for the purpose of keeping the mines clear of what is generally called the deadly 'gas,' a stringent rule would be adopted against the more deadly 'falls.'"

In the last twenty years for every person killed by an explosion of gas, six persons have been killed by "falls," making the ratio six to one.

During the year 1902, 1,351 persons acted as fire bosses, whose duty it was to see every day that the mines were kept clear from the deadly "gas," when there was no person engaged to look after the men doing the actual mining of coal. The law provides that

“the mine foreman or his assistant shall visit and examine every working place in the mine at least one every alternate day, while the men of such place are or should be at work, and shall direct that each and every working place is properly secured by props or timber, and that safety in all respects is assured by directing that all loose coal or rock shall be pulled down or secured, and that no person shall be permitted to work in an unsafe place unless it be for the purpose of making it secure.”

The law imposes many duties on the foreman, and the companies expect, and justly too, that as they pay him, his first duty is to safeguard their interests, especially in seeing that the coal is taken out. The safety of the men at the “working faces” is almost the last thing that is considered.

I do not desire to criticise the overworked official mine foreman because he does not comply with the requirements of the law. I know it is a physical impossibility for him to do so, and at the same time do his duty to his employer. It is my opinion, however, that the coal companies should engage a sufficient number of assistant foremen for the very responsible duty of examining the working places in the mines. These foremen should direct that every working place be examined every day and properly secured by props, timber or otherwise. They should also direct that all loose coal or rock be pulled down or secured, so that safety be assured so far as possible. They should also see that no person be permitted to work in an unsafe place except for the purpose of making it secure.

At the last session of the Legislature, Hon. D. J. Thomas, Senator from Schuylkill county, formerly a practical miner, foreman and superintendent, knowing of the lack of care and attention in the matter of safeguarding the lives and limbs of the persons actually engaged in the mining of coal, offered the following amendment to the law, which could have been made applicable to both the anthracite and bituminous mines:

“In mines generating explosive gases, the mine foreman or his assistants shall make a careful examination every morning of all working places, and traveling roads, and all other places which might endanger the life and safety of the workmen; before the workmen shall enter the mine, and such examination shall be made with a safety lamp, and that within three hours at most before time for commencing work, and a workman shall not enter the mine or his working place until said mine, or part thereof, and working place are reported safe. Every report shall be recorded without delay in a book, which shall be kept in an office at the colliery for the purpose, and shall be signed forthwith by the person or persons making the examination. Said record book shall be supplied by the Department of Mines.

“And in all mines the mine foreman or his assistants shall make a careful examination each day of all the working places and

traveling roads, to see that the roof and sides are properly supported by timber or other material, and to see that the rules in regard to systematic propping are faithfully carried out. Any miner or other workman found violating these rules, or neglecting to comply with their provisions, shall be suspended. Reports of all examinations shall be recorded in a book, which shall be kept in an office at the colliery for that purpose, and shall be signed forthwith by the person or persons making the examination. It shall be the duty of the mine inspector to see that all such examinations are properly recorded and signed by the person or persons making such examinations. These record books shall be provided by the Department of Mines."

This amendment, if it had been adopted, would have gone a great way towards lessening the number of accidents from "falls," and I am of the opinion that if properly lived up to, at least half of the accidents from this cause could be avoided. So far as known, the coal companies made no opposition to this amendment, but considerable opposition was met with from some of the leaders of the mine workers, because of the provision that "any miner or other workman found violating these rules, or neglecting to comply with their provisions, shall be suspended."

In my opinion it is a more merciful act to "suspend a miner" for violation of the rules, than to allow him to lose his life through neglecting to comply with the law which has been enacted for his safety.

I hope that Senator Thomas, or some other equally expert miner, will take up this matter again, and that the leaders of the miners especially will not oppose its passage into a law.

In carrying out the intent of this amendment the immediate expense to the coal companies might be from a fourth to a third of a cent per ton for the coal mined, but this amount would be materially reduced by the less number of accidents. Every time an accident occurs there is a cessation of work and a certain demoralization of the employes in the immediate vicinity, and a consequent loss to the company. In the case of fatal accidents the loss sustained in this way is considerable, as frequently a whole section of a mine is demoralized at the time of the accident and many of the employes stop work to convey the victim to his home. When he is buried, the company suffers a still further loss by the closing down of the colliery for at least half a day to allow the employes to attend the funeral. It is impossible to state the actual loss to a company from the many fatal and non-fatal accidents that occur, but no doubt at least half of those resulting from "falls" could be avoided by the adoption of the plan suggested, and the company's ledger at the end of the year would show very little, if any, additional expense. Even if there should be an expense of a fourth of a cent per ton, I do not

believe that any company would object to the paying of that amount if by so doing human life could be saved and human suffering avoided.

Number of employes inside and outside the Anthracite mines; number of fatal accidents; number of fatal accidents per 1,000 employes; number of tons of coal mined per fatal accident inside, 1881 to 1903 inclusive

Years	Number of employes inside of mines	Number of fatal accidents inside	Number of lives lost inside per 1,000 employed	Production of coal in tons of 2,000 pounds for each life lost inside	Number of employes outside of mines	Number of fatal accidents outside	Number of lives lost outside per 1,000 employed	Number of lives lost inside and outside per 1,000 employed
1881, .....	45,619	234	5.13	144,594	30,412	39	1.28	3.59
1882, .....	50,764	259	4.83	138,285	31,436	41	1.30	3.54
1883, .....	55,268	274	4.87	135,666	35,153	49	1.40	3.53
1884, .....	61,322	286	4.68	127,507	39,151	46	1.75	3.28
1885, .....	62,901	290	4.61	129,456	37,439	42	1.22	3.31
1886, .....	63,930	236	3.69	161,662	39,134	43	1.10	2.71
1887, .....	67,716	270	3.99	154,045	38,801	46	1.18	2.97
1888, .....	78,688	317	4.03	147,313	42,530	47	1.08	2.98
1889, .....	74,178	339	4.35	132,819	45,486	58	1.28	3.32
1890, .....	73,613	323	4.40	139,009	46,306	55	1.16	3.15
1891, .....	76,569	372	4.85	133,406	46,739	56	1.19	3.47
1892, .....	81,953	361	4.40	141,689	48,212	57	1.18	3.21
1893, .....	86,387	388	4.49	136,186	51,682	68	1.30	3.30
1894, .....	87,901	368	4.19	143,198	52,038	78	1.52	3.10
1895, .....	89,059	354	3.98	161,999	54,031	67	1.24	2.94
1896, .....	94,978	430	4.53	125,216	55,320	72	1.30	3.34
1897, .....	95,812	372	3.88	141,346	53,745	51	.99	2.83
1898, .....	91,171	360	3.96	146,668	51,245	51	.99	2.89
1899, .....	92,223	339	4.22	155,773	48,433	72	1.49	3.28
1900, .....	94,140	358	4.26	160,223	49,676	53	1.07	2.86
1901, .....	98,464	441	4.47	152,142	49,217	72	1.46	3.47
1902, .....	98,377	245	*2.50	150,659	49,762	55	1.11	2.63
1903, .....	102,055	426	4.17	176,602	49,772	92	1.85	3.41

\*This is the year of the big strike, when an average of only 116 days was worked by the collieries.



Number of miners and miners' laborers employed in the Anthracite mines; number killed and ratio of each class killed per 1,000 employed; average number of days worked by breakers; average production per day worked by breakers, 1881 to 1903 inclusive

Years	Number of miners employed	Number of miners killed	Number of miners killed per 1,000 employed	Number of miners' laborers employed	Number of miners' laborers killed	Number of miners' laborers killed per 1,000 employed	Average number of days worked by breakers	Average production per day worked by breakers, gross tons
1881, .....	22,809	114	4.99	16,726	70	4.19	221	136,696
1882, .....	23,843	155	5.91	15,223	56	3.66	218	141,593
1883, .....	25,719	133	5.37	16,879	67	3.97	222	149,552
1884, .....	27,100	132	4.87	19,606	81	4.13	192	169,590
1885, .....	28,265	169	5.65	20,128	86	4.27	204	164,318
1886, .....	28,970	121	5.04	17,068	68	3.98	196	173,696
1887, .....	29,558	102	3.45	17,548	57	3.25	208	178,544
1888, .....	31,547	169	4.89	21,952	87	3.96	218	191,002
1889, .....	30,564	144	6.36	19,368	79	4.08*	197	198,049
1890, .....	28,936	136	5.05	18,620	95	5.10	210	190,901
1891, .....	30,552	180	5.89	19,590	119	6.07	213	208,079
1892, .....	30,779	189	6.14	22,110	120	5.43	202	225,212
1893, .....	32,881	195	5.93	22,853	108	4.73	202	233,562
1894, .....	33,357	218	6.54	23,942	91	3.80	175	260,035
1895, .....	34,553	179	5.18	24,638	115	4.67	187	273,823
1896, .....	37,063	204	5.51	26,350	134	5.09	170	282,790
1897, .....	36,332	210	5.69	27,277	99	3.63	151	310,303
1898, .....	36,377	176	4.84	24,060	121	5.15	151	312,219
1899, .....	36,421	199	5.46	23,946	114	4.76	179	301,867
1900, .....	36,832	184	4.98	24,613	95	3.86	176	291,007
1901, .....	37,804	224	5.92	26,265	122	4.64	195	308,000
1902, .....	36,392	114	3.13	25,413	62	2.44	*116	†318,203
1903, .....	36,823	222	5.49	27,533	110	4.00	211	318,350

\*Small number of days worked due to strike.

†This increase of over 10,000 tons per day was caused by washeries working during the strike, the time of which was not computed in the average days worked.

## CARE OF INJURED MINERS

At intervals from 1881 to the present time, I have called the attention of the operators, mine workers and the general public, to the necessity of adopting some system of relief for injured miners and for the families of those who are killed and disabled. Reference has been made to the systems adopted by the Cross Creek Coal Company, under the direction of the late E. B. Coxe, and the Lehigh Coal and Navigation Company, under the direction of W. D. Zehner. There may be other companies that are doing good work in this direction, and if so, I shall be glad to show in future reports the result of their efforts.

My remarks did not seem to have any effect until last year, when the subject was taken up by some of the leaders of the mine workers

and also by the leading newspapers. The Scranton Tribune in a recent issue opened a formal discussion with T. D. Nicholls, President of District No. 1, of the United Mine Workers of America, as follows:

"For many years various projects have been discussed having in view the relief of miners and laborers injured while following their daily work, and the support of the widows and orphans of those who have met their death in and about the mines. Notwithstanding that great minds have given the subject their attention, nothing definite has been accomplished, notwithstanding that employers have on many occasions evinced their willingness to co-operate in such a humane movement. This has probably been due to the fact that the question is both complicated and intricate, as is seen from the history of similar movements in this and the old world."

"There has been a revival of the discussion since the findings of the Anthracite Commission. Previous to that epoch in the history of the anthracite industry, there were differences between employer and employe, which required re-adjusting and which caused more or less irritation. Under such circumstances, neither side was in a favorable mood to discuss a system of permanent relief for miners. The exhaustive and far-reaching discussion of miners' grievances, before the Anthracite Commission, has accomplished wonders in removing old grievances and establishing better relations, and the natural sequence is the thought that something may now be accomplished in the way of organizing means of permanent relief for the great array of disabled miners and for the support of the widows and orphans."

"The discussion before the Anthracite Commission of the South Wales conciliation scheme, which formed the basis of the organization of the Anthracite Conciliation Board, has drawn attention to the North Wales Permanent Relief Society, which has been in operation for the past quarter of a century. There the employers and employes contribute to the fund in proportion, and about \$10 per month is given to disabled miners, \$5 per month to the widows, and \$2.50 per month to each orphan while under the age of fourteen years. The fund is managed by a board of directors composed equally of employers and employes. While a remarkable work of mercy has been accomplished by this fund in North Wales, many of the features would not be applicable to this region, but a number of improvements could be effected."

President Nicholls, of District No. 1, United Mine Workers of America, in an interview with a Scranton Tribune reporter, discussed the matter.

"Do you believe that a project for the organization of a permanent relief fund for the miners of the anthracite region would be feasible? he was asked.

"Yes," replied Mr. Nicholls, "an accident and death fund."

"Presuming that a State law was passed placing a tax of, say, one-half a cent on each ton of coal sold, such tax to be paid by the operators to the State, and repaid to the management of the relief

fund, would the miners, in your opinion, co-operate by paying into such fund a pro rata share to place the fund on a sound basis?" was the next question.

"It would be difficult," said Mr. Nicholls, "to secure complete co-operation between employers and employes, unless the law was mandatory, as there are some employers and employes who would refuse to contribute. My opinion is that there should be a general law passed by the State requiring all employers employing more than twenty-five persons, to pay certain sums during idleness caused by accidents received while at work, and for death, caused by accidents while at work. The weekly benefits should be sufficient to keep the average family in the necessities, and the death benefit should be sufficient to support the average family for at least a year, caring for all children under working age, left by a father killed at work. By the law being applicable to all employers in the same degree, the cost of operating could therefore be computed with this additional cost considered legitimate expense. Such a law would also tend to reduce accidents to a minimum, as the employers would have a strong motive for insisting on all life-protecting methods and appliances being used, and proper supervision by their hired representatives. This law would compel the general public (which would include the employers themselves) to be responsible for the poor unfortunates who are injured while doing public service. Those who consume the products and thereby profit by the labor of another, should be willing to support the persons and their families, who are injured while producing the same, and be glad they are more fortunate."

"What general or organized provision is there at present among those employed in connection with the anthracite industry, to help in cases of fatal accidents or injuries, as compared with Welsh relief fund?" asked the reporter.

"Many of the collieries have an accident and death benefit fund," explained Mr. Nicholls, "which is supported jointly by the company and the men. Membership in such funds is entirely voluntary and they therefore do not include all workers as members. There are also what are called "keg funds." The sale of empty powder kegs to the powder company produces the main part of the revenue, although many members of such funds pay a stipulated amount monthly for their protection in case of accident or death."

I have given here verbatim what the Tribune published, hoping that it would have proper weight with all parties interested.

As Mine Inspector and Chief of the Department of Mines, I have written and plead in public and private with superintendents, operators and miners, endeavoring to show the great good that could be accomplished by having a general system adopted whereby the in-

jured, and the widows and orphans of those killed, and other persons dependent upon the unfortunate miners, could be cared for, and I am of the opinion that a system such as that adopted by the Lehigh Coal and Navigation Company could be utilized with some changes, to meet all requirements in our anthracite and bituminous counties. Possibly a general system should be adopted for the bituminous and anthracite regions, whereby the companies shall contribute one per cent. per ton and the employes one per cent. of their earnings, to be paid monthly to some person designated as treasurer, and upon the information obtainable from the inspectors and the Department of Mines, the fund could be paid to the proper persons. If each company would take hold of this matter, it would be much simpler, but if there is no general law passed, few of the companies, I think, would subscribe to the fund, and few employes would consent to have the one per cent. deducted from their earnings.

Therefore, in the interest of humanity, I would suggest that a law be passed taxing all employers of labor in and about the mines one cent per ton for all coal sent to market, and all employes inside and outside of the mines one per cent. per month on their net earnings. The amount of money that would accrue from this tax would be enough to care for the burial of the dead, to care for the children until they should reach the legal age, and also to care for the widows until re-married.

I reprint herewith briefly the rules of the Lansford Beneficial Fund, as organized by the Lehigh Coal and Navigation Company, in January, 1884. I also give a brief statement of its purposes and the results of its operations to December 31, 1903. At first the men working in the mines were assessed 1 per centum of their wages, not to exceed \$1.00 a month, and the outside men were assessed one-half of one per centum of their wages. The company contributed one cent per ton on its production. In 1894 the fund had accumulated to such an extent that the contributions were cut down one-half, but this was found to be too much of a decrease as the fund soon diminished to a point where it failed to meet the demands made upon it. There is now a debit balance of \$9,057.49. This decided decrease in the fund makes apparent the necessity for increasing the contributions by at least one-half the present rates.

### THE LANSFORD BENEFICIAL FUND

"This fund shall be created and maintained by the following contributions, to be made monthly:

"The Lehigh Coal and Navigation Company will pay into it one cent for every ton of coal produced at its mines: The inside workmen employed on its property will pay into it one per cent. of their earnings, and the outside workmen will pay into it one-half of one per cent.; but no one shall pay more than one dollar in any one month.

\* \* All moneys which shall be paid into this fund shall be placed in charge of a Board of Trustees to be appointed from time to time by the President of the Lehigh Coal and Navigation Company, and to be chosen by him, partly from the officers of the company and partly from business men of experience and good reputation in the mining region.

"A report of the receipts and expenditures of this fund shall be published by the Board of Trustees at least once in each year. \* \* The fund thus established is believed to be ample to meet all claims arising from accidents to the contributors, and if, as is hoped, there shall be more than is required under this plan, the benefits will be increased as from time to time the trustees may think prudent.

"The Lehigh Coal and Navigation Company, in making this contribution and establishing this fund, desires to relieve the suffering which the accidents cause among its workmen, and to render unnecessary the collections which make a heavy tax on the benevolent; and also to promote the growth of kindly feeling which now exists between the company and the men engaged in its service."

"The fund out of which benefits are paid to disabled miners and to the widows and orphans of those killed in the service of the company, is derived from contributions from the employes who joined the association, and from the company.

"The benefits paid by this fund are as follows:

"In case of injury not resulting in death, one-half of the average earnings of six months preceding the accident are paid until the injured person is able to resume work or for a period not exceeding six months thereafter.

"In case of fatal accident, \$30.00 are paid for funeral expenses and the family of the deceased is paid for eighteen months, one-half of his monthly average earnings for six months preceding the accident.

"While it is optional with the employes of the company to become members of the association in point of fact, practically all of them are glad to contribute to the fund."

## 1903.

Contributed by company, .....	\$9,628 45	
Contributed by employes, .....	10,160 71	
Interest on investments, .....	1,450 00	
		<hr/>
Total contributions and receipts,.....		\$21,239 16
Benefits paid, .....	\$25,101 11	
Expenses, .....	1,268 23	
		<hr/>
Total payments, .....	\$26,369 34	
Debit balance, December 31, 1902, .....	3,927 31	30,296 65
		<hr/>
Debit balance, December 31, 1903, .....		\$9,057 49
		<hr/> <hr/>

## LEGAL AGE OF BOY EMPLOYES

---

The anthracite mine law of 1870 made the minimum legal age of boys employed outside the mines twelve years, and inside fourteen years. The legislative amendments of 1885, 1891 preserved the same minimum requirements. I am not familiar with the mining laws of Continental Europe, but in Great Britain the age limit is the same as in Pennsylvania.

A great deal of criticism has been indulged in regarding the employment of children in and about our coal mines, but it has been due largely to the fact that false statements are made in the certificates of age as presented by the parents or guardians of the children.

The law is emphatic in its requirement of properly attested certificates from children applying for employment, but unfortunately under the present system no protection is afforded in cases where the age is falsely represented. The inspectors may frequently have doubts as to the eligibility of the boys who are given employment, but as the certificates have been accepted by the mine foremen, they are without authority to take any action in the matter.

As children are now compelled to begin attendance at school at six years of age, they should, if continuously kept at their studies, be able at the age of twelve to read and write the English language, and 95 per centum of them should have a pretty clear comprehension of what they read. I think, however, that the minimum age for employment outside the mines ought to be advanced to thirteen years, to conform with the school law of the State. But the present minimum of fourteen years for inside employment need not be changed. All children cannot enter the higher professions; in fact, most of them must take up the manual occupations that are the basis and backbone of all our industries. They must be machinists, carpenters, miners, blacksmiths, drivers, laborers and so forth, and the common school advantages of the present day should sufficiently equip them at the age of fourteen to enter upon these occupations. This seems to be conceded in all occupations but that of the miner, and in his case it is urged that the entrance upon his life work should be delayed until he is sixteen. I do not agree with this view of the matter, and have therefore never approved of the amendment advancing the legal minimum limit to sixteen years. I know of many instances where boys of sixteen are earning men's wages inside the mines, and it seems to me a mistake to class them as children. This belief has deterred me from endeavoring to enforce the

provisions of the amendment; but I nevertheless instructed all of the inspectors, when the law went into effect, to demand of the companies employing boys that they require of every boy of doubtful age a certificate from parent or guardian showing him to be of legal employment age. The companies, especially in the anthracite region, willingly complied with the demand, but as before stated, while the certificates attested to the ages fourteen or sixteen, it was evident that many of the boys were under that age. To improve the condition I knew existed, I sent a circular letter to the inspectors for distribution among the mine officials. The letter read as follows:

"December 15, 1903.

"Dear Sir: You are hereby notified that on and after January 1, 1904, all boys who appear to be under the legal age shall be required to furnish affidavits, sworn to before a justice of the peace or other officer qualified to administer oaths, setting forth the fact that they have attained the age required by the mine law; that said affidavit shall be filed with the superintendent or mine foremen at the collieries, and the Mine Inspectors shall examine them on their visits of inspection.

"These certificates shall be filed in the mine offices, convenient for examination by the Inspectors.

"Very truly yours,

JAMES E. RODERICK,

"Chief of Department of Mines."

"(Signed)

This letter, especially in the bituminous region, brought down upon the Department a flood of interrogations from operators, lawyers and mine workers, as to my authority for making such a demand.

To test the constitutionality of the law, I instructed Inspector James Blick to bring suit against Frank Schulte, mine foreman of the Pittsburg Coal Company. The legal proceedings in the case are submitted herewith.

IN THE COURT OF QUARTER SESSIONS OF ALLEGHENY COUNTY,  
PENNSYLVANIA

Commonwealth	}	No. 151 September Sessions, 1903.
vs.		Motion to Quash Indictment.
Frank Schulte.		

SHAFER, J.

The indictment charges the defendant, being a mine foreman, with violating section second of the act of May 13, 1903, by employing in a mine in the county of Allegheny under his charge and control, a boy under the age of sixteen years in work not permitted by that act. The defendant has moved to quash the indictment on the allegation that the act in question is unconstitutional and void.

The act in question is entitled "An act to amend article 9, section

1 of an act, entitled 'An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith,' approved June 2, 1891, also to amend section 17 of an act, entitled 'An act relating to Bituminous coal mines and providing for the lives, health, safety and welfare of persons employed therein,' approved June 20, 1885."

While it is true that anthracite mining and bituminous mining are, in a sense, two distinct subjects, and have been regulated by acts of Assembly such as those quoted in the title above mentioned applying only to the one and not to the other, yet there are species of a single genus and it is no doubt competent for the Legislature to enact laws applying to both of them. The title, therefore, cannot fairly be said for that reason to contain more than one subject. The Constitution, however, provides that no law shall be revived or amended by reference to its title only, but that so much of it as is revived and amended shall be re-enacted and published at length. It seems to us that the amendment of two distinct acts of Assembly, which refer to different subjects of legislation, in one act, even though they may be parts of a general subject, constitutes two subjects within the meaning of the Constitution, each subject being the amendment of a particular act so that it shall read in a particular way.

It is further claimed that the act of June 30, 1885, cited for amendment was repealed by the act of May 15, 1893, and was not, therefore, in force at the time of the passage of the act in question, but that article 17, section 1, of the act of May 15, 1893, regulates the subject of the employment of boys and women in coal mines.

The act of May 15, 1893, contains a repealing clause of all acts inconsistent therewith, and it seems to us plain that the act of 1893 was the law in force at the time of the passage of the act in question. The title of the act in question declares the intention of the Legislature to amend section 17 of the act of 1885. The body of the act provides that the first section of article 9 of the act of 1885, which is alleged in the act to read as therein set out, shall be amended. An inspection of the act of 1885 will show that it is not divided into articles at all; but there is therefore no section first of article 9 of the act and that section 9 of the act and section 17 of the act are both entirely different from the section set out to be amended, which corresponds with section 16 of the act of 1885. So that the title of the present act speaks of one section of the act of 1885, the body of the act speaks of another section and recites for amendment a still different section.

It seems to us therefore that the act of 1903 is void, for the reason that it is an attempt to amend two distinct acts of Assembly by one act, for the further reason that its title is misleading in that it declares to be the intention of the Legislature to amend a section of the act, which is not mentioned in the act itself, and further, because it is not competent for the Legislature to amend in effect the act of May 15, 1893, without reciting its provisions instead of reciting the provisions of an act on the same subject which was not in force. The indictment is, therefore, quashed.

From the record.

Attest: FRANCIS X. BARR, Clerk.



Upon receipt of the decision of the court, I instructed Inspector James Blick to have the case appealed to a higher court, although convinced that the decision was a correct one. The letter relative to the enforcement of the amendment, so far as Allegheny county was concerned, was withdrawn, but until the matter is passed upon by a higher court, its enforcement will be insisted upon in other counties.

The rank and file of the anthracite miners are against the amendment, but say very little about it. The bituminous miners, however, are loud in their protests, and this Department has received many communications from the mine workers and their leaders in regard to its enforcement. I may say here that this amendment was prepared, endorsed and presented by the leaders of the Anthracite Mine Workers of America, but its scope was evidently not appreciated or understood by the leaders of the Bituminous Mine Workers of America until the Department commenced to enforce it. Personally, I have no fault to find with this law, but it no doubt is working a great hardship to many of the widows of mine workers who have been killed in this State. If the children of deceased miners, and they are legion, are not allowed to work in the mines until they are sixteen years of age, who is to care for them and for the younger members of the family and the widowed mother? Before such a law was passed, the State, counties or townships should have made ample provision to care for the widows and orphans until the orphans reached the legal employment age. The law can possibly be amended to make an exception of the children of widows who have no other support.

As I understand it, this amendment was prepared to give the rising generation more years of schooling, and thus better prepare them for citizenship. The purpose is entirely praiseworthy and in keeping with our American ideas of progress and enlightenment; but the requirement is so excessive that it works a hardship to many of the orphaned children and their mothers.

I am well aware that I tread on dangerous ground in expressing my opinion on this question, and perhaps lay myself open to the criticism of the advanced theorists, but I feel that I voice the sentiment of an overwhelming majority of the mine workers of the State when I recommend a further revision of the law to make the ages of boys thirteen and fourteen respectively, for outside and inside work at the mines. However, whether an amendment be made or not, there should be a heavy penalty attached to the violation of the law by parents, guardians or employers.

A further requirement should be that every boy after reaching the legal employment age should be compelled to prove that he can read and write the English language, unless he is of foreign birth and did

not come to this country until twelve years of age. Some one person in every inspection district should be held responsible for the enforcement of the law, and I recommend that each district inspector be the authority to receive the age certificates of all the children applying for employment. After satisfying himself as to the correctness of the certificates, he should test the applicants' ability to read and write, and then furnish them with additional certificates showing that they are legally qualified to work inside or outside the mines, as the case may be. No employer of labor should be allowed to hire any boy unless he possesses a certificate from the inspector. The inspector should also have authority, and it should be made part of his duty, to prosecute all violators of this law, and to enable him to do this a special appropriation should be made by the legislature.

With these additional requirements, it would be possible to eliminate child labor from the coal mines of Pennsylvania.

---

## MINE INSPECTION

The inspections of the mines during the past year were conducted with systematic regularity, but with no better results, apparently, than in former years, although the increase in the number of inspectors, from eight to fifteen, made it possible to give the work closer attention. The benefits, however, that might have been derived from this provision were completely nullified by the absurd requirement of section 15 of article II, as amended, that "each inspector shall examine all the collieries in his district, including each working face, at least once every two months." It would be a physical impossibility to do this. It is doubtful, indeed if it could be done once in five months. This requirement defeats the very purpose of the act and reduces the inspector to a mere walking machine, with time only to note the most trivial matters. The section of which this requirement is a part is the most arbitrary to be found in any mining law of this or any other country, and never should have been enacted. It entails duties upon the inspectors that they cannot perform, takes from them the right to use their own judgment in the conduct of their work, and has a decided tendency to lower the efficiency and thoroughness of the inspection. I have therefore been loath to compel them by judicial measures to meet its requirements. The section reads as follows:

"Each of the said inspectors shall reside in the district for which he is elected, and shall give his whole time and attention to the duties of his office. He shall examine all the collieries in his district





at least once every two months, as often in addition thereto as the necessities of the case or the condition of the mines require. He shall see that every necessary precaution is taken to secure the safety of the workmen and that the provisions of this act are observed and obeyed; and he shall personally visit each working face and see that the air-current is carried to the working faces and is of sufficient quantity or volume to thoroughly ventilate the places. He shall every three months make a report of the condition of each working face in each colliery, on a form to be furnished to the Inspectors by the Chief of the Bureau of Mines and Mining, designating the gangway in which the working is situated and the breast number of said working, and their condition shall be designated by the words good, fair or bad, as the circumstances may warrant; and the said report, or a duplicate, shall be placed in a weather and dust-proof case, with a glass front; said case to be furnished by the operator and placed in a conspicuous place at each mine opening, shaft, slope or drift, so that the workmen have easy access thereto. He shall certify in said report that the employes are hoisted to the surface of the ground or given access thereto according to law; he shall attend every inquest held by the coroner or his deputy upon the bodies of persons killed in or about the collieries in his district; he shall visit the scene of the accident for the purpose of making an examination into the particulars of the same, whenever loss of life or serious personal injury occurs, as elsewhere herein provided for, and make an annual report of his proceedings to the Secretary of Internal Affairs of the Commonwealth, at the close of every year, enumerating all the accidents in and about the collieries in his district, marking in tabular form those accidents causing death or serious personal injury, the condition of the workings of the said mines with regard to the safety of the workmen therein and the ventilation thereof, and the results generally shall be fully set forth; and such other duties as now are or hereafter may be required by law."

Besides the general inspections, the inspectors are in duty bound to visit the scene of every fatal and serious accident, and to attend every coroner's inquest. They are expected to make special inspections when complaint is made by the employes, and also to meet the mine foremen or superintendents in order to point out any neglect or violation of the law discovered during their visits of inspection. Their duties are varied and numerous, and require great physical exertion.

A form is given herewith that was prepared by the Department to comply with the section referred to, and filled in by one of the inspectors as required by law. By this it will be seen that to comply with the requirements the inspector must have considerable clerical ability, as well as a thorough, practical knowledge of his business, qualifications not always found in the same person. It took this inspector 9 days to make the inspection of the Woodward colliery, and no doubt another day in the office copying the desired information from his notebook onto this blank.

I claim that he could have made an inspection of this mine in 3 days that would have answered all practical and theoretical purposes. If so, he spent 6 days doing unnecessary work. With sixteen mine inspectors, the mines can be properly inspected four or five times a year, allowing about 2 days for each inspection.

I hope the next legislature will amend or repeal this obnoxious section. In fact, article II should be amended or repealed in its entirety. If it is not amended or repealed, the number of inspectors should be increased from sixteen to at least thirty-two, if a compliance with its requirements is to be expected. If the legislature does nothing in the way of affording relief, it will be necessary for this Department to take the matter into court for a satisfactory solution of the difficulty.

---

## ELECTION OF INSPECTORS

### Remarks on Article II of the Act of June 8, 1901

The first general anthracite mine law of Pennsylvania was enacted by the Legislature in 1870. In 1885 it was revised in accordance with the recommendations of a Commission consisting of six miners, three operators and six inspectors, appointed by the Governor. It was further revised in 1891 on the recommendation of a Commission of eight miners, three operators, two mining engineers and two inspectors, appointed by the Governor; and in 1901 article II of the act of 1891 was further amended. The act of 1885 was much more satisfactory than the act of 1870 or the act of 1891 or the amendment of 1901, as its provisions were fair to the miners, operators and inspectors.

During the years 1889 and 1890 considerable dissatisfaction was manifested regarding the inspectors, especially in Schuylkill county, and this feeling was intensified against one of them who, from mistaken judgment, committed an act that, while not a violation of the law, was repugnant to the miners. It was an act entirely outside of his duties as inspector. Had any complaint been made to this Department regarding this inspector, or any of the other inspectors, it would have received immediate attention and the matter would have been thoroughly investigated. I did, on account of the persistent rumors regarding some of the inspectors, make careful inquiry to ascertain the causes of complaint, but found nothing to indicate that any of them had neglected their duties. This antagonistic feeling against the inspectors was encouraged and kept

alive to such an extent by a few interested persons, that the miners finally assembled in convention and passed resolutions calling upon the legislature to amend the mining law so that the anthracite inspectors could be elected by the people. They believed that this would do away with all objectionable inspectors and remove all causes of complaint, and that it would also open an avenue for ambitious miners to become inspectors. The fact is, however, that the office of inspector has always been open to all miners qualified to fill it; but in all the years from 1870 to 1903 only one miner passed a successful examination before an examining board in the anthracite region. (The word "miner" as used here, means a man actually employed at cutting coal.) The reason for this is found in the fact that the operators have always advanced the most intelligent miners to be foremen and fire bosses, and many of them have become superintendents and general managers of large corporations. One of them has recently attained the presidency of one of the most prominent coal companies. It is from this class of miners who were foremen or superintendents, that the anthracite inspectors have generally been selected, after a rigid competitive examination before a board composed of three miners and two mining engineers. With but one or two exceptions, the anthracite inspectors from 1870 to 1900 have been men of good moral character and practically and theoretically proficient. All the anthracite laws have favored the miners in the formation of examining boards, as they have always had three-fifths of the membership of each board. They have therefore been able to control the actions of the boards, and if at any time a man was chosen for the office of inspector who was not thoroughly qualified, the responsibility can be placed upon the miners.

In compliance with the demands of the miners, the Legislature in 1901 amended Article II of the law of 1891, providing, that after a certain date, all inspectors should be elected by the people under the general election law of the State, after first having passed an examination and answered 90 per centum of the questions propounded. The election of mine inspectors by the people is unheard of in any other state of the Union, except Kansas, or in any other country of the world, so far as I know. It is a most pernicious practice, as it brings the applicant for an office created for the preservation of life and property, into the vortex of political intrigue, and I sincerely hope the time will soon come when both the miners and operators will demand the repeal of this law. If, however, the election of inspectors is to continue, they should, at least, be elected by the miners and operators, who are the people directly interested in the office. More than this, the miners and operators of each district should vote for their own inspector. For instance, the Fifth and Ninth districts of Luzerne county are about 60 miles apart, and

the residents and miners are nearly all strangers to one another. Why should the voters of the Ninth district vote for the inspector of the Fifth, when the majority of the miners in the former district are ignorant of the qualifications necessary in the inspector of the Fifth? The reasons are equally good why the voters of the Fifth district should not vote for the inspector of the Ninth. It may be presumed that the inspector of the Ninth district has satisfied the miners and operators of his district, and if so, why should the voters of the Fifth district have a right to vote against him and possibly elect his opponent, regardless of the wishes of the people of his district?

If the election of inspectors can in any way be justified, it still remains a fact that the present method is unfair to all persons whose interests are concerned. Although Article II was amended in 1901, through a defect or an omission in its provisions only one election of inspectors has been held up to the present time. That election, however, indicated clearly how future elections would be conducted. The candidates for election in 1902 traversed the counties and used the same methods to obtain votes that were used by the other aspirants to political office. In large counties like Luzerne, Lackawanna and Schuylkill, they spent the best part of two months canvassing for the election, and if they had held the office at the time, it is unnecessary to say that the work of inspection would have been utterly neglected during that period. Can the State afford to pay wages to inspectors while they are electioneering, and consequently neglecting their duties? How will the miners regard it? The method is unquestionably opposed to the best interests of the State, the miners and the operators. The voters of the cities of Scranton, Wilkes-Barre and Pottsville, if they choose to do so, can decide who the inspectors shall be in Lackawanna, Luzerne and Schuylkill counties, while possibly not more than 20 per centum of them are mine workers. Again, why should the large farming districts of these counties have a vote as to who shall inspect the mines? The voters in both these instances are without interest in the matter. Why should the court of Schuylkill county be empowered to appoint a board to examine applicants for mine inspector in Northumberland, Columbia and Dauphin counties (Article II, Section 3) when, if a vacancy occurs in Northumberland county, it can be filled only by the court of that county (Article II, Section 13)?

Great dissatisfaction necessarily exists with this law, particularly among the inspectors, and seven of the most competent ones (the equals of any in the world) have resigned from their positions since 1902. Under the old law, only two resigned from 1870 to 1902, and they did so to accept very lucrative positions.



The evil effects of the election of inspectors may reach even to the selection of mine foremen and fire bosses. The inspector is an ex-officio member of the examining board, and there is reason to fear that in many cases a poorly qualified candidate who possesses some political influence may be treated with leniency not only discreditable to the board but inimical to the interests of the miners and operators. Incompetency in the office of mine foreman or fire boss is a menace to the lives of the miners and the property of the operators. Upon the vigilance, care and efficiency of these officers, depends largely the welfare of the mining interests, and I note with regret that during the past year certificates of qualification have been granted to men regarding whose incompetency there can be but little doubt. I hope the miners and operators will seriously consider my remarks upon this question, and make a joint effort to have the next Legislature repeal the amendment to Article II.

The system formerly in vogue in Pennsylvania of selecting inspectors by a competitive examination, was the best ever devised. In other states and in foreign countries, the appointments are made by the Governors or others in authority, without any test of qualifications. In some states, the office of inspector is considered a political one and a change in the party administration generally causes a change in the inspectors. Any other system, however, is preferable to our present one, which we deem the worst extant, and if we are not to return to the old one let us do as the other states do, and give the Governor power of appointment, even if it be without the requirement of qualification. In this connection I desire to say that the bituminous law of this state, in this respect, is entirely satisfactory. It provides that competitive examinations be held every four years by a board of five persons, appointed by the Governor, three of whom shall be miners. The board reports to the Governor the applicants who have answered 90 per centum of the questions, and he commissions as many inspectors as may be needed, from those who have received the highest percentage. If the number of successful applicants is greater than the number of existing vacancies, the names are placed on a reserve list, and when vacancies occur the Governor appoints the applicants having the highest percentage. This method could be adopted for the anthracite region.

Another injustice resulting from the amendment to Article II is the unequal distribution of the work of the inspectors, some of them having three times as much to do as others. For instance, the unfairness of including 29 collieries in the district of the inspector of Northumberland county, and only 7 collieries in the district of the inspector of Carbon county, will be apparent to everybody. The former district in 1903 employed 14,580 persons in and

about the mines, and produced 4,927,304 tons of coal; the latter district employed 4,051 persons, and produced 1,919,662 tons. Columbia county was also made a separate district by this amendment, although it has fewer mines even than Carbon county. To the Columbia district Dauphin county has been added, but the combined area is hardly one-third as large as the Northumberland district. Under the law, the Chief of the Department of Mines has no authority to send the inspector of Columbia county to inspect the mines of Dauphin county. The inspector of Columbia county is aware of this fact, but he does the work as a matter of courtesy. He would be within his rights if he refused to do it, as the law prohibits his acting in any other county than the one in which he was elected. The operators of Dauphin county might also be within their rights if they refused to have him inspect their mines.

I have endeavored to show some of the defects of the amendment in question, and in order that they might be remedied as quickly as possible, I respectfully suggest that the next session of the Legislature repeal it, and empower the Chief of the Department of Mines to make an equitable division of the work among the inspectors, without regard to county lines. I also suggest that the Legislature empower the Governor to appoint a commission to revise the mining laws of the State. From the present statutes, complex and intricate as they are, a law could be framed that might meet all the requirements of the anthracite and bituminous regions. The opinion used to prevail that the laws governing the bituminous mining operations need not be as stringent as those governing the anthracite region. Very few bituminous mines were thought dangerous, even as late as 1893. As a matter of fact, however, there is much more danger of serious catastrophies in the bituminous mines, than in the anthracite. There are bituminous mines to-day in which the carelessness of one man might result in the destruction of hundreds of lives. My observation leads me to think that one good law, stringent but just, would best meet the interests of all concerned. The commission might be composed of two miners, one operator and one mining engineer from the bituminous region, and two miners, one operator and one mining engineer from the anthracite region, with one person to represent the Governor, and who shall act as chairman of the commission. The latter member should have practical and theoretical knowledge of the workings and ventilation of coal mines, but should have no financial interest in mining. The commission should have power to engage an expert constitutional lawyer to decide all questions of constitutionality, and an expert stenographer to make a complete record of the proceedings of the commission to the Legislature in 1907. The Legislature should then, without unnecessary delay, enact the law as recommended by the commission, and all amendments offered should

be voted down, as the Legislature is not competent to amend mine laws, as not ten per cent. of the members are familiar with the needs of the mining industry.

---

### EXAMINATION OF FIRE BOSSES

The provisions of the anthracite mine laws regarding certificates of qualification for fire bosses, have for years been a bone of contention, especially among the practical men who had not received the proper early training or had not, in later years, made the effort to stand the test of a written examination.

In some districts very slight, if any, test was made of the knowledge and experience of the fire bosses. I therefore issued, through the inspectors of the different districts, a circular letter notifying the persons in interest that all fire bosses would be required to qualify as assistant mine foremen.

The letter created a furor among the fire bosses and their friends, and the Chief of the Department was charged by some of them with overstepping his authority. The result, however, was that the fire bosses took the examination, and all those who were qualified received certificates as assistant mine foremen.

The circular read as follows:

To Operators, Superintendents and Mine Foremen:

Owing to a misunderstanding among the Inspectors, there has been no uniform system of issuing certificates to fire bosses in the anthracite districts.

Hereafter all fire bosses in the Anthracite coal mines will be required to qualify as assistant mine foremen, as per section 4, article 8, of the Anthracite mine law, approved the second day of June, 1891, which reads as follows:

"Certificates of qualification to mine foremen and assistant mine foremen shall be granted by the Secretary of Internal Affairs to every applicant who may be reported by the examiners as heretofore provided, as having passed a satisfactory examination, and as having given satisfactory evidence of at least five years' practical experience as a miner, and of good conduct, capability and sobriety;"

And also as per section 7 of an act, entitled "An act to establish a Department of Mines in Pennsylvania," approved the fourteenth day of April, 1903, which reads as follows:

"Certificates of qualification to mine foremen and assistant mine foremen in the Anthracite mines shall be granted by the Chief of the Department of Mines to each applicant who has passed a successful examination. Before the certificates aforesaid shall be granted, each applicant for the same shall pay the sum of three dollars to the Chief of the Department of Mines."

All fire bosses who are now acting without having complied with the foregoing sections, are requested to appear before the Inspectors of their respective districts, at the time and place designated by the Inspector, and qualify themselves as required by the provisions of the law.

### History of the Case of the Commonwealth vs. The Wilkes-Barre and Scranton Coal and Iron Company.

On the 17th of June, 1903, the secretary of the board of health of the city of Wilkes-Barre, called the attention of this Department to an alleged violation of the law on the part of the Wilkes-Barre and Scranton Coal Company in rebuilding a breaker on the site of an old breaker of the Hillman Vein Coal Company. The inspector of the district was directed by this Department to look into the matter at once, and it was supposed that he would do so. In a short time, however, the Department received another communication from the secretary of the board of health, making further complaint, and the Chief at once went to Wilkes-Barre to interview the inspector, being thoroughly convinced that the Wilkes-Barre and Scranton Coal Company (the Hillman Vein Coal Company having ceased to exist after 1900) had no legal right to rebuild (not repair) a breaker on the site where a breaker had been erected in 1882 before the act of June 2, 1891, went into effect. More than this, the erection of the breaker as contemplated would, it was believed, prove a menace to the lives of the people employed in the mines, as the Hillman Vein mine was one of the most gaseous in the Wyoming Valley. In the event of a fire in the new breaker, the head-house and breaker being connected, the loss of life that would inevitably result to the hundreds of people entombed in the mine beneath, would be appalling.

The learned judge possibly may be correct in declaring that the company had the right, under the law, to rebuild this breaker, but in view of the disaster that may ultimately result from this interpretation of the law, it is suggested that it would be wise to have the act of 1891 amended. On the question of the safety of employes, the mine law should be so plain that it will admit of but one interpretation.

The proceedings in this important case are published herewith.

#### BILL IN EQUITY—FILED SEPTEMBER 2, 1903

To the within named defendant, Wilkes-Barre and Scranton Coal and Iron Company:

You are hereby notified and required within fifteen days after the service hereof on you, to cause an appearance to be entered for you in the court of common pleas of Luzerne county to the within Bill of Complaint of the within named Commonwealth of Pennsylvania et al., and to observe what the court shall direct. You are

also notified that if you fail to comply with the above directions by not entering an appearance in the Prothonotary's Office within fifteen days, and not filing your answer within thirty days, you will be liable to have the bill taken pro confesso, and a decree made against you in your absence.

Witness our hands at Wilkes-Barre, Pa., this 15th day of July, 1903.

B. R. JONES,  
Attorney for Plaintiff.

---

IN THE COURT OF COMMON PLEAS OF LUZERNE COUNTY

Sitting in Equity

<p>The Commonwealth of Pennsylvania upon the application of Edward E. Reynolds, Inspector of Mines of the Seventh Sub- Division of the First Anthracite Coal Inspection District of Pennsylvania, acting in behalf of the said Common- wealth—Plaintiff,</p>	}	<p>No. 5, October Term, 1903.</p>
<p>vs.</p>		
<p>The Wilkes-Barre and Scranton Coal and Iron Company—Defendant.</p>	}	

To the Honorable, the Judges of said Court:

Your orator complains and says:

First. That he is the mine inspector of the Seventh Sub-Division of the First Anthracite Coal Inspection District of Pennsylvania, embracing that portion of the Wyoming coal field lying east of the Susquehanna river and extending from the Eastern boundary line of Wilkes-Barre city to western boundary line of Newport township, excluding Buttonwood and Wanamie collieries.

Second. That as such inspector it is part of his duty to see that every necessary precaution is taken to secure the safety of the workmen employed in the mines within his district, and that the provisions of the mine law are observed and obeyed.

Third. That the within named defendant is a corporation duly organized under the laws of this Commonwealth for the purpose of mining and preparation of anthracite coal for market within the limits of the said Anthracite Coal Inspection District aforesaid.

Fourth. That the said defendant for the purpose of mining and preparation of coal is erecting a new frame breaker, shaft tower and engine house (inflammable structures) and other buildings necessary to be used for the preparation, storage, and hoisting of coal.

Fifth. That the said new breaker, shaft tower and other buildings are being erected on a plot of ground adjoining Pennsylvania avenue in the Sixteenth ward of the City of Wilkes-Barre on the property formerly known as "The Hillman Vein Coal Company Land."

Sixth. That said new breaker, shaft tower, and other buildings, if defendant is permitted to erect the same, will be within two

hundred feet of the mouth of the shaft, which said shaft connects the surface of the underground workings of the mines of the defendant and up which shaft from the mines aforesaid the defendant intends to hoist coal when the new breaker aforesaid is completed.

Seventh. That the erection of the said new breaker, shaft tower, and other buildings in the manner aforesaid is contrary to law, namely to the fifth section of article fourth of the act of Assembly approved the second day of June, 1891, and entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania and for the protection and preservation of property connected therewith," and the erection of said breaker, shaft tower and other buildings directly over the mouth of the shaft as contemplated will be dangerous and hazardous to the health and safety of persons employed in said mines, and will also work irreparable injury to your orator.

Your orator would therefore respectfully pray for relief as follows:

First. For an injunction, first preliminary and afterwards upon final hearing perpetual, against the said defendant, her agents, superintendents, servants, contractors, and employes, restraining them or any of them from erecting a breaker or other inflammable structure, for the preparation and storage of coal within two hundred feet of said shaft belonging to said defendant and located in the Sixteenth ward of the City of Wilkes-Barre, Luzerne county.

Second. For such other and general relief as may seem proper to your Honors in the premises.

LUZERNE COUNTY, ss:

Edward E. Reynolds, the mine inspector of the First Anthracite Coal District above named, being duly sworn doth depose and say that the facts set forth and contained in the foregoing bill are just and true to his personal knowledge.

Sworn and subscribed before me, this            day of July, A. D. 1903.

EDWARD E. REYNOLDS.

---

#### OPINION OF COURT

#### ON MOTION TO CONTINUE PRELIMINARY INJUNCTION

The depositions establish the following

#### Facts

The original breaker of the Hillman Vein Coal Company was built in 1882.

It was erected less than two hundred feet from the shaft through which the coal which was put through it was brought to the surface.

The breaker and shaft so located with reference to each other were used from 1882 until August, 1900.

In the year 1902, the stock of the Hillman Vein Coal Company was bought by certain individuals, and shortly afterwards the defendant

corporation was chartered, with said individuals and many others as stockholders.

The organization of the Hillman Vein Coal Company is still kept up.

None of the property of the Hillman Vein Coal Company has been transferred to the defendant corporation.

In the latter part of the year 1902, Robert Ireland, of the firm of Ireland and Pettebone, architects, saw a newspaper item in which it was stated that the defendant company was about to resume mining operations at the old Hillman vein colliery.

With a view of getting the job of preparing plans for remodeling the old breaker, he, of his own accord, examined it, and made a sketch plan, which he submitted to Mr. McCaskie, who was the man who had negotiated the purchase of the Hillman vein stock, and was an attorney at law, a stockholder of the Hillman Vein Coal Company, one of its directors, a member of its executive committee, and was also a stockholder of the defendant company.

With these plans McCaskie and Ireland met at the old breaker sometime before Christmas, 1902, and in that way procured information from which the plans were finished. They bear date January 17, 1902, and about two months after that date were accepted by McCaskie, and the work which has been since done has been in accordance with those plans.

Before any actual work was done Mr. McCaskie and Mr. Kearney, also a stockholder and director and the other member of the executive committee of the Hillman Vein Coal Company, and vice president of the defendant company, called in the mine inspector of this district, and McCaskie went upon the ground with him, and submitted the plans to him, and he examined into the matter and said that it was all right and that they should go ahead.

He did this after legal advice had been given him.

Thereupon McCaskie and Kearney, or the Hillman Vein Coal Company, or the defendant company—it does not matter which, for the purposes of this motion—went ahead with the work.

The mine inspector was there at least once during the progress of the work.

Nobody did anything to mislead the mine inspector.

McCaskie went over the matter with the mine inspector, so as to be assured that he was within the law, and showed him the plans, and went on the ground with him, and told him that if the timbers were rotten so as not to bear what was to put in, they would probably replace them with new timbers, and the mine inspector approved the proposed action.

On the faith of this approval McCaskie and his associates, whoever they are, proceeded in conformity with the plans and ideas so submitted, and expended nearly fifty thousand dollars on the building before this injunction was applied for.

The building which is there now is of new materials, because the old timbers were found rotten and insufficient to support the new machinery which is intended to be used.

It is essentially, however, upon the lines of the old breaker, and upon the old foundations.

## LAW

The plaintiff is estopped, and the preliminary injunction must be dissolved.

## GENERAL DISCUSSION

The act of June 2, 1891, P. L. 185, following substantially the language of the act of June 30, 1885, P. L. 226, declared, "that from and after the passage of this act, \* \* \* no 'breaker' shall be erected within two hundred feet of any such opening. \* \* \* Provided, That this section shall not apply to breakers that are now erected."

Having regard for the old law, the mischief and the remedy, there is great force in the argument that if by fire or the elements a breaker within the proviso of the act shall be destroyed, it may not be re-built, even upon the old foundation walls, but then comes within the prohibition of the act.

There is equal force in the argument that if not actually destroyed, such a breaker, arriving at such a state of delapidation as puts it beyond repairs, and requires a new building, also comes within the prohibition of the statute.

The analogy of cases arising upon ordinances prohibiting the erection of frame or wooden buildings within prescribed fire limits, and holding that such buildings may not be rebuilt after having been destroyed by fire or the elements, makes strongly for a like construction of the act of 1891.

So, too, in determining what shall constitute an erection of a building, as distinguished from repairs, the cases arising upon mechanics' liens seem to be applicable, even upon the admission that the statute ought to receive a strict construction.

On the other hand, there is force in the argument that such breakers as are within the proviso of the act of 1891 are in the same situation as if the act had never been passed.

That as to them, therefore, by the express terms of the statute there is no prohibition, and what might have been done concerning them before the act of 1885, may still be done.

This latter argument has received the assent of two judges of the common pleas—Judge Hand, in *Commonwealth vs. Smith*, 4 C. P. R. 1, and Judge Smith, in *Commonwealth vs. Vipond*, 14 C. C. R. 357 (1893).

In addition to this, the Attorney General, at the request of the Chief of the Mining Bureau, has given the act of 1891 a like interpretation.

See *Coal Company breaker*, 8 D. Repts. 124 (1899).

It is safe to say, therefore, that the complainant's right to prevail, is doubtful in law, and that alone would prevent a continuance of this injunction, which cannot result otherwise than in great pecuniary loss to the defendant, since it ties up the operations of a mining property of considerable extent.

*City of Philadelphia's Appeal*, 78 Pa. p. 33.

I put the decision, however, squarely upon the ground that the complainant is estopped by the conduct of the Mine Inspector.

If it were an individual who was asking for the continuance of the injunction, and it appeared that he had, with full knowledge and



information, encouraged the expenditure of nearly fifty thousand dollars by the defendant, before asserting that defendant's conduct was unlawful, and that too in a matter in which it was his special duty to know that such conduct was unlawful and to speak out, no one could doubt that he would be estopped.

The same law applies to the Commonwealth when she is party to an action.

Commonwealth vs. Smith, 2 Clark 120.

Commonwealth vs. Phila., &c., Turnpike Co., 153 Pa. 47.

The statute makes it the duty of the Mine Inspector to "examine all the collieries in his district at least every two months (and), as often in addition thereto as the necessities of the case or the condition of the mine require. He shall see that every necessary precaution is taken to secure the safety of the workmen and that the provisions of this act are observed and obeyed," etc.

Act of 1901, June 8, P. L. 543.

He is designated as the person upon whose application, in behalf of the Commonwealth, injunction shall be issued prohibiting the working of any mine or colliery \* \* \* in contravention of the provisions of this act.

Act of 1891, June 2, P. L. 204.

He is therefore the Commonwealth's officer or agent charged with the special duty of investigating and knowing if this breaker was being erected in contravention of the act of 1891, and if so, designated as the person who in behalf of the Commonwealth should proceed to enjoin it.

He determined in the beginning, after investigation, that the action of those engaged in repairing or rebuilding was not in contravention of the statute.

I am not prepared to say that he was wrong in so deciding, but whether right or wrong, the parties having gone ahead, and expended large sums of money, upon the faith of his consent, and without any subsequent dissent on his part, and having done this with full knowledge on his part, not hurriedly or covertly, but openly and during the greater part of a year, it would seem to me that the Court is now asked to do what the Legislatures of 1885 and 1891, recognizing as I do, all the dangers attending such an operation, refused to do, namely, to require the destruction or abandonment of a breaker already erected.

It is too late.

If the defendant had gone on in direct and unmistakable violation of the statute law, perhaps the case might be different, as for example, if the act of 1891 clearly and expressly forbade the rebuilding or extensive repairing of an old breaker on the original site, but where its legal right to do what it has done is doubtful, and was doubtful at the inception of the work, and during its progress, and it has gone upon the faith of a resolution of that doubt in its favor by the officer of the State having authority in the premises, and expended large sums of money, in good faith relying upon that decision, equity will refuse its aid, even to the State.

Adapting the language of the chancellor in Attorney General vs. The Delaware, &c., Railway Co., 27 N. J. Eq. p. 1, "The work has been from its commencement, a matter of public notoriety, and yet no action has been taken on the part of the State authorities, nor even any warning offered by them against the work. The defendants

have been permitted to make their immense expenditure upon their enterprise in the confidence of their convictions that they possessed all requisite legislative authority without even a word of protest or remonstrance"—indeed with the express sanction and encouragement of the State, speaking through its duly authorized official. "Under such circumstances, equity will refuse its aid, even to the State."

Quoted with approval in

Commonwealth vs. Phila., &c., Turnpike Co., 153, Pa. 55.

Now, October 27, 1903, this cause came on to be heard, and was argued by counsel, and thereupon, upon consideration thereof, it is ordered, adjudged and decreed as follows, viz., that the preliminary injunction heretofore granted on the 15th day of July, 1903, be and the same is hereby dissolved.

---

## DEPARTMENT OF MINES

The Bureau of Mines was created by the act of July 15, 1897, as a part of the Department of Internal Affairs. The act provided for a Chief of the Bureau, one clerk and a messenger, and lodged with the Governor the power to appoint the Chief. Governor Hastings named Robert Brownlee as Chief, and the Secretary of Internal Affairs named the clerk and messenger. At the time the Bureau of Mines was established the number of inspectors was 18, of which 8 were in the anthracite region and 10 in the bituminous region. As the Bureau was under the direct supervision of the Secretary of Internal Affairs, it was apparent to him at once that the clerical force provided was inadequate to perform the work, and he therefore detailed an additional clerk and a stenographer, increasing the force to five persons. But this force was not sufficient, and when I was appointed Chief of the Bureau by Governor Stone, on May 15, 1899, I instituted night work in the office. It was necessary to do this, particularly in the months of January, February, March and April, when the reports from the inspectors were coming in and the compilation of the annual report of the Bureau was in progress. The work was made still heavier in 1901 by the appointment of two additional inspectors in the bituminous region.

On the 14th of April, 1903, the act was approved creating the Department of Mines, and on the same day Governor Pennypacker appointed the present incumbent Chief of the new department. The act also provided for an assistant, two clerks, a stenographer and a messenger, a total of six persons, only one more than was employed in the Bureau.

On January 1, 1903, the act increasing the number of anthracite inspectors from eight to sixteen became operative, and under the provisions of section 5, article 10, of the act of May 15, 1893, the number of bituminous inspectors was also increased from ten to fifteen, raising the total number from eighteen to thirty-one, an increase of 72 per centum since the establishment of the Bureau.

In addition to this, the act of 1903, creating the Department of Mines, provided that the boards to examine applicants for the position of mine inspector, mine foreman, assistant mine foreman and miner, in the anthracite region, and first and second grade mine foremen, in the bituminous region, shall file all examination papers, including questions, answers and tally sheets, in the Department.

The act also provided that the Chief of the Department shall issue certificates of qualification to the mine foremen and assistant mine foremen in the anthracite region, and to the first and second grade mine foremen in the bituminous region, who are reported as having passed a successful examination. This work was formerly done by the Secretary of Internal Affairs, the Secretary of the Commonwealth, and the bituminous inspectors. The Miners' Examining Boards, however, were never before required to report their work to any of the State Departments.

The additional work, as referred to, with the increase in the number of inspectors, has overwhelmed the Department to such an extent that it has been almost impossible to keep abreast, notwithstanding the hours of the evening have constantly been devoted to work. It is apparent, therefore, that if the Department of Mines is to render the valuable service for which it was created, it will be necessary for the law to provide additional clerical force. I therefore recommend that section 9 of the act of April 14, 1903, be amended to read as follows:

"The Chief of the Department of Mines is hereby empowered to name a Deputy, four clerks, one messenger and one stenographer."

I recommend a Deputy, as it is necessary to have a person in authority that can decide important matters in the absence of the Chief of the Department, who is obliged to spend much time in investigating the complaints made from different parts of the State, and in visiting and consulting with the inspectors of the 31 districts.

In this connection it is proper to refer to the requirements of the Department in the way of accommodations in the new capitol building. The floor space required will be at least 3,800 square feet, to be divided into seven apartments for the Chief, Deputy, stenographer, clerks, messenger and exhibit room. The plan of the rooms and the details of their arrangement need not be mentioned here.

## Summary of the Work of the Department (formerly Bureau) of Mines

Years	Letters written, copied and indexed	Letters received, docketed and filed	Blanks sent to mine inspectors	Letter heads and envelopes sent to mine inspectors	Rules, general and special, sent to bituminous mine inspectors	Mine foremen's record books sent to bituminous mine inspectors, 300 pages each	Fire-bosses' daily record books sent to bituminous mine inspectors, 250 pages each	Annual reports of the Bureau of Mines, shipped from office	English mine laws in pamphlet form sent to mine inspectors	Monthly narrative reports sent to mine inspectors, 31 pages each	Books for recording accidents sent to mine inspectors, 400 pages each
1898, .....	922	1,216	30,570	7,200	2,500	275	50	1,522	1,353	171	18
1899, .....	697	972	42,394	26,188	2,012	279	..	1,830	1,353	171	18
1900, .....	1,854	1,342	76,428	26,750	2,165	490	270	2,735	1,353	455	17
1901, .....	1,465	1,690	67,468	25,200	4,390	20	15	2,303	1,353	517	17
1902, .....	1,733	1,324	51,806	21,750	4,390	618	373	1,987	1,353	475	11
1903, .....	2,901	2,328	89,650	93,600	2,080	173	90	4,052	11,250	475	11

Years	Reports of accidents received, copied and filed	Reports of inspections received, copied and filed	Daily reports of inspectors, showing duties performed and expenses incurred, copied and filed	Vouchers for incidental and other expenses compared, and delivered to Auditor General	Anthracite mine laws translated into foreign languages and distributed	Bituminous mine laws translated into foreign languages and distributed	Books of mine foremen's and assistant to mine foremen's certificates, 300 pages each, sent to mine inspectors	English mine laws in pamphlet form distributed	Mine inspectors' annual reports received, corrected and compiled for publication	Certificates of qualification issued to mine foremen and assistant mine foremen in the anthracite region after being recorded	Certificates of qualification issued to mine foremen of first grade and mine foremen of second grade in the bituminous region after being recorded
1898, .....	2,235	3,846	5,416	576	..	..	..	..	18	127	..
1899, .....	2,350	3,318	5,627	644	..	..	..	..	18	181	..
1900, .....	2,719	2,486	6,024	656	..	..	..	..	20	70	..
1901, .....	2,211	2,996	6,243	926	57,250	..	..	..	20	296	..
1902, .....	3,293	5,312	9,360	1,640	22,325	57,000	60	38,000	20	235	..
1903, .....	3,293	5,312	9,360	1,640	22,325	57,000	60	38,000	30	600	768

ABSTRACT FROM REPORT—ANTHRACITE REGION

Number of tons of coal mined, shipped, used at collieries, sold to local trade and used by employes; number of days worked, number of persons employed, number killed and injured, amount of powder and dynamite used, etc.

Districts	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in gross tons	Average number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules in use
First, .....	4,131,907	397,909	89,747	4,599,563	188	10,396	26	70	161,177	159,807	947
Second, .....	3,493,219	288,412	49,596	4,252,223	210	9,422	33	80	144,925	178,265	961
Third, .....	4,902,243	298,681	213,490	4,643,514	189	9,119	30	85	168,252	96,180	1,068
Fourth, .....	5,410,784	309,445	51,585	5,411,814	168	10,458	42	117	169,215	95,277	1,176
Fifth, .....	4,406,890	305,966	48,177	4,751,133	178	11,526	47	104	156,852	221,845	1,497
Sixth, .....	4,136,797	321,226	91,947	4,549,970	193	10,388	46	81	151,488	350,883	1,239
Seventh, .....	4,385,681	316,619	224,174	4,926,474	190	12,070	39	124	150,222	476,867	1,365
Eighth, .....	5,783,253	459,361	92,248	6,334,962	210	11,433	37	119	152,468	196,030	1,418
Ninth, .....	5,456,465	774,996	126,726	6,358,127	228	14,026	53	97	99,168	1,229,540	1,732
Tenth, .....	3,199,261	417,347	63,992	3,680,600	212	8,870	29	60	48,310	311,152	886
Eleventh, .....	3,511,378	427,293	39,688	3,978,269	234	8,821	34	84	80,054	319,680	813
Twelfth, .....	3,020,724	447,015	391,587	3,498,306	231	7,353	33	88	95,435	535,406	813
Thirteenth, .....	4,029,463	291,539	55,010	4,476,312	233	7,821	34	106	102,435	535,406	893
Fourteenth, .....	4,337,261	510,840	74,189	4,922,290	231	44,509	43	64	192,167	338,643	1,472
Fifteenth, .....	1,556,439	276,462	31,379	1,864,280	281	4,376	11	46	16,556	341,788	525
Totals, .....	60,231,104	5,750,341	1,220,506	67,171,951	211	151,827	518	1,325	1,701,176	5,317,422	16,872

ABSTRACT FROM REPORT—ANTHRACITE REGION—Continued

Districts	Number of Boilers			Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity in gallons delivered to surface per minute	Number of electric dynamos	Number of air compressors						
	Cylindrical			Steam										Air			Electric		
	Horse power	Tubular	Horse power	Horse power	Steam	Air								Electric	Steam	Air	Electric		
First, .....	141	3,585	119	13,941	17,526	23	26	25	259	20,060	60	46,379	36,241	15					
Second, .....	171	3,944	87	12,559	16,543	21	6	2	230	17,105	54	42,351	30,394	9					
Third, .....	77	4,703	65	14,940	19,643	10	3	13	266	17,472	56	32,378	23,021	8					
Fourth, .....	184	6,266	75	12,315	18,581	23	5	3	319	18,256	46	50,224	29,784	7					
Fifth, .....	111	3,633	142	22,510	26,318	28	5	2	427	26,626	56	41,356	25,186	4					
Sixth, .....	169	5,215	152	23,070	28,255	19	.....	.....	330	23,041	33	50,930	28,905	10					
Seventh, .....	153	6,012	143	27,081	33,123	23	4	4	380	41,976	38	55,246	16,132	4					
Eighth, .....	235	7,323	129	20,784	28,657	19	.....	.....	406	40,368	37	34,441	18,906	4					
Ninth, .....	364	9,327	815	49,171	53,693	106	12	.....	534	32,950	115	123,256	66,469	10					
Tenth, .....	134	4,351	294	25,256	29,629	18	3	.....	563	47,733	47	44,327	34,383	1					
Eleventh, .....	62	1,044	174	24,430	25,464	16	6	.....	579	37,699	40	32,424	31,303	.....					
Twelfth, .....	293	5,755	170	24,956	28,451	16	.....	.....	509	37,699	47	42,424	31,303	.....					
Thirteenth, .....	273	5,755	170	24,956	28,451	16	.....	.....	509	37,699	47	42,424	31,303	.....					
Fourteenth, .....	132	3,876	216	23,430	32,100	27	2	.....	371	41,193	50	66,283	44,123	2					
Fifteenth, .....	127	4,820	80	14,915	19,735	19	.....	.....	72	9,568	22	20,179	15,328	3					
Totals, .....	2,456	78,293	2,256	335,148	413,441	405	71	84	4,652	425,909	820	745,690	447,331	81					

TABLE A—ANTHRACITE, 1903

Number of each class of employes in each district

Districts	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside										Total outside	Grand total, inside and outside
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes			
First, .....	23	17	31	2,790	2,629	1,607	216	80	586	455	7,825	10	19	139	281	566	412	31	1,113	2,571	10,296	
Second, .....	29	23	20	2,569	2,419	1,024	166	53	539	154	6,365	8	23	120	249	494	437	50	1,106	2,487	9,422	
Third, .....	27	11	16	2,210	2,069	1,064	253	52	445	518	6,869	12	24	122	265	615	574	53	975	2,240	8,169	
Fourth, .....	23	15	15	2,277	2,183	1,072	274	62	369	300	6,582	.....	32	168	361	761	651	41	1,021	2,337	10,536	
Fifth, .....	23	15	15	2,277	2,183	1,072	274	62	369	300	6,582	.....	32	168	361	761	651	41	1,021	2,337	10,536	
Sixth, .....	28	21	40	2,891	2,690	1,385	249	80	593	370	7,339	11	25	179	309	731	634	57	1,033	3,029	10,388	
Seventh, .....	24	17	88	2,732	2,383	1,012	455	59	1,012	713	8,451	15	18	200	393	850	338	55	1,751	3,619	12,070	
Eighth, .....	22	17	61	2,729	2,428	1,018	411	55	820	672	8,245	8	22	132	364	941	320	41	1,326	3,187	11,423	
Ninth, .....	44	44	40	3,250	2,978	1,307	298	128	666	1,151	8,452	13	44	331	746	930	667	90	3,352	6,173	14,626	
Tenth, .....	24	13	79	1,340	1,335	333	91	383	458	1,300	5,052	12	27	175	412	798	335	51	2,008	3,818	8,870	
Eleventh, .....	16	13	65	1,940	1,307	386	107	41	497	1,177	5,549	4	12	111	399	998	418	37	1,383	3,272	8,821	
Twelfth, .....	27	15	70	1,857	927	308	96	25	543	977	4,845	15	26	147	448	557	224	50	1,611	3,078	7,923	
Thirteenth, .....	26	15	50	1,716	786	366	118	40	621	960	4,668	15	28	151	389	627	416	20	1,436	3,131	7,829	
Fourteenth, .....	28	28	109	1,477	1,437	657	165	69	1,130	1,432	9,312	20	216	216	369	1,337	347	64	2,669	5,268	14,580	
Fifteenth, .....	12	12	22	960	437	266	152	44	98	807	2,710	4	8	106	216	320	71	20	921	1,666	4,376	
Totals, .....	309	276	841	36,823	27,533	11,251	3,087	880	9,050	11,924	102,655	145	361	2,482	5,453	11,430	5,234	712	24,605	49,772	151,827	

TABLE B—ANTHRACITE, 1903

Causes of fatal accidents in and about the mines, and number attributable to each cause; number of wives made widows and children orphaned by reason of such accidents

Causes of Accidents Inside	Districts														Total	Percentage	
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth			Fifteenth
Falls of coal, slate and roof, .....	14	17	13	19	14	22	14	15	14	14	5	13	7	21	3	210	49.30
Mine cars, .....	7	5	5	7	7	6	4	9	5	4	1	5	2	3	4	70	16.43
Explosions of gas and dust, .....	.....	.....	.....	3	3	1	9	2	.....	.....	2	2	2	2	.....	26	6.10
Explosions of powder and dynamite, .....	.....	.....	.....	1	1	1	1	1	1	1	1	.....	.....	.....	.....	17	3.99
Premature blasts, .....	1	3	6	2	8	4	3	3	3	3	1	.....	.....	.....	.....	38	8.92
Falling into shafts, slopes, etc., .....	.....	.....	.....	1	1	1	3	3	2	2	3	2	1	3	2	31	7.28
Crushed at batteries, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kicked by mules, etc., .....	1	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	1.41
Suffocation from gas or otherwise, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Machinery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	22	30	26	35	37	42	34	35	34	13	30	28	17	35	8	426	100.00
Causes of Accidents Outside																	
Cars, .....	1	3	1	3	6	2	3	1	8	3	1	1	3	1	2	39	42.50
Machinery, .....	1	.....	.....	1	1	2	2	1	4	2	2	2	.....	.....	.....	25	27.18
Suffocation in chutes, etc., .....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	4.35
Boiler explosions, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous, .....	2	.....	.....	1	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2.17
Totals, .....	4	3	4	7	10	4	5	2	19	7	4	5	7	8	3	92	100.00
Grand total inside and outside, .....	26	33	30	42	47	46	39	37	53	20	34	33	24	43	11	518	.....

Number of widows, 209.  
Number of orphans, 352.



TABLE C—ANTHRACITE, 1903

Causes of non-fatal accidents in and about the mines, and number attributable to each cause

Causes of Accidents Inside	Districts															Total	Percentage
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth		
Falls of coal, slate and roof, .....	24	33	25	42	22	20	33	26	23	11	18	27	27	17	14	268	32.65
Mine cars, .....	13	13	14	30	21	15	23	27	13	7	13	18	12	15	8	249	22.09
Explosions of gas and dust, .....	2	10	12	1	3	19	16	27	3	9	11	4	30	3	4	181	16.06
Explosions of powder and dynamite, .....	1	5	9	9	2	5	13	3	13	1	4	6	1	3	2	55	4.88
Ignition of blazes, .....	1	1	1	12	13	6	12	9	2	5	11	7	3	2	2	112	9.94
Running of batteries, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13	1.15
Crushing at batteries, .....	1	1	4	2	3	1	1	4	1	1	1	1	1	1	1	11	1.8
Kicked by mules, etc., .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11	1.8
Suffocation from gas or otherwise, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11	1.8
Machinery, .....	12	6	6	12	3	5	16	12	14	13	5	8	7	8	2	129	11.45
Miscellaneous, .....	64	75	79	104	88	69	104	104	75	48	74	73	86	51	33	1,127	100.00
Totals, .....	64	75	79	104	88	69	104	104	75	48	74	73	86	51	33	1,127	100.00
Causes of Accidents Outside																	
Cars, .....	3	4	4	5	2	6	8	5	9	3	4	2	3	4	2	66	33.33
Machinery, .....	3	1	1	3	2	2	2	4	3	3	1	2	4	3	4	34	17.17
Suffocation in chutes, etc., .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.01
Boiler explosions, .....	1	1	2	7	8	4	10	6	10	7	5	2	13	6	7	96	48.49
Miscellaneous, .....	6	5	6	13	16	12	20	15	22	12	10	15	20	13	13	198	100.00
Totals, .....	6	5	6	13	16	12	20	15	22	12	10	15	20	13	13	198	100.00
Grand total inside and outside, .....	70	80	85	117	104	81	124	119	97	60	84	88	106	64	46	1,325	.....

TABLE D—ANTHRACITE, 1903

Number of gaseous and non-gaseous mines, number of foremen, assistants and fire bosses, production of coal from gaseous and non-gaseous mines and washeries, and percentage of production from each

Districts	Number of gaseous mines	Number of foremen and assistant foremen in gaseous mines	Number of fire bosses	Number of non-gaseous mines	Number of foremen and assistant foremen in non-gaseous mines	Production, in tons, from gaseous mines	Production, in tons, from non-gaseous mines	Production, in tons, from washeries	Percentage of production from gaseous mines	Percentage of production from non-gaseous mines	Percentage of production from washeries
First,	7	18	31	9	21	2,290,911	2,136,438	152,214	49.25	47.37	3.88
Second,	13	33	20	42	31	1,574,431	353,906	323,986	37.02	55.36	7.62
Third,	16	31	56	4	8	3,573,247	277,490	492,777	83.41	5.98	10.61
Fourth,	21	36	45	4	6	4,376,553	93,130	942,081	80.87	1.72	17.41
Fifth,	26	44	50	13	6	4,105,128	430,235	225,770	86.22	9.04	4.71
Sixth,	26	39	49	14	10	3,658,104	714,880	176,986	80.40	15.71	3.89
Seventh,	31	38	88	5	3	4,709,376	152,777	64,321	95.59	3.10	1.31
Eighth,	36	37	61	1	2	5,720,545	116,581	497,836	90.30	1.84	7.86
Ninth,	35	72	49	63	16	5,450,873	892,525	14,629	85.73	14.04	2.23
Tenth,	18	31	70	4	6	3,076,900	135,763	407,847	83.60	5.32	11.08
Eleventh,	29	29	65	.....	.....	3,978,269	.....	.....	100.00	.....	.....
Twelfth,	16	33	70	5	9	3,035,236	153,826	309,244	86.76	4.40	8.84
Thirteenth,	13	30	50	9	11	3,019,232	89,071	94,069	93.75	1.45	1.70
Fourteenth,	10	53	109	16	3	4,608,493	307,622	11,189	93.33	6.23	1.23
Fifteenth,	4	19	22	2	5	1,437,618	365,062	.....	86.38	19.62	.....
Totals and percentages, .....	281	529	841	197	137	54,905,146	8,658,896	3,677,909	81.33	13.41	5.26

CORRECTED TABLE E, PAGE XLI.  
Quantity of coal produced by each company that produced 700,000 or more tons, and the number of persons employed

Names of Companies	Numbers of Inspection Districts	Production of coal in tons	Employees
Philadelphia and Reading Coal and Iron Company, .....	Tenth, Fifteenth, Twelfth, Thirteenth, Fourteenth, Fifteenth, ..	10,051,829	93,999
Delaware, Lackawanna and Western Railroad Company, .....	First, Third, Fourth, Sixth, Seventh, Eighth, .....	7,713,893	14,180
Delaware and Hudson Company, .....	First, Second, Third, Fourth, Fifth, Sixth, Seventh, Eighth, .....	6,222,731	14,217
Lehigh Valley Coal Company, .....	Fourth, Fifth, Sixth, Seventh, Ninth, Tenth, Eleventh, Fifteenth, ..	5,787,600	12,329
Lehigh and Wilkes-Barre Coal Company, .....	Seventh, Eighth, Thirteenth, .....	3,988,644	7,625
Pennsylvania Coal Company, .....	Second, Third, Fourth, Fifth, Sixth, .....	3,189,464	7,356
Susquehanna Coal Company, .....	Seventh, Tenth, Fourteenth, .....	2,839,154	7,964
Scranton Coal Company, .....	First, Third, .....	2,298,122	5,590
Lehigh Coal and Navigation Company, .....	Ninth, Thirteenth, .....	2,029,368	4,205
Hillside Coal and Iron Company, .....	First, Second, Fifth, .....	1,698,158	3,624
Coxe Brothers and Company, Incorporated, .....	Ninth, Thirteenth, .....	1,311,993	2,755
Temple Iron Company, .....	First, Fourth, Sixth, .....	1,170,543	3,066
G. B. Markle and Company, .....	Ninth, .....	1,091,513	2,186
Kingston Coal Company, .....	Sixth, Eighth, .....	1,072,384	2,223
Parrish Coal Company, .....	Eighth, .....	808,771	1,626
Mineral Railroad and Mining Company, .....	Fourteenth, .....	741,189	2,457
Totals, .....	.....	51,509,806	115,402



TABLE E—ANTHRACITE, 1903  
Quantity of coal produced by each company that produced 700, 000 or more tons, and the number of persons employed

Names of Companies	Numbers of Inspection Districts	Production of coal in tons	Number of employes
Philadelphia and Reading Coal and Iron Company	Tenth, Eleventh, Twelfth and Fourteenth	9,151,989	22,004
Delaware, Lackawanna and Western Railroad Company	First, Third, Fourth and Eighth	6,557,144	12,265
Delaware and Hudson Company	First, Second and Eighth	2,322,682	3,707
Lehigh and Wilkes-Barre Coal Company	Seventh and Eighth	3,323,796	7,040
Lehigh Valley Coal Company	Fifth, Sixth and Ninth	3,335,192	7,041
Scranton Coal Company	First and Third	2,28,422	5,560
Susquehanna Coal Company	Seventh and Fourteenth	2,139,761	7,355
Lehigh Coal and Navigation Company	Ninth and Thirteenth	2,029,868	4,205
Pennsylvania Coal Company	Fifth	1,845,701	4,108
G. B. Markie and Company	Ninth	1,091,513	2,186
Coxe Brothers and Company	Ninth	891,788	2,184
Parrish Coal Company	Eighth	808,771	1,626
Mineral Railroad and Mining Company	Fourteenth	741,139	2,457
Totals		39,279,408	86,688

TABLE F—ANTHRACITE, 1883 TO 1903 INCLUSIVE

Classification of employes killed or fatally injured in and about the mines

Years	Inside Employes						Outside Employes						Total inside	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers	All others	Total outside	Grand total		
	Mine foremen	Fire bosses	Miners	Miners' laborers	Drivers and runners	Door boys, etc.	All others	Total inside	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers									All others	Total outside
1883	1	1	136	67	47	18	3	274	7	7	11	7	24	49	323							
1884	1	1	122	81	28	13	30	286	4	4	9	9	21	46	332							
1885	2	3	160	86	16	6	19	290	6	6	7	13	16	42	332							
1886	2	1	131	68	18	6	9	236	1	1	6	9	26	43	279							
1887	1	5	102	57	23	10	72	270	3	3	3	9	28	46	316							
1888	1	2	169	87	33	9	16	317	1	1	3	6	37	47	361							
1889	4	2	194	79	39	10	11	339	1	1	3	10	37	58	397							
1890	1	5	146	85	37	8	31	322	1	1	8	12	21	55	378							
1891	1	6	180	119	38	7	22	372	2	2	3	11	40	56	428							
1892	3	4	180	111	39	8	16	361	2	2	4	7	45	57	418							
1893	3	1	195	108	47	12	22	388	2	2	11	53	68	56	456							
1894	1	1	218	91	38	5	15	368	1	1	4	12	62	78	446							
1895	5	1	179	115	33	7	14	354	3	3	4	13	47	71	502							
1896	3	5	204	134	46	10	29	430	3	3	4	16	59	71	492							
1897	5	4	170	124	33	6	48	382	4	4	4	13	33	51	411							
1898	2	4	170	134	23	6	15	380	1	1	6	10	53	73	461							
1899	2	5	190	114	30	18	33	358	1	1	2	9	40	53	411							
1900	5	2	184	95	33	8	37	341	2	2	5	9	58	72	513							
1901	2	3	221	122	45	6	32	345	2	2	7	12	34	55	500							
1902	2	3	114	62	27	5	32	245	2	2	6	9	72	92	518							
1903	3	2	202	110	46	12	51	426	1	1	4	6	9	22	518							
Totals	47	57	3,635	2,024	731	188	517	7,199	11	61	107	212	839	1,230	8,429							

TABLE C—ANTHRACITE, 1883 TO 1903 INCLUSIVE  
Number and causes of fatal accidents in and about the mines

Years	Inside of Mines										Outside of Mines						Grand total						
	Coal	By Falls of		By Explosions of					By Falling into			Crushed at batteries	By mules	By suffocation	Miscellaneous causes	Total inside			By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes
State and roof		By mine cars	Gas and dust	Power, dynamite	Blasts, etc.	Shafts	Slopes	Manways and breasts	Miscellaneous causes	By cars	By machinery					By suffocation	By boiler explosions	Miscellaneous causes					
1884	158	66	52	39	11	28	14	5	2	.....	.....	.....	.....	13	24	12	.....	4	9	49			
1885	74	61	61	16	15	20	11	11	.....	.....	.....	.....	.....	19	286	16	13	.....	14	46			
1886	67	62	61	25	13	18	11	11	.....	.....	.....	.....	.....	*50	290	19	9	.....	7	42			
1887	67	62	35	24	7	14	5	3	.....	.....	.....	.....	.....	16	236	12	11	.....	5	43			
1888	74	75	49	19	7	14	9	1	.....	.....	.....	.....	.....	22	270	17	11	.....	1	17			
1889	85	89	58	20	11	24	3	3	.....	.....	.....	.....	.....	18	317	16	12	.....	19	47			
1890	81	100	58	29	10	24	3	5	.....	.....	.....	.....	.....	29	339	27	14	.....	6	58			
1891	67	70	56	60	3	16	17	8	.....	.....	.....	.....	.....	23	323	25	9	.....	7	58			
1892	75	97	59	39	13	33	11	6	.....	.....	.....	.....	.....	4	361	19	11	.....	2	56			
1893	80	104	57	45	11	30	7	2	.....	.....	.....	.....	.....	1	388	14	13	.....	1	418			
1894	83	104	53	29	18	28	13	5	.....	.....	.....	.....	.....	2	368	23	13	.....	12	456			
1895	66	122	32	31	24	27	7	7	.....	.....	.....	.....	.....	4	354	26	17	.....	1	493			
1896	68	187	49	41	9	28	13	3	.....	.....	.....	.....	.....	3	411	17	4	.....	4	502			
1897	54	120	40	36	10	33	6	3	.....	.....	.....	.....	.....	6	379	21	9	.....	0	473			
1898	78	128	44	33	11	27	5	4	.....	.....	.....	.....	.....	.....	379	15	14	.....	5	521			
1899	68	118	50	38	13	29	13	4	.....	.....	.....	.....	.....	8	389	26	12	.....	2	492			
1900	65	160	69	33	15	36	15	4	.....	.....	.....	.....	.....	16	423	12	12	.....	22	551			
1901	66	160	69	33	15	36	15	4	.....	.....	.....	.....	.....	5	324	10	14	.....	22	461			
1902	40	76	42	20	19	13	16	3	.....	.....	.....	.....	.....	3	441	19	12	.....	1	411			
1903	61	149	70	26	17	38	19	6	.....	.....	.....	.....	.....	2	425	39	25	.....	3	515			
Totals	1,479	2,194	1,124	684	246	551	269	89	57	15	52	139	369	7,199	435	272	45	65	413	1,230	8,429		

\*Nanticoke disaster; 26 persons were entombed by an inrush of quicksand.  
†Twin shaft disaster; 58 persons were entombed.

TABLE H—ANTHRACITE, 1892 TO 1903 INCLUSIVE  
Nationality of employes killed or fatally injured in and about the mines

Years	American	English	Welsh	Scottish	Irish	German	Polish	Hungarian	Italian	Slavonian	Lithuanian	Austrian	Russian	Greek	Swedish	French	Tyrolian	Bohemian	Assyrian
1892	88	33	40	2	63	18	96	43	14	9	9	3	3	2	1	1	.....	.....	.....
1893	73	36	41	1	75	25	120	38	13	15	3	6	6	1	2	1	.....	.....	.....
1894	76	37	43	4	76	27	91	62	16	2	1	7	2	.....	2	.....	.....	.....	.....
1895	78	38	40	3	73	23	115	51	18	4	4	4	1	3	1	.....	.....	.....	.....
1896	82	38	38	3	87	29	107	61	11	2	8	7	2	3	1	1	.....	.....	.....
1897	69	21	38	.....	77	29	107	61	11	2	8	7	2	3	1	1	.....	.....	.....
1898	73	21	47	.....	58	22	114	36	18	7	.....	6	9	4	1	.....	.....	.....	.....
1899	90	27	30	7	67	15	112	27	13	6	5	10	12	1	5	1	.....	.....	.....
1900	92	20	23	4	43	21	114	18	24	19	17	7	14	1	.....	1	.....	.....	.....
1901	135	22	24	2	58	16	139	27	25	25	29	8	7	.....	3	1	.....	.....	.....
1902	80	14	15	2	28	15	64	14	12	16	17	8	12	2	.....	1	.....	.....	.....
1903	128	17	30	2	50	26	125	14	33	27	17	25	13	1	2	.....	2	.....	1
Totals	1,057	309	319	35	755	217	1,357	441	215	140	169	100	78	23	15	5	7	1	1



TABLE I—ANTHRACITE, 1880 TO 1903 INCLUSIVE

Fatal accidents in and about the mines

Districts	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1900	1901	1902	1903
First, .....	64	*69	55	51	47	39	51	58	51	68	46	58	99	96
Second, .....	40	.....	35	25	41	34	39	53	37	42	45	62	27	36
Third, .....	150	60	80	64	57	69	108	63	87	62	56	64	58	30
Fourth, .....	66	90	82	84	77	74	73	60	75	81	71	78	48	43
Fifth, .....	66	53	48	58	58	52	42	33	32	48	40	60	26	47
Sixth, .....	39	68	54	60	74	59	67	72	54	72	65	72	52	46
Seventh, .....	17	56	45	77	78	59	76	46	46	52	49	62	46	39
Eighth, .....	.....	28	50	27	20	35	46	38	37	34	32	35	23	37
Ninth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	153
Tenth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20
Eleventh, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	34
Twelfth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	33
Thirteenth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24
Fourteenth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
Fifteenth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
Totals, .....	578	425	418	456	446	421	502	423	411	461	411	513	300	518

\*First and Second Districts reported together.  
 †Number of Inspectors increased by Act of 1901.

TABLE J—ANTHRACITE, 1890 TO 1903 INCLUSIVE  
Non-fatal accidents in and about the mines

Districts	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
First, .....	941	9215	1115	96	98	121	134	125	126	116	118	118	60	70
Second, .....	174	1831	1831	172	141	192	161	149	154	159	152	186	109	80
Third, .....	908	189	163	178	148	167	209	145	201	206	139	173	115	87
Fourth, .....	124	168	180	221	227	221	225	279	278	188	244	322	117	117
Fifth, .....	97	115	110	99	95	102	91	114	72	86	106	119	35	104
Sixth, .....	421	93	126	159	94	85	99	73	42	69	120	149	66	81
Seventh, .....	55	455	101	119	76	114	106	119	112	80	90	95	58	124
Eighth, .....	62	57	44	44	40	106	140	112	119	86	107	116	64	119
Ninth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	497
Tenth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
Eleventh, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	84
Twelfth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	88
Thirteenth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	106
Fourteenth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	64
Fifteenth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
Totals, .....	1,011	997	1,023	1,069	919	1,108	1,165	1,106	1,134	1,030	1,057	1,243	641	1,325

\*First and Second Districts reported together.  
Number of Inspectors increased by Act of 1901.

TABLE K—ANTHRACITE, 1892 TO 1903 INCLUSIVE

Production of coal in tons of 2,000 pounds, number of tons produced per employe inside, quantity of explosives used, and the number of tons of coal produced for each pound of explosive used

Years	Production of coal in tons of 2,000 pounds	Average number of tons of coal produced per employe inside.	Number of pounds of black powder used	Number of pounds of dynamite used	Average number of tons of coal produced per pound of explosive used
1892, .....	51,226,977	647	30,951,875	1,092,190	1.59
1893, .....	52,841,110	625	31,723,771	1,324,142	1.60
1894, .....	50,966,920	611	30,755,450	1,713,235	1.57
1895, .....	57,351,840	600	32,766,775	1,797,494	1.61
1896, .....	53,893,259	641	32,117,950	1,733,970	1.59
1897, .....	52,531,036	567	31,804,950	2,415,650	1.50
1898, .....	52,302,594	534	30,670,100	3,025,015	1.57
1899, .....	60,518,331	655	24,317,275	3,649,417	1.59
1900, .....	57,363,306	682	30,929,500	3,454,641	1.61
1901, .....	67,094,665	680	38,020,100	4,155,685	1.59
1902, .....	41,340,940	†420	21,128,675	2,130,965	*1.77
1903, .....	75,232,585	‡737	42,529,400	5,317,422	1.57

The ton of 2,000 pounds is used so that a comparison can be made with the bituminous production per pound of powder used.

\*The increase in production per pound of powder used was caused by the production of the washeries during the strike.

†This decrease in production per employe inside was caused by the small number of days worked on account of the strike.

‡The increase in production per employe was due to the large production of the washeries.

TABLE L—ANTHRACITE, 1890 TO 1903 INCLUSIVE  
Number of employes in and about the mines, by districts

Districts	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
First, .....	22,620	*23,974	14,121	15,637	16,014	16,272	17,694	18,065	17,890	17,143	17,285	18,773	18,460	10,336
Second, .....	13,739	17,354	14,131	14,429	15,627	16,243	16,243	16,536	17,795	17,156	18,690	18,054	18,220	10,336
Third, .....	18,471	17,354	13,763	14,763	15,627	16,243	16,243	16,536	17,795	17,156	18,690	18,054	18,220	9,410
Fourth, .....	14,429	14,961	21,006	22,740	22,763	24,169	26,059	25,650	23,377	23,688	23,067	24,317	24,764	10,438
Fifth, .....	14,289	14,961	15,977	17,540	18,361	18,467	17,568	17,119	14,649	14,293	15,111	16,108	14,364	11,526
Sixth, .....	18,527	19,270	20,668	21,872	20,109	19,810	20,979	21,656	20,159	19,905	20,278	20,277	20,858	10,388
Seventh, .....	8,789	18,325	18,437	19,197	19,121	19,239	20,195	19,670	19,557	20,317	20,655	19,844	19,856	12,070
Eighth, .....	.....	9,740	10,417	10,777	10,734	11,306	13,335	13,432	12,965	12,682	12,041	12,655	13,383	11,433
Ninth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14,626
Tenth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,870
Eleventh, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,821
Twelfth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,923
Thirteenth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,823
Fourteenth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14,580
Fifteenth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,376

\*First and Second Districts reported together.  
†Number of inspectors was increased by the act of 1901.

TABLE M—ANTHRACITE, 1890 TO 1903 INCLUSIVE,  
Number of employes in and about the mines, by counties

Counties	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
Carbon, .....	3,222	3,312	3,848	4,410	5,391	4,382	4,153	4,748	2,989	2,238	2,517	6,365	3,805	4,051
Columbia, .....	2,219	2,787	2,424	2,661	2,011	1,756	2,074	5,909	2,436	2,309	2,094	2,329	2,339	2,255
Dauphin, .....	2,203	2,155	2,294	2,091	2,682	30,362	27,788	27,892	27,174	27,309	27,577	27,353	27,343	27,140
Lackawanna, .....	43,716	41,825	48,193	51,332	52,994	55,798	58,711	55,138	52,877	52,598	52,740	51,280	52,808	51,629
Luzerne, .....	19,538	12,437	12,825	13,487	13,870	14,522	14,737	15,139	13,833	14,607	15,105	14,187	14,763	14,580
Northumberland, .....	25,155	29,986	32,049	33,611	31,696	32,232	35,650	35,088	34,238	33,508	33,228	33,907	34,970	33,413
Scranton, .....	237	229	291	307	312	312	334	327	321	351	351	434	472	648
Sullivan, .....	659	823	969	1,045	1,012	2,191	1,186	1,294	1,138	1,210	1,250	909	1,386	1,367
Susquehanna, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wayne, .....	.....	18	.....	.....	.....	.....	.....	.....	.....	1,466	11	589	.....	.....

TABLE N—ANTHRACITE, 1890 TO 1903 INCLUSIVE  
Production of coal in tons, by districts

Districts	1890	1891	1892	1893	1894	1895	1896
First, .....	8,932,295	9,981,856	5,854,659	6,202,131	5,907,331	6,510,817	6,217,447
Second, .....	5,229,627	6,013,538	6,013,538	5,936,475	5,674,539	6,189,465	5,895,669
Third, .....	6,907,709	6,125,047	5,659,730	5,629,915	5,541,952	6,311,834	5,734,929
Fourth, .....	5,776,689	7,639,698	7,519,005	8,065,769	7,162,961	8,066,539	8,017,852
Fifth, .....	6,311,865	5,803,964	5,842,725	6,239,068	6,132,627	6,590,966	5,872,427
Sixth, .....	4,429,632	6,492,950	6,287,366	6,674,807	6,340,631	7,164,898	6,521,510
Seventh, .....	2,579,160	5,302,050	5,464,678	5,288,893	5,404,823	6,134,542	5,594,049
Eighth, .....	.....	3,031,067	3,066,092	3,142,505	3,341,315	3,925,013	4,239,847
Ninth, .....	.....	.....	.....	.....	.....	.....	.....
Tenth, .....	.....	.....	.....	.....	.....	.....	.....
Eleventh, .....	.....	.....	.....	.....	.....	.....	.....
Twelfth, .....	.....	.....	.....	.....	.....	.....	.....
Thirteenth, .....	.....	.....	.....	.....	.....	.....	.....
Fourteenth, .....	.....	.....	.....	.....	.....	.....	.....
Fifteenth, .....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	40,166,327	44,376,180	45,738,373	47,179,563	45,506,179	50,847,104	48,074,330

†First and Second districts reported together.

TABLE N—ANTHRACITE, 1890 TO 1903 INCLUSIVE—Continued

Districts	1897	1898	1899	1900	1901	1902	1903
First, .....	6,249,833	6,515,790	7,374,571	6,368,949	7,728,314	4,032,924	4,599,553
Second, .....	5,985,630	5,496,450	6,774,458	6,429,112	8,674,060	6,032,123	4,979,288
Third, .....	5,875,823	5,964,467	6,854,711	6,296,932	6,925,658	6,077,192	4,918,514
Fourth, .....	7,457,418	7,866,277	8,648,452	8,585,741	9,891,332	6,761,696	5,411,814
Fifth, .....	5,487,550	5,556,859	6,194,027	4,170,784	6,374,295	3,490,755	4,761,133
Sixth, .....	6,475,980	6,513,155	7,538,404	7,020,571	8,683,928	3,568,897	4,549,970
Seventh, .....	5,108,948	5,074,834	6,308,234	6,070,101	7,032,828	3,668,369	4,926,474
Eighth, .....	4,306,222	4,158,651	4,244,567	4,274,528	5,172,530	3,223,387	6,334,962
Ninth, .....	.....	.....	.....	.....	.....	.....	6,338,127
Tenth, .....	.....	.....	.....	.....	.....	.....	3,680,640
Eleventh, .....	.....	.....	.....	.....	.....	.....	3,978,269
Twelfth, .....	.....	.....	.....	.....	.....	.....	3,498,306
Thirteenth, .....	.....	.....	.....	.....	.....	.....	3,476,312
Fourteenth, .....	.....	.....	.....	.....	.....	.....	4,927,304
Fifteenth, .....	.....	.....	.....	.....	.....	.....	1,863,280
Totals, .....	46,947,354	47,145,174	54,034,224	51,217,318	59,995,951	36,911,549	67,171,951

\*Number of inspectors increased by act of 1901

TABLE P—ANTHRACITE, 1890 TO 1903 INCLUSIVE  
Production of coal in tons, by counties

Counties	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
Carbon, .....	1,296,541	1,191,158	1,427,543	1,510,289	1,589,365	1,577,146	1,488,550	1,327,235	1,445,288	1,630,595	1,663,961	1,659,392	986,127	1,419,662
Columbia, .....	599,404	761,559	689,490	741,991	510,537	493,042	443,330	481,453	569,175	895,061	875,643	1,080,231	658,991	1,208,813
Dauphin, .....	577,490	633,569	639,879	640,723	693,697	712,856	792,333	662,842	677,460	729,757	695,656	741,582	377,983	654,437
Leackawanna, .....	9,374,359	10,184,348	11,410,554	11,697,550	11,170,382	11,859,382	11,638,479	11,946,871	11,589,601	13,248,949	12,282,158	15,409,040	10,581,401	17,688,333
Luzerne, .....	15,825,674	17,126,569	17,548,568	18,253,145	17,243,928	19,143,101	17,964,500	17,141,809	17,793,773	19,899,742	19,179,573	21,396,312	13,016,428	24,891,394
Northumberland, .....	3,068,547	3,672,828	3,724,234	3,731,445	3,893,660	4,573,114	4,117,569	3,774,667	3,519,365	4,339,547	4,188,243	4,841,699	2,823,273	4,927,304
Schuylkill, .....	9,045,216	9,538,111	9,564,534	9,962,086	9,885,082	11,495,388	11,092,772	10,971,943	10,989,700	12,229,938	11,606,160	13,616,766	7,693,266	14,693,487
Sullivan, .....	63,746	74,884	76,009	70,418	.....	152,141	154,788	194,045	147,533	168,555	209,422	136,165	365,194	262,702
Susquehanna, .....	315,350	369,713	467,622	571,956	413,578	840,964	474,637	476,488	422,939	496,432	496,432	683,487	404,248	714,376
Wayne, .....	.....	3,450	.....	.....	.....	.....	.....	.....	.....	275,955	19,520	329,877	.....	61,513
Totals, .....	40,166,327	44,376,180	45,738,373	47,179,563	45,506,179	50,847,104	48,071,330	46,947,354	47,145,174	54,634,224	51,217,318	59,995,951	36,911,549	67,171,951



TABLE Q—ANTHRACITE, 1870 TO 1903 INCLUSIVE

Fatal accidents per each 1,000 employes in and about the mines, and tons of coal mined for each fatal accident

Years	Employes	Fatal accidents	Fatal accidents per 1,000 employes	Number of tons of coal mined	Number of tons of coal mined for each fatal accident
1870, .....	35,600	211	5.93	12,653,575	59,970
1871, .....	37,488	210	5.60	13,868,087	66,039
1872, .....	44,745	169	3.71	13,899,976	83,735
1873, .....	48,190	224	4.65	18,751,358	83,711
1874, .....	53,402	231	4.33	17,794,357	77,034
1875, .....	64,956	238	3.40	20,895,220	87,795
1876, .....	70,474	228	3.24	19,611,071	86,013
1877, .....	66,842	194	2.90	22,077,869	113,803
1878, .....	61,964	187	2.92	18,661,577	99,795
1879, .....	68,847	262	3.81	27,711,250	105,768
1880, .....	73,373	292	2.75	24,843,476	122,988
1881, .....	76,031	273	3.59	30,210,018	110,659
1882, .....	82,290	291	3.54	30,867,201	106,073
1883, .....	91,421	323	3.53	33,200,608	102,788
1884, .....	101,073	332	3.28	32,561,330	98,076
1885, .....	100,820	332	3.31	33,520,941	100,967
1886, .....	103,044	279	2.71	34,064,543	122,095
1887, .....	106,517	319	2.97	37,137,231	117,523
1888, .....	122,218	364	2.98	41,638,426	114,391
1889, .....	119,664	297	2.32	30,015,835	75,632
1890, .....	119,919	378	3.15	40,080,355	106,033
1891, .....	123,308	428	3.47	44,320,967	103,554
1892, .....	130,165	418	3.21	45,738,373	109,422
1893, .....	138,069	456	3.30	47,179,563	103,464
1894, .....	139,839	416	3.19	45,566,179	102,031
1895, .....	143,080	421	2.94	51,207,000	121,632
1896, .....	150,298	502	3.34	48,074,330	95,765
1897, .....	149,557	423	2.83	46,947,354	110,987
1898, .....	142,416	411	2.89	47,145,174	114,708
1899, .....	140,056	461	3.28	54,034,234	117,211
1900, .....	143,516	411	2.86	51,217,318	124,616
1901, .....	147,681	513	3.47	59,805,951	116,776
1902, .....	148,139	300	2.03	36,911,554	123,033
1903, .....	151,827	518	3.41	67,171,951	129,675



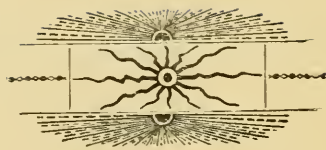
---

---

# ANTHRACITE MINE DISTRICTS

---

---



# First Anthracite District

LACKAWANNA AND SUSQUEHANNA COUNTIES

---

Scranton, Pa., March 5, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: In compliance with Section 15 of the Anthracite Mine Law of June 8, 1901, I have the honor of presenting my report as Inspector of the First Anthracite District for the year 1903.

The tables clearly set forth all the statistical information pertaining to tonnage and accidents, but on account of this being the first report since the division of the district, it is impossible to make an intelligent comparison of detailed results with previous years, except to state that the percentage of fatal accidents to the number of tons of coal produced was greater in 1903 than in 1902.

Respectfully submitted,

L. M. EVANS,  
Inspector.

## First Anthracite District, 1903

## SUMMARY OF STATISTICS

Number of mines in district, .....	16
Number of mines in operation, .....	16
Number of tons of coal produced, .....	4,509,563
Number of tons shipped to market, .....	4,131,907
Number of tons sold at mines to local trade, .....	39,747
Number of tons consumed at mines in generating steam and heat, .....	337,909
Number of persons employed inside the mines, .....	7,825
Number of persons employed outside, .....	2,571
Number of fatal accidents inside the mines, .....	22
Number of tons produced for each fatal accident inside,...	204,980
Number of persons employed per fatal accident inside, ...	356
Number of fatal accidents outside, .....	4
Number of persons employed per fatal accident outside,..	643
Number of wives made widows by fatal accidents,.....	14
Number of children orphaned by fatal accidents, .....	23
Number of non-fatal accidents inside of mines, .....	64
Number of persons employed per non-fatal accident inside,	122
Number of non-fatal accidents outside, .....	6
Number of persons employed per non-fatal accident out- side, .....	428
Number of steam locomotives used inside, .....	2
Number of compressed air locomotives used inside, .....	26
Number of electric motors used inside, .....	25
Number of fans used for ventilation, .....	31
Number of gaseous mines in operation, .....	7
Number of non-gaseous mines in operation, .....	9

---

TABLE A.—First Anthracite District, 1903

PRODUCTION OF COAL	
Names of Companies	Tons
Hillside Coal and Iron Company, .....	831,032
Scranton Coal Company, .....	1,271,260
Delaware and Hudson Company, .....	1,218,355
Delaware, Lackawanna and Western Railroad Company, .	672,785
Temple Iron Company, .....	427,192
North End Coal Company, .....	88,939
	<hr/>
Total, .....	4,509,563
	<hr/> <hr/>
Production by Counties	
Lackawanna, .....	3,794,587
Susquehanna, .....	714,976
	<hr/>
Total, .....	4,509,563
	<hr/> <hr/>

TABLE B.—First Anthracite District, 1903  
 Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Companies	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per fatal accident	Number of employees outside per non-fatal accident
	Fatal Accidents		Non-fatal Accidents		Total	Total									
	Inside	Outside	Inside	Outside											
Hillside Coal and Iron Co., .....	7	.....	11	.....	11	75,548	1,017	177	119	.....	1,017	.....	.....	.....	.....
Seranton Coal Co., .....	4	3	6	2	8	241,877	3,433	69	403	.....	3,433	.....	.....	399	508
Delaware and Hudson Co., .....	3	1	18	4	22	406,118	2,530	624	104	657	2,530	.....	.....	657	164
Delaware, Lackawanna and Western R. Co., .....	4	.....	20	.....	20	33,693	1,387	294	211	.....	1,387	.....	.....	.....	.....
Temple Iron Co., .....	2	.....	8	.....	8	53,663	1,942	407	227	.....	1,942	.....	.....	.....	.....
North End Coal Co., .....	2	.....	1	.....	1	88,330	382	151	80	.....	382	.....	.....	.....	.....
Totals and averages for district, .....	22	4	64	6	70	294,380	10,395	356	2,571	643	10,395	122	.....	643	423



TABLE C.—First Anthracite District, 1903  
Classification of Fatal Accidents

	Inside of Mines										Outside of Mines						Grand total								
	Coal	State	Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	Slopes	Manways, breasts, etc.	Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes	Total inside		By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside		
January			1													1		1					1	2	3
February				1																			1	1	2
March																									3
April			1																						1
May	1																								2
June				2																					2
July		1																							3
August			3																						3
September	1			1																					3
October			1																						1
November			1																						1
December			2																						2
Totals	3	2	9	7				1								22	1	1					4	26	

TABLE D.—First Anthracite District, 1903  
Classification of Non-Fatal Accidents

	Inside of Mines										Outside of Mines						Grand total						
	By Falls of			By Falling into							Total inside							Total outside					
	Coal	Slate	Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	Slopes	Manways, breasts, etc.	Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes	Total inside		By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside
January	1		1	1												1							1
February			1	1												1							1
March	1		1	2												4							1
April			1	2												4							1
May	1		1	1												3							1
June			1	1												4							1
July	1		4	1	3											11							4
August			1	1												4							1
September		1	5	1												7							1
October			1	1												4							1
November			1	4												6							1
December			1	1												2							1
Totals	3	1	20	18	3		2	5							64	3	2					6	70

TABLE E.—First Anthracite District, 1903  
Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines

	Inside											Outside								Grand total	
	Mine foremen	Assistant mine foremen	Fire bosses and assistants.	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes		Total outside
January					1										1						1
February						1															
March																					
April				1																	
May				2																	
June						1															
July						1															
August						1															
September				1		1			1												
October				1		1															
November				2		1															
December				1		1															
Totals	1			7		5	1		2		22				1				3	4	25

TABLE F.—First Anthracite District, 1903  
Occupations of Persons Injured Inside and Outside the Mines

	Inside										Outside								Grand total		
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks		All other employes	Total outside
January, .....				2	1	2			1		4									1	1
February, .....				2	4						4									1	1
March, .....				2	1						4									1	1
April, .....				1	1	1					3									1	1
May, .....				1	1	1					4									1	1
June, .....				1	4						4									1	1
July, .....				1	1						11									1	1
August, .....				3	3			1			8									1	1
September, .....				1	3	2					7									1	1
October, .....				1	1	2					4									1	1
November, .....				3	1	1		1			6									1	1
December, .....				1	1	2		1			5									1	1
Totals, .....				33	19	8	1	1	2		61						1		5	6	70

TABLE G.—First Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	English	Welsh	Scotch	Irish	German	Polish	Austrian	Russian	Totals
January, .....	3									3
February, .....										
March, .....			1		1					2
April, .....			1							1
May, .....					1					1
June, .....							1			1
July, .....	1							1		2
August, .....	1		1				1			3
September, .....								1		1
October, .....				1						1
November, .....			1		1					2
December, .....						1	3		1	5
Totals, .....	5		4	1	3	1	8	3	1	26

TABLE H.—First Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Hungarian	Italian	Slavonian	Austrian	Russian	Totals
January, .....	3					2						5
February, .....	2					1		1		1	1	7
March, .....				1	1	1			2			5
April, .....	1					1				1		3
May, .....				1		1	1					3
June, .....	1		1			1		1				4
July, .....	2	2	3			4						11
August, .....	1	2	1	1		5						9
September, .....	2	1	1			4				1		8
October, .....	2					1						4
November, .....	2			1		1			1			3
December, .....	4		1	1		1		1				8
Totals, .....	19	4	6	5	1	24	1	3	3	3	1	70

TABLE I.—First Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed	Average number provided for each person
Hillside Coal and Iron Co.																
Clifford mines, .....	Shaft, .....	Non-gas.	Fan, .....	18	5	5	80	.6	Guibal,	Steam, ...	4	75,000	72,500	74,570	275	963
Edwards shaft, .....	Shaft, .....	Non-gas.	Fan, .....	14	7	7	65	.4	Guibal,	Steam, ...	6	43,828	57,536	103,882	412	232
Dummers vein, .....	Shaft, .....	Non-gas.	Fan, .....	24	7	7	65	.4	Guibal,	Steam, ...	1	4,600	4,400	5,600	30	190
Forest City slope, .....	Slope, .....	Non-gas.	Fan, .....	14	6	5	100	.8	Guibal,	Steam, ...	5	83,700	76,550	91,650	251	304
Glenwood mines, .....	Shaft, .....	Non-gas.	Fan, .....	18	3	3	100	.5	Guibal,	Steam, ...	5	65,000	62,080	90,900	157	395
Scranton Coal Co.																
Richmond No. 3 mines, .....	Shaft, .....	Gaseous.	Fan, .....	18	4	5	120	.4	Guibal,	St-ear, ...	3	82,000	53,730	94,000	196	274
Richmond No. 4 mines, .....	Shaft, .....	Non-gas.	Fan, .....	14	4	4.5	50	.4	Guibal,	Steam, ...	1	24,500	17,800	25,200	61	291
Johnsons No. 1, .....	Shaft, .....	Gaseous.	Fan, .....	30	5	5	50	1.3	Guibal,	Steam, ...	11	173,875	146,500	176,215	553	417
Johnsons No. 2, .....	Shaft, .....	Non-gas.	Fan, .....	18	5	6	116	1.3	Guibal,	Steam, ...	4	84,000	98,650	98,650	285	239
Ontario colliery, Sturgess shaft, .....	Shaft, .....	Non-gas.	Fan, .....	20	6	6.25	65	1.2	Guibal,	Steam, ...	4	65,100	64,500	73,525	216	223
Ontario tunnel, .....	Tunnel, .....	Non-gas.	Fan, .....	14	3.5	3.5	90	.6	Guibal,	Steam, ...	1	39,800	39,800	40,200	64	621
Ontario, Jernyn No. 6, .....	Tunnel, .....	Non-gas.	Fan, .....	12	3	3.5	90	.4	Guibal,	Steam, ...	1	23,100	23,100	20,325	57	415
Ontario, Blue Ridge tunnel, .....	Tunnel, .....	Non-gas.	Fan, .....	15	3	3	55	.5	Guibal,	Steam, ...	1	35,150	35,000	37,100	75	466
Ontario, Blue Ridge shaft, .....	Shaft, .....	Non-gas.	Fan, .....	15	4.5	4	55	.6	Guibal,	Steam, ...	3	57,400	48,000	58,300	172	329
Raymond No. 1 shaft, .....	Shaft, .....	Non-gas.	Fan, .....	18	3	6	75	.6	Guibal,	Gasoline,	2	23,750	23,750	35,375	137	274
Raymond No. 2 shaft, .....	Shaft, .....	Non-gas.	Fan, .....	18	3.3	3	105	.50	Guibal,	Gasoline,	3	33,250	39,200	35,150	137	213
Riverside shaft, .....	Shaft, .....	Gaseous.	Fan, .....	22	4	6	70	1.40	Guibal,	Gasoline,	3	51,200	44,993	51,425	145	310
Delaware and Hudson Co.																
Coal Brook, Wilson opening, .....	Drift, .....	Non-gas.	Fan, .....	20.5	5	6	78	2.40	Guibal,	Steam, ...	8	89,870	83,430	100,740	328	274
Coal Brook opening, .....	Drift, .....	Non-gas.	Fan, .....	17	4	4.25	45	.40	Guibal,	Steam, ...	3	32,000	32,000	33,100	99	321
Coal Brook, Mills opening, .....	Drift, .....	Non-gas.	Fan, .....	19	2.06	2.06	95	.39	Guibal,	Gasoline,	5	286,649	250,000	26,900	77	372
Leggett's Creek No. 1 shaft, .....	Shaft, .....	Gaseous.	Fan, .....	20	5	6	75	1.50	Guibal,	Steam, ...	5	286,649	280,000	33,300	267	1,048
Leggett's Creek No. 2 shaft, .....	Shaft, .....	Gaseous.	Fan, .....	20	5	6	75	2.50	Guibal,	Steam, ...	4	148,320	154,300	162,810	85	1,815

Leggett's Creek No. 3 shaft, .....	Shaft,....	Gaseous,	Fan,.....	6	75	2.00	Guibal,	Steam,...	5	203,300	213,400	224,500	238	866
Marvine No. 1 shaft, .....	Shaft,....	Gaseous,	Fan,.....	5	83	1.40	Guibal,	Steam,...	7	298,000	234,000	300,500	234	895
Marvine slope, .....	Slope,....	Gaseous,	Fan,.....	5	61	.40	Guibal,	Steam,...	4	295,000	278,000	387,500	350	796
D. L. and W. R. R. Co.														
Storrs No. 1, mine, .....	Shaft,....	Gaseous,	Fan,.....	4	96	1.3	Guibal,	Steam,...	9	111,535	109,713	113,860	432	253
Storrs No. 2, mine, .....	Shaft,....	Gaseous,	Fan,.....	6	98	1.2	Guibal,	Steam,...	9	137,729	110,464	158,749	360	307
Storrs No. 3 mine, .....	Shaft,....	Gaseous,	Fan,.....	6	102	.9	Guibal,	Steam,...	9	157,655	114,815	246,001	257	446
Temple Iron Co.														
Lackawanna mine, .....	Shaft,....	Gaseous,	Fan,.....	5	80	1.5	Guibal,	Steam,...	5	129,000	120,000	135,000	340	352
Lackawanna tunnel, .....	Tunnel,...	Non-gas,	Natural,	5	70	1.40	Guibal,	Steam,...	3	46,000	35,000	30,000	67	821
Northwest mine, No. 1 slope, .....	Slope,....	Non-gas,	Fan,.....	5	70	1.40	Guibal,	Steam,...	3	46,125	43,425	48,130	59	488
Northwest mine No. 2 slope, .....	Slope,....	Non-gas,	Fan,.....	6	80	1.50	Guibal,	Steam,...	6	98,070	92,625	98,120	117	321
North End Coal Co.														
North End, .....	Tunnel,...	Non-gas,	Natural,	.....	.....	.....	.....	.....	5	59,000	56,500	61,300	94	611

TABLE 1.—First Anthracite District, 1903  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
Hillside Coal and Iron Co. Clifford colliery, .....	Susquehanna, .....	V. L. Peterson, .....	Scranton, .....	S. J. Jennings, .....	Forest City, .....	Erie
Forest City colliery, .....	Susquehanna, .....	V. L. Peterson, .....	Scranton, .....	S. J. Jennings, .....	Forest City, .....	Erie
Glenwood colliery, .....	Lackawanna, .....	V. L. Peterson, .....	Scranton, .....	J. F. Gallagher, .....	Mayfield, .....	Delaware and Hudson
Scranton Coal Co. Richmond No. 3 colliery, .....	Lackawanna, .....	John R. Bryden, .....	Scranton, .....	Wm. L. Allen, .....	Peckville, .....	Ontario and Western
Richmond No. 4 colliery, .....	Lackawanna, .....	John R. Bryden, .....	Scranton, .....	Wm. L. Allen, .....	.....	Ontario and Western
Johnsons colliery, .....	Lackawanna, .....	John R. Bryden, .....	Scranton, .....	Wm. L. Allen, .....	.....	Ontario and Western
Ontario colliery, .....	Lackawanna, .....	John R. Bryden, .....	Scranton, .....	Wm. L. Allen, .....	.....	Ontario and Western
Riverside colliery, .....	Lackawanna, .....	John R. Bryden, .....	Scranton, .....	Wm. L. Allen, .....	.....	Ontario and Western
Raymond colliery, .....	Lackawanna, .....	John R. Bryden, .....	Scranton, .....	Wm. L. Allen, .....	.....	Ontario and Western
Delaware and Hudson Co. Cowl Brook colliery, .....	Lackawanna, .....	C. C. Rose, .....	Scranton, .....	E. W. Scharar, .....	Scranton, .....	Delaware and Hudson
Marvine, .....	Lackawanna, .....	C. C. Rose, .....	Scranton, .....	Finley Ross, .....	Scranton, .....	Delaware and Hudson
Leggitts Creek, .....	Lackawanna, .....	C. C. Rose, .....	Scranton, .....	Finley Ross, .....	Scranton, .....	Delaware and Hudson
Delaware, Lackawanna and Western R. R. Co. Storrs, .....	Lackawanna, .....	R. A. Phillips, .....	Scranton, .....	Walter Reese, .....	Scranton, .....	D., L. and W.
Temple Iron Co. North West colliery, .....	Lackawanna, .....	F. H. Hemeiright, .....	Scranton, .....	John W. White, .....	Carbondale, .....	Erie
Lackawanna colliery, .....	Lackawanna, .....	F. H. Hemeiright, .....	Scranton, .....	Jas. Reese, .....	Olyphant, .....	Delaware and Hudson
North End Coal Co. North End, .....	Lackawanna, .....	E. E. Roderick, .....	Scranton, .....	E. E. Roderick, .....	Scranton, .....	Ontario and Western



TABLE 2.—First Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Hillside Coal and Iron Co.												
Clifford colliery, .....	Susquehanna,	189,687	12,199	1,437	203,323	228	446	3	1	8,241	6,754	40
Forest City colliery, .....	Susquehanna,	480,781	23,373	7,439	511,653	247	921	3	9	28,080	14,522	79
Glenwood colliery, .....	Lackawanna,	80,420	24,378	.....	110,728	178	259	1	1	1,946	1,332	27
Glenwood washery, .....	Lackawanna,	756,888	59,880	8,936	825,704	271	1,906	7	11	33,277	23,068	157
		5,328	.....	.....	5,328	83	11	.....	.....	.....	.....	.....
Totals, .....		762,246	59,880	8,936	831,032	.....	1,617	7	11	38,297	22,068	155
Scranton Coal Co.												
Richmond No. 3, .....	Lackawanna,	88,287	6,488	506	95,281	187	357	.....	.....	8,850	1,370	40
Richmond No. 4, .....	Lackawanna,	25,770	4,380	276	37,426	101	116	.....	.....	1,037	1,570	20
Johnsons, .....	Lackawanna,	345,188	39,000	2,652	387,840	196	981	4	3	12,401	18,950	46
Ontario, .....	Lackawanna,	209,620	30,000	1,711	242,331	225	920	.....	.....	10,450	51,450	87
Riverside, .....	Lackawanna,	37,309	14,610	408	112,408	215	233	1	3	3,429	600	36
Raymond, .....	Lackawanna,	269,671	16,290	3,029	279,891	189	733	1	.....	8,131	14,112	51
Raymond washery, .....	Lackawanna,	1,027,836	116,678	9,663	1,148,177	186	3,369	6	8	39,128	87,912	329
		111,809	3,776	1,438	123,083	118	69	1	.....	.....	.....	1
Totals, .....		1,115,645	114,454	11,161	1,271,260	.....	3,438	7	8	33,128	87,912	330
Delaware and Hudson Co.												
Coal Brook, .....	Lackawanna,	516,536	16,390	.....	532,806	267	1,004	2	8	14,000	15,714	80
Marvine, .....	Lackawanna,	287,695	26,290	2,049	316,934	272	727	.....	5	11,076	2,168	60

†Totals in this column are averages.

\*133,498 tons produced at Forest City colliery were prepared for shipment at Clifford breaker

TABLE 2—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of nonfatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Leggitt's Creek, .....	Lackawanna,	288,441	51,526	4,755	344,722	277	765	2	9	15,760	10,867	54
Delaware, Lackawanna and Western R. R. Co. Storrs, .....	Lackawanna,	1,092,732	84,116	7,704	1,194,552	272	2,496	3	22	41,886	28,879	194
Leggitt's Creek washery, .....	Lackawanna,	23,801	.....	2	23,803	62	34	.....	.....	.....	.....	.....
Totals, .....	.....	1,116,533	84,116	7,706	1,218,355	.....	2,520	4	22	41,876	28,879	194
Delaware, Lackawanna and Western R. R. Co. Storrs, .....	Lackawanna,	634,681	34,451	3,643	672,785	235	1,887	4	20	27,276	12,859	93
Temple Iron Co. North West, .....	Lackawanna,	211,887	12,648	655	225,190	214	457	.....	2	4,589	1,438	79
Lackawanna, .....	Lackawanna,	178,246	18,356	5,406	202,002	172	585	2	6	8,190	4,965	74
Totals, .....	.....	800,122	30,988	6,061	837,172	193	1,042	2	8	12,779	6,963	153
North End Coal Co. North End, .....	Lackawanna,	82,669	4,070	2,240	88,939	162	382	2	1	2,361	246	19
Grand totals, .....	.....	4,431,907	337,909	39,747	4,509,563	.....	10,396	26	70	161,177	159,807	947

TABLE 2—Recapitulation

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Not including washeries)	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Hillside Coal and Iron Co., .....	Lack. & Susq.,	762,216	59,880	8,976	831,032	201	1,617	7	11	38,267	23,008	175
Scranton Coal Co., .....	Lackawanna,	1,145,645	114,454	11,161	1,271,260	186	3,438	7	8	39,128	87,912	330
Delaware and Hudson Co., .....	Lackawanna,	1,116,532	94,116	7,705	1,218,355	272	2,530	4	22	41,876	78,879	194
Temple Iron Co., .....	Lackawanna,	634,681	34,461	3,643	672,785	255	1,387	4	20	27,256	12,879	96
North End Coal Co., .....	Lackawanna,	399,133	30,398	6,681	427,192	193	1,042	2	8	12,779	6,973	153
.....	Lackawanna,	82,689	4,000	2,249	88,939	162	382	3	1	2,361	246	19
Totals, .....	.....	4,131,907	337,309	39,747	4,509,563	208	10,396	26	70	161,177	159,807	947

TABLE 2—Continued

Names of Operators and Collieries	County	Number of Boilers			Total horse power	Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular		Horse power	Steam	Air							
Hillsite Coal and Iron Co.															
Clifford colliery, .....	Susquehanna.	.....	.....	7	650	650	2	.....	9	495	4	2,440	1,200	.....	.....
Forest City colliery, .....	Susquehanna.	.....	.....	18	1,430	1,430	2	.....	7	2,505	3	1,600	1,570	.....	.....
Glenwood colliery, .....	Lackawanna.	.....	.....	12	960	960	.....	.....	6	200	10	4,456	3,505	.....	.....
Totals, .....		.....	.....	37	2,970	2,970	4	.....	32	3,295	16	7,896	6,015	5	.....
Scranton Coal Co.															
Richmond No. 3, .....	Lackawanna.	6	375	3	375	750	1	.....	7	625	2	950	650	.....	.....
Richmond No. 4, .....	Lackawanna.	.....	.....	5	420	420	.....	.....	5	290	1	500	422	.....	1
Johnsons, .....	Lackawanna.	.....	.....	13	1,585	1,585	1	.....	20	1,880	5	5,000	4,000	.....	2
Ontario, .....	Lackawanna.	.....	.....	5	460	1,235	4	.....	26	2,060	5	2,680	1,870	.....	2
Riverside, .....	Lackawanna.	.....	.....	5	400	580	.....	.....	13	1,101	5	4,491	2,836	.....	.....
Raymond, .....	Lackawanna.	7	725	7	725	830	2	.....	16	365	3	4,492	2,685	.....	2
Raymond washery, .....	Lackawanna.	53	1,435	38	3,975	5,410	8	.....	87	6,841	20	14,682	10,104	.....	3
Totals, .....		.....	.....	53	3,360	3,360	1	.....	4	180	4	650	400	.....	.....
Delaware and Hudson Co.															
Coal Brook, .....	Lackawanna.	12	240	5	600	840	4	10	5	580	.....	.....	.....	.....	4
Martins, .....	Lackawanna.	37	740	.....	.....	740	.....	6	28	2,242	4	5,855	4,000	.....	.....
Leggett's Creek, .....	Lackawanna.	24	480	10	2,000	2,480	.....	10	50	3,065	5	8,300	4,000	.....	6
Totals, .....		73	1,460	15	2,600	4,060	4	16	83	5,908	9	14,355	8,000	1	10

D., L. and W. R. R. Co.	12	540	11	1,386	1,926	3	10	27	1,916	2	2,160	1,156	3
Lackawanna, .....													
Temple Iron Co.	3	150	3	770	970	2		8	655				2
North West, .....													
Lackawanna, .....													
Lackawanna, .....													
Totals, .....	3	150	10	2,190	2,340	3		22	1,701	9	6,736	4,572	3
North End, .....													
North End Coal Co.			5	490	490		2	4	225				1
Lackawanna, .....													
Grand totals, .....	141	3,585	119	13,941	17,526	23	26	259	20,660	60	46,373	30,241	15

TABLE 2—Recapitulation

Hillside Coal and Iron Co.	37	2,970	2,970	4	7	32	3,255	16	7,886	6,015	5	.....	
Summit Coal Co.	41	4,345	5,740	9	6	91	7,021	24	17,332	10,504	5	3	
Delaware, .....	73	1,169	2,600	4	26	83	5,968	9	14,255	8,000	1	10	
Delaware, Lackawanna and Western R. R. Co., .....													
Temple Iron Co.	12	540	1,386	3	10	27	1,910	2	2,160	1,156	3	.....	
Lackawanna, .....	3	150	2,190	3		22	1,701	9	6,736	4,572	1	.....	
Lackawanna, .....													
North End Coal Co.			490		2	4	225					.....	
Lackawanna, .....													
Totals, .....	141	3,585	119	13,941	17,526	23	26	259	20,660	60	46,373	30,241	15

TABLE 3.—First Anthracite District, 1903  
Number of Each Class of Employes at Each Colliery

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside							Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Book-keepers and clerks	All other employes	Total outside
Hillside Coal and Iron Co.	Susquehanna.	1	1	1	116	105	54	5	3	10	12	306	1	1	3	6	27	28	3	72	140	446
Cliff colliery, .....	Susquehanna.	1	1	1	270	280	98	27	3	31	41	758	1	1	17	12	31	15	8	83	103	921
Forest City, .....	Susquehanna.	1	1	1	60	64	22	3	6	7	10	174	1	1	5	15	7	8	29	65	239	
Glenwood, .....	Lackawanna.	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	11	11	
Glenwood washery, .....	Lackawanna.	3	2	.....	446	449	174	85	18	48	63	1,228	1	3	25	33	65	55	6	191	379	1,617
Totals, .....	.....	8	7	8	975	763	305	80	23	84	159	2,421	7	8	54	118	245	115	11	419	1,017	3,438
Seranton Coal Co.	Lackawanna.	1	.....	2	85	95	55	4	2	.....	32	276	1	1	6	19	12	15	1	26	81	957
Richmond No. 3, .....	Lackawanna.	1	.....	.....	20	25	10	.....	.....	.....	14	72	1	1	2	6	4	15	1	14	44	106
Richmond No. 4, .....	Lackawanna.	2	1	5	295	245	103	35	15	.....	80	721	1	1	13	28	69	63	3	130	300	981
Ontario, .....	Lackawanna.	2	3	.....	285	165	76	10	6	70	.....	627	1	1	16	25	65	27	3	177	302	991
Riverside, .....	Lackawanna.	1	1	.....	33	33	25	.....	.....	14	.....	179	1	1	9	12	27	8	.....	77	253	
Raymond, .....	Lackawanna.	1	3	.....	225	236	36	24	4	.....	21	516	1	1	3	8	9	.....	64	187	733	
Raymond washery, .....	Lackawanna.	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47	69	69	
Totals, .....	.....	8	7	8	975	763	305	80	23	84	159	2,421	7	8	54	118	245	115	11	419	1,017	3,438
Delaware and Hudson Co.	Lackawanna.	1	4	.....	236	298	88	50	.....	55	25	697	1	8	19	23	23	128	2	126	317	1,004
Coal Brook, .....	Lackawanna.	2	.....	6	166	166	101	36	9	90	.....	586	1	1	20	59	23	23	1	59	141	727
Marvine, .....	Lackawanna.	2	.....	7	210	210	54	12	6	85	5	590	1	7	31	53	.....	.....	3	8	175	765
Leggett's Creek, .....	Lackawanna.	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23	54	34
Leggett's Creek washery, .....	Lackawanna.	5	4	13	642	644	243	68	15	230	30	1,873	3	23	71	115	151	.....	6	288	657	2,530
Totals, .....	.....	5	4	13	642	644	243	68	15	230	30	1,873	3	23	71	115	151	.....	6	288	657	2,530



TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Total		
		January	February	March	April	May	June	July	August	September	October	November	December			
Hillside Coal and Iron Co. Clifford colliery, .....	Susquehanna,	21.7	19.4	17.3	19.3	20.7	21.9	22.9	21.6	20.3	16.9	13.1	12.9	288		
		22.7	23.5	19.3	21.3	23.8	23.2	24.8	24.8	18.2	14.7	13.6	14.3	277		
		17.9	15	15.4	14.3	13.6	13.9	13.9	13.9	13.3	4.4	.....	.....	128		
		Averages, .....	20.5	19.3	16.7	18.5	19	19	20.6	19.9	17.6	12	13.3	13.8	211	
Scranton Coal Co. Richmond No. 3, .....	Lackawanna,	20.2	19.6	19.6	19.2	18.2	21.2	22.1	14.6	1.6	8.2	13	9.4	187		
		6.9	6.2	5.8	7.6	9.9	11.9	8.7	8.5	10.8	8.5	7.9	8.2	101		
		22.5	15.7	16.7	18.4	21.4	20.3	19.6	17.4	14.5	8.6	12.2	8.7	196		
		23.5	20	20.8	20.5	22.5	20.5	23.1	18.9	17.7	12.8	13.3	11.3	225		
		21.8	18.1	18.4	20.2	18.3	20	16.3	14.3	15.9	16.7	19.6	15.7	215		
		19	19.1	17.7	17.2	17.8	18.6	20.1	16.5	12.6	9.1	11.7	9.7	189		
		Averages, .....	19	16.5	16.5	17.2	18	18.8	18.3	15	12.1	10.6	12.9	10.5	186	
		Delaware and Hudson Co. Coal Brook .....	Lackawanna,	25.00	25.55	23.88	22.44	21.66	22.44	24.66	24.44	21.44	14.33	20.66	20.66	967
				24.00	23.60	24.00	25.44	23.22	24.88	23.55	24.77	20.44	16.88	20.00	22.00	272
				26.33	26.11	27.22	24.00	22.00	24.66	23.65	23.77	20.77	18.00	19.55	21.22	277
Averages, .....	25.1			24.9	25	24	22.3	24	24	24.3	20.9	16.4	20.1	21.3	272	
Delaware, Lackawanna and Westm R. R. Co. Storrs colliery, .....	Lackawanna,	25.5	18.6	12.9	23.6	21.8	21.7	22.1	21.7	19.5	14.7	17.5	14.9	235		
		Averages, .....	19.3	17.3	18.8	17.8	18.9	18.7	20.5	20.5	19.5	13.8	16.3	12.5	214	
Temple Iron Company. North West, .....	Lackawanna,	16.1	14.4	13.2	16.1	16.1	15.8	14.7	14.1	14.9	11.2	13.5	12.7	172		
		Averages, .....	17.7	15.9	16	17	17.5	17.3	17.6	17.3	16.8	12.5	14.9	12.6	193	
		North End, .....	Lackawanna,	.....	.....	.....	11	19.7	20.7	21.2	19.4	18	18.7	17.8	15.9	162
				Averages, .....	21.6	19	17.4	18.6	19.7	20.3	20.6	19.6	17.5	14.2	16.1	14.8



TABLE 3—Recapitulation

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker.												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Hillside Coal and Iron Co., .....	Lack. & Susq.	20.5	19.3	16.7	18.5	19	19	20.6	19.9	17.6	12	13.3	13.8	21
Swanton Coal Co., .....	Lackawanna,	29	16.5	16.5	17.2	18	18.8	13.3	15	12.1	10.6	12.9	10.5	186
Delaware, .....	Lackawanna,	23.1	24.3	15	24	21.3	21	24	24.3	20.9	16.4	20.1	21.3	272
Delaware, Lackawanna and Western R. R. Co., .....	Lackawanna,	23.1	18.6	12.9	23.6	27.5	27	22.1	21.7	13.5	14.7	17.5	14.9	235
Temple Iron Co., .....	Lackawanna,	17.7	13.9	16	17	17.5	17.5	17.5	17.5	16.8	12.5	14.9	12.6	133
North End Coal Company, .....	Lackawanna,	.....	.....	.....	11	19.1	29.1	21.2	19.4	18	18.1	17.8	13.3	163
Averages, .....	.....	21.6	19	17.4	18.6	19.7	20.3	20.6	19.6	17.5	14.2	16.1	14.8	28

TABLE 4.—First Anthracite District, 1903  
Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 1	Patrick Caffery, .....	American, ..	Flasher, ....	37	M.	1	1	Raymond washery	Lackawanna, ..	Smothered by culm. He was working at the end of a culm line, when the bank gave way from under him.
15	James Healey, .....	American, ..	Breaker eng.	35	S.	.....	.....	Johnsons No. 2, ....	Lackawanna, ..	By falling 90 feet over a railing in the breaker while making his daily examination. For reason, not known, he overreached.
21	Michael Henry, .....	American, ..	Laborer, ....	30	M.	1	2	Coal Brook, .....	Lackawanna, ..	By fall of roof. After firing two blasts the reason they returned to examine the reason they took their lunch and returned to the face the second time. A piece of roof fell, killing Henry instantly and injuring a miner.
March 4	David Jones, .....	Welsh, .....	Runner, ....	29	S.	.....	.....	Storrs No. 1, .....	Lackawanna, ..	By falling from cars. He was riding out on cars that became derailed and received such injuries that when found he was dead.
20	Mathew Fitzimous, ....	Irish, .....	Switch boy, ..	17	S.	.....	.....	Coal Brook, .....	Lackawanna, ..	By falling under moving cars. He was crossing between cars when he fell under, the wheels passing over his body.
April 21	Joseph Thomas, .....	Welsh, .....	Miner, .....	38	S.	.....	.....	Leggitt's Creek, ...	Lackawanna, ..	He was killed by a fall of roof that he knew to be dangerous.
May 12	Michael Ciezewski, ....	Polish, .....	Miner, .....	31	M.	1	.....	Johnsons No. 2, ....	Lackawanna, ..	Killed in the face of his chamber by a fall of roof while trying to get out.
16	James McGinnis, .....	Irish, .....	Miner, .....	42	S.	.....	.....	Clifford, .....	Susquehanna, ..	By fall of rock in his chamber, that gave no sign or warning of danger.
June 2	Laud Larenis, .....	Polish, .....	Driver, .....	19	S.	.....	.....	Clifford, .....	Susquehanna, ..	By cars. He attempted to cross between cars while the runner was bumping up a car behind him. He received a badly lacerated leg, from which he died the next day.

June	29	Andrew Keeper, .....	Polish, .....	Laborer, ... 25	S. ....	Lackawanna, .....	Lackawanna, ..	By fall of roof while loading his car. The miner says he examined it a short time previous and was of the opinion it was safe.
	30	Andrew Pedro, .....	Austrian, ...	Footman, ... 30	M. 1 2	Forest City, .....	Susquehanna, ..	Was walking between the tracks at the foot of slope for an empty trip to land. When opposite him it became derailed, discharging a prop that fell over on him, causing a fractured skull, from which he died the next day.
July	17	George Morochka, .....	Austrian, ...	Laborer, .... 40	M. 1 2	Glenwood, .....	Lackawanna, ..	By fall of coal. The miner says that he and another warned the laborer not to go under the roof and that it was taken down by blasting, which he was doing at the time.
	18	Rubev Barron, .....	American, ..	Driver, .....	17 S. ....	Johnsons No. 1, .....	Lackawanna, ..	By cars. In crossing from one side to the other, before moving cars to turn his mule, he stumbled and fell under the cars. Received injuries to his chest from which he died next day.
	28	Charles Zukis, .....	Polish, .....	Laborer, ... 21	S. ....	North End, .....	Lackawanna, ..	By fall of roof. The foreman ordered the miner to prop or take it down a short time previous, but he failed to do it.
Aug.	5	Stanley Kaslowski, .....	Polish, .....	Laborer, ... 28	S. ....	Storris No. 2, .....	Lackawanna, ..	By fall of roof. The miner says he warned the laborer not to go under this roof, which he (the miner) knew to be dangerous.
	5	John Jones, .....	Welsh, .....	Runner, .... 19	S. ....	Storris No. 3, .....	Lackawanna, ..	By fall of roof. While walking to an oil lamp on the gangway to put oil in his lamp, a large stone fell on him, killing him instantly. This stone was examined the morning of the accident by the foreman, timberman and miner and pronounced safe, but it contained a slip that could not be detected.
	26	James Coggins, .....	American, ...	Co. laborer, 28	M. 1 ....	North End, .....	Lackawanna, ..	By cars. The victim and others had detached a rope from a car on the plane to place the car on the opposite track, when the car got on the track they failed to hold it until the rope was attached, and it ran over Coggins and killed him.
Sept.	22	Frank Sayer, .....	Austrian, ...	Laborer, ... 24	M. 1 ....	Clifford, .....	Susquehanna, ..	By fall of coal. After falling to hear down the piece, the miner decided to blast it down and had the hole in two feet when the laborer went under the piece and it fell on him, killing him instantly.
Oct.	31	Thomas Furgison, .....	Scotch, .....	Miner, .....	M. 1 2	Leggett's Creek, ...	Lackawanna, ..	By fall of roof. He was removing props with a drill to give the blast a better chance. Was killed instantly.
Nov.	19	Wm. P. Jones, .....	Walsh, .....	Miner, .....	M. 1 5	Forest City, .....	Susquehanna, ..	By fall of rock. While replacing an air pipe under a piece of roof it fell on him, killing him instantly. This roof was disturbed by a blast.

TABLE 4—Continued.

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
23	James McHale, .....	Irish, .....	Doortender, ..	60	M.	1	.....	Storrs No. 1, .....	Lackawanna, ..	By cars. In attempting to open his door for a trip of cars that were only six feet away, and moving very slowly, he became excited and was caught between the door and car, and was killed instantly.
Dec. 4	William Becoski, .....	Polish, .....	Driver, .....	17	S.	.....	.....	Johnsons No. 1, .....	Lackawanna, ..	By cars. In attempting to mount a moving trip of cars he fell under, receiving a lacerated arm, from which he died of lock jaw on December 10.
7	John Horosko, .....	Polish, .....	Laborer, ...	37	M.	1	6	Forest City, .....	Susquehanna, ..	By a fall of "bell" roof from an otherwise safe roof. Was not detected although in a cross-cut.
10	Michael Conyack, .....	Polish, .....	Miner, .....	48	M.	1	2	Raymond, .....	Lackawanna, ..	By fall of "bell" roof in the face of his chamber that was apparently safe.
23	Michael Krust, .....	Russian, ...	Miner, .....	34	M.	1	1	Lackawanna, .....	Lackawanna, ..	By fall of "bell" roof. After discharging a hole three times he returned the last time too soon, and was killed by the blast, when within 18 feet from the face.
28	Peter Berghauser, .....	German, ....	Watchman, ..	62	M.	1	.....	Riverside, .....	Lackawanna, ..	By falling over a walk in a breaker. The railing had been removed on account of repairs being made at the time. He fell 32 feet.

TABLE 5—First Anthracite District, 1903  
Non-Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 7	Stanley Delura, .....	Polish, .....	Miner, .....	28	M.	Lackawanna, .....	Lackawanna.	By explosion of powder from a spark of his lamp while he was preparing a charge.
8	William Collier, .....	American, .....	Motor boy, .....	16	S.	Coal Brook, .....	Lackawanna.	By cars. Stood at top of plane outside to see the effects of a runaway trip land at the bottom. When it landed it struck another trip attached to a rope and threw the victim in mid air, breaking his arm.
22	Thomas Foy, .....	American, .....	Footman, .....	27	S.	Storrs No. 2, .....	Lackawanna.	Reaching in with his leg to take off the block a piece of coal fell down the shaft, striking him, causing a serious fracture of the leg.
24	John Pidgion, .....	American, .....	Miner, .....	48	M.	Coal Brook, .....	Lackawanna.	By cars. While walking in the gangway he failed to hear the coming of the trip and was squeezed between the rib and cars, breaking his hip.
26	Joseph Lukayzk, .....	Polish, .....	Miner, .....	20	M.	Lackawanna, .....	Lackawanna.	In placing a derailed car on the track it slipped over on to the victim, breaking his leg.
Feb. 2	Bezer Zerib, .....	Austrian, .....	Footman, .....	40	M.	Johnsons breaker, ...	Lackawanna.	By cars. He stepped in front of an empty car that was being run under the chutes. Hip dislocated.
3	Stephen Kaplowka, .....	Polish, .....	Driver, .....	16	S.	Forest City, .....	Susquehanna.	By cars. While riding on the bumpers his leg became fast and his ankle was sprained.
19	Peter Qurnnan, .....	American, .....	Miner, .....	26	S.	Coal Brook, .....	Lackawanna.	By fall of roof. While replacing a disbarred prop a piece of roof fell on him, breaking his leg.
21	Samuel Russan, .....	Russian, .....	Miner, .....	40	M.	Lackawanna, .....	Lackawanna.	By fall of roof. While examining his chamber after a blast a piece of roof fell on him, lacerating his hip.
21	Dometro Kaco, .....	Italian, .....	Laborer, .....	37	M.	Glenwood, .....	Lackawanna.	By fall of roof. While loading his car roof fell on him, injuring his chest and limbs.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Feb. 25	Julius Smith, .....	Polish, .....	Miner, .....	39	M.	Leggitt's Creek, ....	Lackawanna, ..	By blocking his car the motor picked up a prop and came in contact with the casing, fracturing it.
27	John Neary, .....	American, .....	Brakeman, .....	18	S.	Leggitt's Creek, ....	Lackawanna, ..	By John's pushing the motor, it pushed an empty car in a chamber it became derailed. Leg caught between cars and motor and broken.
March 12	James Casper, .....	Slavonian, .....	Laborer, .....	22	M.	Forest City, .....	Susquehanna, ..	By cars. While riding on the bumper, his foot was caught and leg broken above the ankle.
13	William Meyers, .....	German, .....	Laborer, .....	21	S.	Lackawanna, .....	Lackawanna, ..	By a fall of roof. He was taking down roof and more came than was expected and broke his arm.
25	Mike Pender, .....	Irish, .....	Runner, .....	36	S.	Coal Brook, .....	Lackawanna, ..	While releasing a brake on a railway car outside, he slipped and fell on the rail and fractured his leg.
28	John Vindunski, .....	Slavonian, .....	Laborer, .....	36	M.	Storrs No. 2, .....	Lackawanna, ..	By fall of roof in the chamber while loading his car.
29	Nathan Mitchel, .....	Polish, .....	Laborer, .....	41	S.	North West, .....	Lackawanna, ..	In attempting to pass before a moving car he got on the wrong side and was squeezed between the cars and rib.
April 11	Thomas Lewis, .....	American, .....	Slate picker, .....	16	....	Leggitt's Creek, ....	Lackawanna, ..	While oiling a scraper line at the breaker his clothes were caught and drew him in, causing a badly lacerated leg.
17	William Bores, .....	Polish, .....	Miner, .....	40	M.	Marvine, .....	Lackawanna, ..	By premature blast. Victim says he did not shorten the match, but believes it to have been imperfect.
27	Frank Mahutes, .....	Austrian, .....	Miner, .....	28	M.	Clifford, .....	Susquehanna, ..	While unhooking the rope on top of a plane he was struck by it and thrown to the rib, breaking his arm.
May 13	Joseph Kraske, .....	Polish, .....	Laborer, .....	25	S.	Forest City, .....	Susquehanna, ..	By cars. While riding up a slope on a trip he fell under the cars and had two ribs broken and received other injuries.
16	Patrick Noone, .....	Irish, .....	Driver, .....	19	S.	Storrs No. 2, .....	Lackawanna, ..	By cars while riding up a slope, the reader caught squeezing him between the mule and car, fracturing his shoulder.

31	John Yacub, .....	Hungarian, ....	Miner, .....	36	M.	Richmond No. 4, .....	Lackawanna, ..	By fall of roof. While barring down loose roof after a blast, he was injured about the hip.
June	Jacob Trice, .....	Polish, .....	Miner, .....	27	S.	Ontario, .....	Lackawanna, ..	By blasting. He shortened the squib, and failed to get to a safe place in time. Injured about the back and leg.
9	John Lowcna, .....	Italian, .....	Laborer, .....	40	S.	Riverside, .....	Lackawanna, ..	By a falling wall. While eating his lunch near the wall the concussion of a cave-in in old works blew the wall on him and broke his arm.
15	Benjamin Harris, .....	American, .....	Switchman, ..	17	S.	Forest City, .....	Susquehanna, ..	By cars. While sanding the rail on a moving train, it caught into another man's head and smashed his thumb.
25	David J. Thomas, .....	Welsh, .....	Laborer, .....	33	S.	Leggitt's Creek, ....	Lackawanna, ..	By fall of roof. While barring it down he received injuries abut the back and had one rib broken.
July	William James, .....	Welsh, .....	Miner, .....	42	M.	Storrs No. 1, .....	Lackawanna, ..	{ By explosion of gas. While taking down some loose roof a fall disturbed a small body of gas, which was ignited by their lamps five feet away, and the place being very low they received burns about the face and hands.
2	Peter Peterson, .....	Polish, .....	Laborer, .....	22	S.	Storrs No. 1, .....	Lackawanna, ..	{
2	John Conear, .....	Polish, .....	Laborer, .....	26	S.	Storrs No. 1, .....	Lackawanna, ..	{
11	Anthony Kilganon, ....	American, ....	Laborer, .....	31	S.	Coal Brook, .....	Lackawanna, ..	{ By fall of roof. It fell on the gob and slid over on him where he was cleaning a fall and badly lacerated his leg.
13	John Parlyn, .....	English, .....	Miner, .....	59	M.	Forest City, .....	Susquehanna, ..	{ By fall of roof. While barring down a fall, he slid into his drill and broke his leg about five inches above the knee.
22	John Kasidar, .....	Polish, .....	Miner, .....	32	M.	Lackawanna, .....	Lackawanna, ..	{ By blasting. He failed to get out of the way in time and was struck by flying coal and had a leg broken.
24	Anthony Balerats, ....	Polish, .....	Miner, .....	35	M.	Storrs No. 3, .....	Lackawanna, ..	{ Standing in a cross-cut waiting for a blast to go off he was struck by a piece of coal that rebounded, lacerating his leg.
29	Henry Williams, .....	Welsh, .....	Miner, .....	38	M.	Leggitt's Creek, ....	Lackawanna, ..	{ On a moving cage he tried to remove a block of buntan, and had one finger taken off.
29	George Kell, .....	English, .....	Miner, .....	45	M.	Johnsons No. 1, .....	Lackawanna, ..	{ By fall of roof. While barring down some loose roof he slipped and a piece fell on him and broke his leg.
30	Thomas Griffiths, .....	American, ....	Laborer, .....	22	S.	Storrs No. 2, .....	Lackawanna, ..	{ By fall of roof. While the miner was taking roof down the laborer went under and had his leg broken.
31	John Reese, .....	Welsh, .....	Miner, .....	40	M.	Leggitt's Creek, ....	Lackawanna, ..	{ By fall of roof. While barring it down it fell on him, breaking his leg.
Aug.	Edgar Weber, .....	English, .....	Miner, .....	27	M.	Storrs No. 1, .....	Lackawanna, ..	{ When near the foot of the shaft the hoisting engineer threw his reverse lever the wrong way lowering the men to the bottom with such force that it threw them in various positions. Not very seriously injured.
1	James Weber, .....	English, .....	Miner, .....	24	S.	Storrs No. 1, .....	Lackawanna, ..	{
1	Anthony Rubef, .....	Polish, .....	Miner, .....	42	M.	Storrs No. 1, .....	Lackawanna, ..	{
1	George Verbeski, .....	Polish, .....	Miner, .....	29	M.	Storrs No. 1, .....	Lackawanna, ..	{
1	Chas. Mutishofski, .....	Polish, .....	Laborer, .....	35	M.	Storrs No. 1, .....	Lackawanna, ..	{
1	Stanley Swartz, .....	Polish, .....	Laborer, .....	28	M.	Storrs No. 1, .....	Lackawanna, ..	{

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Aug. 6	Henry Loftus, .....	American, .....	Miner, .....	35	M.	Coal Brook, .....	Lackawanna, ..	By fall of rock. Immediately on returning to the face to make an examination after a blast a piece of roof fell on him, breaking his leg. While barring down a piece fell on him, injuring his back and shoulder.
19	Patrick Gallagher, .....	Irish, .....	Miner, .....	45	M.	Storrs No. 3, .....	Lackawanna, ..	By fall of roof. While barring down a piece fell on him, injuring his back and shoulder.
28	George Kudoock, .....	Polish, .....	Miner, .....	31	M.	Storrs No. 1, .....	Lackawanna, ..	By fall of roof. While barring down a piece fell on him, injuring his back and shoulder.
Sept. 1	Joseph Kearney, .....	American, .....	Driver, .....	15	S.	Leggitt's Creek, ...	Lackawanna, ..	In running the car from his chamber the drag was not released and the car was thrown on to the victim, breaking his leg, dropping out of a bolt, and causing the car to enter the chamber on the side of its truck and struck the victim, fracturing his skull.
2	Joseph Dumfiski, .....	Polish, .....	Laborer, .....	35	M.	Leggitt's Creek, ...	Lackawanna, ..	By fall of roof. He and the miner failed to get down a bad piece of roof. They started to work under it when it fell, fracturing his skull.
3	John Fabine, .....	Austrian, .....	Laborer, .....	28	M.	Forest City, .....	Susquehanna, ..	By fall of roof in his chamber, he received a badly lacerated arm.
8	Michael Kenshan, .....	American, .....	Pump runner, ..	32	S.	Marvine, .....	Lackawanna, ..	By cars. While walking alongside a moving trip of cars a prop fell off the track and caught his foot against the pillar, bruising instep.
15	William Olkna, .....	Polish, .....	Laborer, .....	27	S.	Marvine, .....	Lackawanna, ..	By fall of roof. While replacing a damaged prop, he received several cuts about the body.
23	John Kozloski, .....	Polish, .....	Miner, .....	31	M.	Johnsons No. 2, .....	Lackawanna, ..	By fall of roof in chamber while drilling a hole. He knew this roof to be usually bad, but failed to take it down. His back was broken.
28	Richard Arscott, .....	Welsh, .....	Miner, .....	27	S.	Storrs No. 3, .....	Lackawanna, ..	By fall of roof that he thought to be safe. Leg broken.



30	Julius Galanski, .....	Polish, .....	Miner, .....	48	M.	Forest City, .....	Lackawanna, .....	By fall of roof that he had failed to bar down. He started pecking under it when it fell on his head, fracturing his ribs.	
Oct.	17	Barnard Gafney, .....	American, .....	Driver, .....	17	S.	Storrs No. 1, .....	Lackawanna, .....	By fall of roof. In leaning against a prop in a chamber he disturbed some bad roof that fell on him, fracturing his knee.
	21	Edward Saunders, .....	American, .....	Miner, .....	35	M.	Marvine, .....	Lackawanna, .....	By fall of roof. Injured about the head, neck and back.
	23	John McGuire, .....	American, .....	Motorman, .....	21	S.	North End, .....	Lackawanna, .....	By bumping cars too strong to a head block, one fell on his foot, injuring it.
	25	Alex. Bonkofski, .....	Polish, .....	Miner, .....	36	S.	Forest City, .....	Susquehanna, .....	By cars. In attempting to pass an empty car in motion he was squeezed and had three ribs broken.
Nov.	14	John Bogdonis, .....	Polish, .....	Laborer, .....	39	S.	Storrs No. 3, .....	Lackawanna, .....	By fall of roof that was apparently safe. Injured about the back.
	16	Cosena Stowback, .....	Slavonian, .....	Laborer, .....	38	M.	Ontario, .....	Lackawanna, .....	While unloading rails from an outside car, one fell on him, breaking his leg generally. Two ribs broken.
	24	John Moore, .....	Irish, .....	Miner, .....	25	S.	Lackawanna, .....	Lackawanna, .....	By a fall of roof that he knew to be bad generally. Two ribs broken.
Dec.	2	William Spinel, .....	Italian, .....	Laborer, .....	25	S.	Coal Brook, .....	Lackawanna, .....	While thawing a stick of atlas with a lamp it exploded, fracturing his ankle.
	2	David Brown, .....	Welsh, .....	Rock miner, .....	39	S.	Ontario, .....	Lackawanna, .....	In stepping from a bucket to a platform in a shaft he fell, injuring his hip and breaking two ribs.
	3	Patrick Nolan, .....	American, .....	Driver, .....	16	S.	Marvine, .....	Lackawanna, .....	By cars. While sideitching, the spreader caught, throwing a car over on his leg and breaking it.
	4	James Price, .....	American, .....	Carp'tr helper, .....	25	S.	Coal Brook, .....	Lackawanna, .....	By cars. A car became derailed while passing. Received compound fracture of the leg. While riding on the bumper.
	21	Robert Williams, .....	American, .....	Driver, .....	24	M.	Forest City, .....	Susquehanna, .....	By cars. While riding on the bumper with his arm on the eye rail it got caught in low roof, breaking his collar bone.
	23	Stanley Davitt, .....	Polish, .....	Miner, .....	25	M.	North West, .....	Lackawanna, .....	By blasts. He failed to get out of the way in time and was struck by flying coal and injured about the back.
	23	Mark Moran, .....	Irish, .....	Miner, .....	46	M.	Leggitt's Creek, ...	Lackawanna, .....	One end of a collar fell on him that was being lifted to position. Had two ribs broken.
	24	Lincoln Morgan, .....	American, .....	Runner, .....	20	S.	Storrs No. 2, .....	Lackawanna, .....	While placing a block under the wheel of a derailed car that was in motion, his arm was caught and fractured.

### Remarks on District

I entered upon the duties of the office June 3, 1903, having been appointed to fill the unexpired term of Mr. Edward E. Roderick, who resigned to accept the superintendency of the North End Coal Company, at Scranton, Pa.

There are 16 collieries in the district, 7 of which are gaseous and 9 non-gaseous, employing 7,825 persons inside the mines, under the daily supervision of 23 mine foremen, 17 assistants and 31 fire bosses; making a total of seventy-one persons who are in charge of the daily operation of these collieries and responsible for these 7,825 persons.

### Accidents

Notwithstanding that the district has been so adjusted that mine inspections may be made more frequently, I regret to say that the results in regard to accidents have not been as satisfactory as might have been expected under the existing conditions.

The number of tons of coal produced per fatal accident inside in 1902 was 224,224, while in 1903 the number was only 204,980.

Of the 22 fatal accidents inside, 14 were caused by falls of roof, and investigations proved that 11, or 50 per cent., of these could have been avoided had the victims themselves used the necessary precautions.

It has also been proved that these accidents can be attributed to two general causes. First. Where the miner, after failing to bar down a suspicious piece of roof, pronounced it safe and started to work under it, when he should have either propped or blasted it down. Second. Where the miner, after firing a blast, returned to the face to work out some loose coal entirely too soon, before the smoke had time to clear away, and without making a careful examination of the roof, which the law as well as good judgment requires.

As long as the mining of coal continues it will be attended by dangers and fatalities, but it is seldom that a person is killed or seriously injured in a place that he knows to be dangerous, because he is on the alert, and takes no chances. This being the case, it may truthfully be said that the number of fatal accidents could be reduced if the employes were to use more precaution in apparently safe places.

### Condition of the Mines

The condition of the mines in general is good, with the exception of a few places in non-gaseous mines where the ventilation could

be improved by the foremen, with the use of more doors, and the employes themselves using more precaution to close them after drawing cars through the working places. The operators furnish the mechanical means to produce ventilation, and any failure to conduct it to the working faces is due to the indifference of the mine foremen.

The attention of mine foremen is called to the importance of not having two cross-cuts come opposite each other in the same chamber, except, in the face where the place is finished, as ventilation is more effective, the mine is strengthened and the expense reduced by not having the cross-cuts come opposite each other.

The use of inferior oils for illumination is to be condemned in the strongest terms as being injurious to health and a detriment to ventilation. The amount of smoke given off by lamps burning these oils is astonishing, especially in low veins, but their discontinuance cannot be looked for until the Assembly sees fit to enact laws to prohibit their use.

The condition of some mines could be made more sanitary and healthful if more attention was paid to drainage by the foremen and employes.

After making an inspection of all the workings in this district, I report them to be to the best of my knowledge and judgment, in a safe condition.

As to ventilation and drainage, I report the following:

#### Hillside Coal and Iron Company

Clifford, Glenwood and Riverside, ventilation fair, drainage poor.  
 Forest City and Raymond, ventilation good, drainage good.  
 Johnsons and Ontario, ventilation good, drainage fair.

#### Elk Hill Coal and Iron Company

Richmond No. 3, ventilation good, drainage fair.  
 Richard No. 4, ventilation good, drainage good.

#### Delaware and Hudson Company

Coalbrook and Marvine, ventilation good, drainage good.  
 Leggitt's Creek, ventilation good, drainage fair.

#### Delaware, Lackawanna and Western Railroad Company

Storrs, ventilation good, drainage fair.

#### Temple Iron Company

Northwest, ventilation good, drainage good.  
 Lackawanna, ventilation good, drainage fair.

### North End Coal Company

North End, ventilation fair, drainage fair.

#### Improvements

The Hillside Coal and Iron Company made the following improvements at their various collieries during the year.

Clifford Shaft.—One balance plane driven 6x14 feet, 498 feet long.

Extension of No. 8 plane on east side, 6x14 feet, 198 feet long.

Engine plane on west side, partly driven, 6x10 feet, 300 feet long.

Forest City Slope.—Have sunk an air shaft at the extreme south workings, 12x25 feet in depth; also a new slope to the New County vein (opened from surface) 8 feetx16feet, 250 feet long.

Forest City No. 2 shaft.—The present air shaft was continued from the Clark to the Bottom or Dunmore vein, a distance of 245 feet; size of shaft, 12 x 12 feet. The cribbing at the head was replaced at the same time with concrete.

They have also installed at their Forest City No. 2 shaft (one in the Clark Vein and one in the Bottom or Dunmore vein) two 6½ ton mine locomotives with cable reels attached. These motors are used in place of mules to bring the coal from the face to the passing branches, where the larger motors get the coal.

It has been the practice for years at this colliery, to use a small size locomotive, but being equipped with a trolley, they had found considerable difficulty with having to extend the trolley wires in the chambers as the places advanced, and also found it quite expensive. The later type of motors, with the reel attachments avoid the necessity of trolley wires being put up in the chambers, and are working very successfully. They are so well satisfied with it, and especially in laying out new workings, that they will endeavor to do without mule haulage altogether, as besides the other conveniences, the motors do not take up as much height as mules, and consequently they find they do not have to cut as much rock in a low vein as would otherwise be necessary.

They have also installed at No. 2 shaft one Jeansville Woodlined Compound Duplex Plunger Pump, size 18 and 28x10x18 inches, and at Clifford shaft a Scranton Steam Pump Company's Compound Duplex Plunger Pump, 18 and 28x10x18 inches; both of these throwing to the surface; and at Clifford shaft they have constructed a mule barn (inside) to accommodate about 50 mules.

### Scranton Coal Company

At their Johnsons No. 1 shaft, Priceburg, a pair of Vulcan Hoisting engines 28x48 inches has been installed.

At their Ontario Colliery the Blue Ridge shaft has been sunk from the Clark to the Dummore vein, a distance of 90 feet, cutting 4 feet of very fine coal.

At Raymond Colliery, Archbald, a second shaft has been sunk to the Rider or New County vein, and equipped with a 22 horse power gasoline engine, driving a ten-foot fan.

#### Delaware, Lackawanna and Western Railroad Company

Storrs Mines.—An electric motor system has been installed. Four motors at Storrs No. 1. Three motors at Storrs No. 2. Two motors at Storrs No. 3.

Also two generators to furnish power for Storrs Nos. 1 and 2, and one generator at Storrs No. 3.

A washery annex, with a capacity of 500 tons daily.

Also three steel towers, one each at Storrs Nos. 1, 2 and 3.

#### Mine Foremen's Examinations

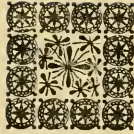
The annual mine foremen and assistant mine foremen's examinations were held at Carbondale, October 8 and 9. Thirty-seven persons were recommended for mine foremen's certificates, and 24 for assistant mine foremen's certificates.

#### Mine Foremen

George Smith, Wm. E. Lewis, Aneurin L. Morgan, Joseph A. Scharar, Wm. Pugh, George Imes, Thomas Lewis, David J. Llewellyn, Evan H. Evans, David G. Thomas, Edward Lewis, John Sirwatka, Theobald Field, Gomer Parry, James Jones, Benjamin F. Bowen, David S. Jones, Patrick Parks, Solomon Jones, Patrick J. O'Hara, Walter H. Vizeard, John Morgan, John Moore, Patk. B. Gilmartin, John H. Bexon, David A. Beynon, Thomas C. Harvey, Ivor E. Davies, Patk. J. McAndrew, George E. Maxey, Charles Richards, John J. Renshaw, Joseph Vickers, Arthur C. LaMonte, Thomas Haddock, George C. Knight, Thomas Sullivan.

#### Assistant Mine Foremen

William D. Johns, George Evans, John T. Watkins, David Parry, Charles J. Arnold, Phillip W. Foster, John V. Fadden, Thomas Woods, Robert Reid, Wm. Rooke, Edward Reid, Thomas Robinson, Wm. P. Kelly, John Elderkin, Joseph Rafferty, David J. Davies, Wm. I. Richards, Thomas Taylor, Wm. J. Williams, Wm. Miles, John F. Jones, Jacob Evans, William A. Stephens, Wm. J. Davies.



## Second Anthracite District

LACKAWANNA AND WAYNE COUNTIES

---

Carbondale, Pa., March 1, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to submit herewith my first annual report as Inspector of Mines for the Second Anthracite District for the year ending December 31, 1903.

Accompanying the report will be found the usual tables of statistics and some remarks that may be of interest concerning improvements made during the year, causes of accidents, flooding of mines, mining as compared with other occupations, inrush of sand and water, ventilation, drainage and safety of the mines.

Respectfully submitted,

P. J. MOORE,  
Inspector.

## Second Anthracite District, 1903

## SUMMARY OF STATISTICS

Number of mines in district, .....	52
Number of mines in operation, .....	52
Number of tons of coal produced, .....	4,252,323
Number of tons shipped to market, .....	3,921,315
Number of tons sold at mines to local trade,.....	42,596
Number of tons consumed at mines in generating steam and heat, .....	288,412
Number of persons employed inside the mines, .....	6,935
Number of persons employed outside, .....	2,487
Number of fatal accidents inside the mines, .....	30
Number of tons produced for each fatal accident inside,..	141,744
Number of persons employed per fatal accident inside,..	231
Number of fatal accidents outside, .....	3
Number of persons employed per fatal accident outside,..	829
Number of wives made widows by fatal accidents,.....	14
Number of children orphaned by fatal accidents,.....	37
Number of non-fatal accidents inside of mines,.....	75
Number of persons employed per non-fatal accident inside,	92
Number of non-fatal accidents outside, .....	5
Number of persons employed per non-fatal accident out- side, .....	497
Number of steam locomotives used inside,.....	7
Number of compressed air locomotives used inside,.....	6
Number of electric motors used inside, .....	3
Number of fans used for ventilation, .....	27
Number of furnaces used for ventilation, .....	1
Number of gaseous mines in operation, .....	7
Number of non-gaseous mines in operation, .....	45
Number of new mines opened, .....	5
Number of old mines abandoned, .....	2



TABLE A.—Second Anthracite District, 1903

PRODUCTION OF COAL	
Names of Companies	Tons
Delaware and Hudson Company, .....	2,046,636
Carney and Brown Coal Company, .....	68,190
Dolph Coal Company, Limited, .....	215,329
Pennsylvania Coal Company, .....	450,862
Hillside Coal and Iron Company, .....	213,461
Price Pancoast Coal Company, .....	491,698
Edgerton Coal Company, .....	137,630
Sterrick Creek Coal Company,.....	353,598
Black Diamond Coal Company, .....	55,065
Moosic Mountain Coal Company, .....	119,213
Mount Jessup Coal Company, Limited, .....	98,541
Finn Coal Company, .....	2,100
	<hr/>
Total, .....	4,252,323
	<hr/> <hr/>

## Production by Counties

Lackawanna, .....	4,190,810
Wayne, .....	61,513
	<hr/>
Total, .....	4,252,323
	<hr/> <hr/>

TABLE B.—Second Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Companies	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Delaware and Hudson Co.,	13	2	15	32	4	36	157,484	63,957	3,447	1,137	4,584	265	108	568	284
Black Diamond Coal Co.,	1	1	2	1		2	157,630	45,877	99	45	144			45	
Edgerton Coal Co.,	1		1	3		3	49,270	22,847	158	97	255	158	52	54	
Mt. Jessup Coal Co.,	1		1	3		3	119,213	59,803	210	33	243	210	52		
Moosic Mt. Coal Co.,	1		1	4		4		55,389	591	194	785			59	
Sterrick Creek Coal Co.,				10		10		215,329	337	292	559		337		202
Dolph Coal Co., Limited,	1		1	1	1	2	491,698	81,949	707	297	974	707	118		
Price-Francoast Coal Co.,	5		5	6		6	30,172	64,469	698	231	929			100	
Pennsylvania Coal Co.,	1		1	7		7	68,189	17,047	69	32	101	69		17	
Cumby and Brown Coal Co.,	1		1	4		4	35,577	42,692	465	131	536			81	
Hillside Coal and Iron Co.,	6		6	5		5									
Totals and averages for district,	30	3	33	75	5	80	141,744	56,698	6,935	2,487	9,422	231	92	829	497

TABLE C.—Second Anthracite District, 1903  
Classification of Fatal Accidents

	Inside of Mines										Outside of Mines						Grand total					
	By Falls of			By Falling Into							Total inside	By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes		Total outside				
	Coal	Slate	Roof	Shafts	Stapes	Manways, breasts, etc.	Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes												
January, .....	1		2																		4	
February, .....			1																			4
March, .....			1	1																		4
April, .....			1																			1
May, .....			1																			1
June, .....	1		1																			1
July, .....			1																			1
August, .....			1																			1
September, .....			1																			1
October, .....			1																			1
November, .....			1																			1
December, .....			1																			1
Totals, .....	1	16	5	2	3	1	2	3	3	2	2	1	1	1	1	1	1	1	1	1	1	33

TABLE D.—Second Anthracite District, 1903  
Classification of Non-Fatal Accidents

	Inside of Mines										Outside of Mines						Grand total							
	Coal	State	Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	By Falling Into		Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes	Total inside		By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside	
										Slopes	Manways, breasts, etc.													
January, .....	1	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	4	1	1	1	1	1	4	6
February, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
March, .....	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
April, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
May, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
June, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
July, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
August, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
September, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
October, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
November, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
December, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
Totals, .....	5	1	33	13	10	5	5	1	1	1	1	1	1	1	6	75	4	1	1	1	1	1	5	80



TABLE F.—Second Anthracite District, 1903  
Occupations of Persons Injured Inside and Outside the Mines

	Inside										Outside								Grand total		
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks		All other employes	Total outside
January, .....	1			2	1	1	1	1			6										6
February, .....				5	1		1	1			4										4
March, .....				1	4	1			2		11										11
April, .....				1	2	1					4		1						2		7
May, .....				1	2	2					4										6
June, .....	1			2	2	1					6				1						7
July, .....				2	2	1		1			6										6
August, .....				2	2	1		1			6										6
September, .....				6	2	1		1			10										10
October, .....				1	2	1					4										7
November, .....				1	1	1		1			5										6
December, .....				1	1	1		1			5								1		6
Totals, .....	1			29	28	9	3	3		3	75		1						3	5	80

TABLE G.—Second Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	English	Welsh	Irish	Polish	Italian	Austrian	Russian	Totals
January, .....	1		2				1		4
February, .....	3				1				4
March, .....									1
April, .....	1			1					2
May, .....	2			1		1		1	5
June, .....								1	1
July, .....	1	1	1	1		1		1	5
August, .....						1	1	1	3
September, .....	2								2
October, .....				1	1				2
November, .....							3		3
December, .....									5
Totals, .....	10	1	3	5	2	4	5	3	33

TABLE H.—Second Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Hungarian	Italian	Slavonian	Austrian	Russian	Totals
January, .....	1	2			1			2				6
February, .....	1					2		1				4
March, .....	3					4	1		2		1	11
April, .....	4	1				1			1		2	9
May, .....	1			1		1				1		4
June, .....	3					3		1	2			9
July, .....	2	1		1	1			1		1		7
August, .....	1		1	1		1		1			1	6
September, .....	2	1		2	1		1	2	1			10
October, .....	1	1	1									3
November, .....	1	1		1						1	1	5
December, .....				1		1	1	1	2			6
Totals, .....	20	7	2	7	3	13	3	9	8	3	5	80





Black Diamond Coal Co.	Drift,.....	Non-gas.	Fan,.....	12	4-0	4-0	50	.3	Guibal,...	Steam,...	1	26,000	16,000	21,000	42	331
Black Diamond, .....	Drift,.....	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	1	14,000	11,500	12,000	35	329
Finn Coal Co.	Drift,.....	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	1	16,000	10,000	18,000	44	227
Pennsylvania Coal Co.	Tunnel & drift,	Non-gas.	Fan and furnace,	17½	5-0	4-4	50	.2	Guibal,...	Steam,...	6	69,005	59,235	74,145	218	285
No. 2 shaft, .....	Shaft,.....	Gaseous.	Fan,.....	17½	5-0	4-4	70	.7	Guibal,...	Steam,...	7	102,815	71,950	104,000	227	317
No. 1 shaft, .....	Shaft,.....	Non-gas.	Fan,.....	17½	5-0	4-4	72	.1	Guibal,...	Steam,...	5	37,830	63,040	89,100	233	283
Gipsy Grove, .....	Shaft,.....	Non-gas.	Fan,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hillside Coal and Iron Co.	Shaft,.....	Non-gas.	Fan,.....	19	4-4	6-0	75	0.75	Guibal,...	Steam,...	6	69,719	69,806	71,139	324	215
Keystone, .....	Drift,.....	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	2	91,370	88,229	65,000	84	1,050
Dolph Coal Co., Limited.	Slope,.....	Non-gas.	Fan,.....	24	5-0	6-0	60	1.0	Guibal,...	Steam,...	5	42,631	37,735	43,394	148	255
Hannabel, .....	Drift,.....	Non-gas.	Fan,.....	20	6-0	6-0	55	1.5	Guibal,...	Steam,...	3	100,970	59,130	99,750	203	284
Dolph, .....	Shaft & drift,	Non-gas.	Fan,.....	12	4-0	4-2	65	.3	Guibal,...	Steam,...	2	37,000	44,000	44,000	133	331
Moosic Mt. Coal Co.	Slope,.....	Non-gas.	Fan,.....	14	4-2	3-3	78	.8	Guibal,...	Steam,...	4	60,290	35,550	71,300	72	498
Mt. Jessup Coal Co., Limited.	Slope,.....	Gaseous.	Fan,.....	16	6-0	4-6	80	.8	Guibal,...	Steam,...	2	15,500	14,000	16,500	76	184
Mt. Jessup No. 3, .....	Slope,.....	Non-gas.	Fan,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mt. Jessup No. 1, .....	Slope,.....	Non-gas.	Fan,.....	12	3-8	3-4	70	1.1	Guibal,...	Steam,...	1	22,300	19,500	23,800	62	315
Edgerton Coal Co.	Drift,.....	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Edgerton, .....	Shaft,.....	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Edgerton, .....	Shaft,.....	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carney and Brown Coal Co.	Shaft,.....	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Murray, .....	Shaft,.....	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sterrick Coal Co.	Shaft,.....	Non-gas.	Fan,.....	16	.....	.....	80	.8	Guibal,...	Steam,...	2	32,850	21,420	34,000	68	244
Sterrick Creek, .....	Tunnel,...	Gaseous,	Fan,.....	20	.....	.....	70	.2	Guibal,...	Steam,...	4	52,000	41,200	53,300	242	170

†Robbing pillars; air not measured.

TABLE 1.—Second Anthracite District, 1903  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
Delaware and Hudson Co.	Lackawanna	C. C. Rose	Scranton	J. L. Atherton	Scranton	Delaware and Hudson
Eddy Creek	Lackawanna	C. C. Rose	Scranton	J. L. Atherton	Scranton	Delaware and Hudson
Olyphant and washery	Lackawanna	C. C. Rose	Scranton	J. L. Atherton	Scranton	Delaware and Hudson
Grassy Island washery	Lackawanna	C. C. Rose	Scranton	J. L. Atherton	Scranton	Delaware and Hudson
White Oak	Lackawanna	C. C. Rose	Scranton	J. L. Atherton	Scranton	Delaware and Hudson
Jermyn	Lackawanna	C. C. Rose	Scranton	J. L. Atherton	Scranton	Delaware and Hudson
Powderly	Lackawanna	C. C. Rose	Scranton	J. L. Atherton	Scranton	Delaware and Hudson
No. 1	Lackawanna	C. C. Rose	Scranton	J. L. Atherton	Scranton	Delaware and Hudson
Clinton	Lackawanna	C. C. Rose	Scranton	J. L. Atherton	Scranton	Delaware and Hudson
Racket Brook washery	Lackawanna	C. C. Rose	Scranton	J. L. Atherton	Scranton	Delaware and Hudson
Edgerton Coal Co.	Lackawanna	F. Hemmelright	Jermyn	J. White	Carbondale	D. and H. and Erie
Sterrick Creek Coal Co.	Lackawanna	F. Hemmelright	Jermyn	Joseph Reese	Olyphant	D. and H. and Erie
Sterrick Creek	Lackawanna	F. Hemmelright	Jermyn	Joseph Reese	Olyphant	D. and H. and Erie
Price-Pancoast Coal Co.	Lackawanna	John R. Bryden	Scranton	Joseph Birdley	Throop	Ontario and Western
Pancoast	Lackawanna	John R. Bryden	Scranton	Joseph Birdley	Throop	Ontario and Western
Pancoast washery	Lackawanna	John R. Bryden	Scranton	Joseph Birdley	Throop	Ontario and Western
Pennsylvania Coal Co.	Lackawanna	W. A. May	Scranton	W. P. Jennings	Dunmore	Erie
Gipsy Grove	Lackawanna	W. A. May	Scranton	W. P. Jennings	Dunmore	Erie
No. 1	Lackawanna	W. A. May	Scranton	W. P. Jennings	Dunmore	Erie
No. 1 washery	Lackawanna	W. A. May	Scranton	W. P. Jennings	Dunmore	Erie
Hillside Coal and Iron Co.	Lackawanna	V. T. Peterson	Dunmore	John F. Gallagher	Mayfield	Erie
Erie and washery	Lackawanna	V. T. Peterson	Dunmore	John F. Gallagher	Mayfield	Erie
Keystone	Lackawanna	V. T. Peterson	Dunmore	John F. Gallagher	Mayfield	Erie
Murray	Lackawanna	John Carney	Dunmore	Thos. Mullen	Dunmore	D., L. and W.
Carney and Brown Coal Co.	Lackawanna	John Carney	Dunmore	Thos. Mullen	Dunmore	D., L. and W.
Dolph Coal Co., Limited	Lackawanna	W. G. Robertson	Scranton			Erie
Dolph	Lackawanna	W. G. Robertson	Scranton			Erie
Dolph washery	Lackawanna	W. G. Robertson	Scranton			Erie
Mt. Jessup Coal Co., Limited	Lackawanna	Chas. P. Ford	Winton			D., L. & W. and Erie
Mt. Jessup	Lackawanna	Chas. P. Ford	Winton			and O. & W.
Mt. Jessup washery	Lackawanna	Chas. P. Ford	Winton			D., L. & W. and Erie
	Lackawanna	Chas. P. Ford	Winton			and O. & W.

Moosic Mt. Coal Co.	Lackawanna	Chas. P. Ford, ....	Winton, .....	.....	D., L. & W., and Eble and O. & W.
Moosic Mountain, .....	Lackawanna, .....	W. G. Thomas, ....	West Pittston, .....	Carbondale, .....	Ontario and Western.
Black Diamond Coal Co.	Lackawanna, .....	W. M. Finn, .....	Scranton, .....	Carbondale, .....	Ontario and Western.
Black Diamond, .....	Lackawanna, .....				
Barton, .....					

TABLE 2.—Second Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes.	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Clinton, .....	Delaware and Hudson Co.	352,665	15,210	1,976	369,851	284	724	5	3	16,376	46,025	64
No. 1 Carbondale, .....	Lackawanna, .....	75,412	15,908	.....	91,318	215	398	3	2	3,968	7,775	53
Powderly, .....	Lackawanna, .....	58,838	12,946	.....	71,784	325	573	.....	.....	8,291	5,416	45
Jermyn, .....	Lackawanna, .....	316,581	16,558	5,741	328,880	272	593	1	3	3,696	18,436	55
White Oak, .....	Lackawanna, .....	171,719	3,253	1,415	176,387	272	593	1	3	3,696	18,436	55
No. 2 Powderly, .....	Lackawanna, .....	411,633	3,253	6,916	418,842	74	85	.....	.....	10,209	3,815	44
No. 2 Olyphant, .....	Lackawanna, .....	411,633	64,302	.....	475,935	257	625	1	6	12,451	3,208	61
Eddy Creek, .....	Lackawanna, .....	260,802	11,215	129	272,138	245	689	2	10	7,488	5,338	35
Grassy Island shaft and slope,* .....	Lackawanna, .....	.....	.....	.....	.....	257	454	.....	.....	.....	.....	.....
Totals, .....	.....	1,689,644	142,808	16,168	1,848,620	293	4,563	15	36	67,066	95,078	412
Racket Brook washery, .....	Lackawanna, .....	58,064	4,806	.....	63,464	212	32	.....	.....	.....	.....	.....
Grassy Island washery, .....	Lackawanna, .....	131,052	3,509	.....	134,562	184	49	.....	.....	.....	.....	.....
Totals, .....	.....	189,716	8,360	.....	198,016	198	81	.....	.....	.....	.....	.....
Carney and Brown Coal Co. ....	Lackawanna, .....	1,879,300	151,108	16,168	2,046,636	.....	4,584	15	36	67,066	95,078	412
Murray, .....	Lackawanna, .....	58,702	250	9,293	68,190	226	101	1	4	1,884	50	19

\*Production included in No. 2 Olyphant.  
†Totals in this column are averages.

Dolph Coal Co., Limited. Dolph washery.	189,764 490	25,000	755	24,859 490	218	559	2	1,722	3,400	56	
Totals	189,874	25,000	755	245,829	218	559	2	7,122	3,400	56	
Hillside Coal and Iron Co. Eric, .....	137,221	12,818	2,012	152,001	203	421	5	5,077	5,605	51	
Keystone, .....	99,594	806	.....	91,400	189	115	1	1,256	389	16	
Totals	197,825	13,624	2,012	213,411	196	536	6	6,333	5,986	67	
Pennsylvania Coal Co. No. 1 colliery, .....	283,235	7,850	2,347	292,422	215	629	2	13,025	3,266	59	
Gipsy Grove colliery, .....	106,621	793	13	107,440	278	300	3	5,451	316	36	
Totals	439,859	8,643	2,360	450,862	212	929	5	19,116	3,612	95	
Price-Panocoast Coal Co. Panocoast shaft, .....	236,616	27,375	2,227	265,218	243	935	1	18,275	13,100	90	
Panocoast washery, .....	125,489	.....	.....	125,489	151	49	.....	.....	.....	.....	
Totals	462,046	27,375	2,227	491,698	.....	974	1	18,275	13,100	90	
Mt. Jessup Coal Co., Limited. Mt. Jessup, .....	72,505	25,000	1,086	98,541	225	262	2	2,025	30,575	38	
Moosic Mountain Coal Co. Moosic Mountain, .....	111,612	6,000	1,601	119,213	199	243	1	5,052	700	42	
Edgerton Coal Co. Edgerton, .....	130,150	7,318	162	137,630	150	275	1	3,065	800	37	
Sterrick Creek Coal Co. Sterrick Creek, .....	332,280	19,954	1,364	353,598	189	785	.....	10,182	23,664	82	
Black Diamond Coal Co. Black Diamond, .....	46,352	3,640	5,073	55,065	227	144	1	2,460	300	20	
Finn Coal Co. Barton, .....	1,009	500	660	2,100	100	50	.....	175	1,000	3	
Grand totals	3,921,315	288,412	42,586	4,232,323	.....	9,122	33	80	144,925	178,265	961



TABLE 2—Continued

Names of Operators and Collieries	County	Number of Boilers			Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Tubular	Horse power	Steam	Air	Electric							
Delaware and Hudson Co.														
Clinton, .....	Lack. & Wayne	19	320	.....	320	.....	13	320	.....	2	830	500	.....	.....
No. 1 Carbondale, .....	Lackawanna	15	300	.....	540	.....	3	300	.....	3	6,500	2,500	.....	.....
Powderly, .....	Lackawanna	12	120	.....	800	.....	3	120	.....	3	2,500	1,500	.....	.....
Jermyn, .....	Lackawanna	.....	.....	.....	750	.....	8	750	.....	4	1,500	1,500	.....	.....
White Oak, .....	Lackawanna	3	60	.....	370	.....	1	60	.....	1	250	250	.....	.....
No. 2 Powderly, .....	Lackawanna	.....	.....	.....	800	.....	3	800	.....	.....	.....	.....	.....	.....
No. 2 Olyphant, .....	Lackawanna	12	300	.....	2,750	.....	24	3,150	.....	4	8,000	5,000	.....	.....
Bully Creek, .....	Lackawanna	.....	.....	.....	300	.....	18	1,727	.....	4	3,400	2,500	.....	.....
Grassy Island shaft and slope, .....	Lackawanna	34	600	.....	500	.....	17	1,375	.....	4	3,500	1,500	.....	.....
Totals, .....		85	1,700	36	6,180	7,880	100	9,789	27	25,990	19,750	2	3	.....
Racket Brook washery, .....	Lackawanna	9	270	.....	270	.....	5	180	.....	.....	.....	.....	.....	.....
Grassy Island washery, .....	Lackawanna	.....	.....	.....	400	.....	7	210	.....	.....	.....	.....	.....	.....
Totals, .....		9	270	.....	400	670	12	390	.....	.....	.....	.....	.....	.....
Murray, .....	Lackawanna	94	1,970	38	6,580	8,550	112	10,170	27	25,990	19,750	3	3	.....
Carney and Brown Coal Co. ....	Lackawanna	.....	.....	.....	270	270	4	115	.....	.....	.....	.....	.....	.....
Dolph, .....	Lackawanna	4	80	7	966	1,046	14	871	5	1,350	300	2	2	.....

TABLE 2—Continued

Names of Operators and Collieries	County	Number of Boilers			Total horse power	Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Tubular	Horse power		Steam	Air	Electric							
Hillside Coal and Iron Co.	Lackawanna,	21	356	.....	356	.....	1	8	230	6	4,330	3,480	2	.....	
Keystone, .....	Lackawanna,	2	69	.....	69	.....	.....	1	30	.....	.....	.....	.....	.....	
Totals, .....	.....	23	410	.....	410	.....	1	9	360	6	4,330	3,480	2	.....	
Pennsylvania Coal Co.	Lackawanna,	*	.....	.....	1,000	.....	3	18	783	4	2,796	1,300	.....	1	
No. 1 colliery, .....	Lackawanna,	.....	.....	.....	.....	.....	1	12	548	2	1,471	461	.....	.....	
Gipsy Grove colliery, .....	Lackawanna,	.....	.....	.....	1,000	.....	4	30	1,331	6	4,267	1,761	.....	1	
Totals, .....	.....	.....	.....	.....	1,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Price-Panocoast Coal Co.	Lackawanna,	.....	.....	.....	1,368	.....	.....	14	1,961	2	1,200	800	2	1	
Panocoast shaft, .....	Lackawanna,	.....	.....	.....	.....	.....	.....	8	215	.....	.....	.....	.....	.....	
Panocoast washery, .....	Lackawanna,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Totals, .....	.....	.....	.....	.....	1,368	.....	.....	22	1,576	2	1,200	800	2	1	
Mt. Jessup Coal Co., Limited.	Lackawanna,	12	240	.....	1,440	.....	1	14	695	2	1,600	1,400	.....	.....	
Mt. Jessup, .....	Lackawanna,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Moosic Mountain Coal Co.	Lackawanna,	10	250	.....	350	.....	2	2	120	2	800	700	.....	.....	
Moosic Mountain, .....	Lackawanna,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Edgerton Coal Co.	Lackawanna,	13	444	.....	704	.....	4	8	588	.....	.....	.....	.....	.....	
Edgerton, .....	Lackawanna,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

\*Steam obtained from No. 1 boiler plant.

†Steam obtained from colliery plant.



Sterrick Creek Coal Co.	12	480	4	645	1,125	5	.....	9	1,064	3	2,314	1,700	1	2
Black Diamond Coal Co.	3	70	1	60	150	.....	.....	3	86	.....	.....	.....	.....	.....
Finn Coal Co.	.....	.....	2	150	150	.....	.....	3	120	1	500	500	.....	.....
Grand totals,	171	3,944	87	12,589	16,543	21	6	3	230	17,165	54	42,351	30,394	10

TABLE 2—Recapitulation

Delaware and Hudson Co.,	84	1,976	38	6,579	8,550	5	6	2	112	10,179	27	25,390	19,750	3
Carney and Brown Coal Co.,	.....	.....	3	270	270	.....	.....	.....	4	115	5	1,350	300	2
Dolph Coal Co., Limited,	4	80	7	968	1,046	.....	.....	.....	14	871	6	4,330	3,480	2
Hillside Coal and Iron Co.,	23	410	.....	.....	410	.....	.....	1	9	350	6	4,237	1,764	1
Pennsylvania Coal Co.,	.....	.....	7	1,000	1,000	4	.....	.....	30	1,331	2	1,290	800	2
Price-Pancoat Coal Co.,	.....	.....	8	1,368	1,368	.....	.....	.....	22	1,576	2	1,600	1,400	1
Mount Jessup Coal Co., Limited,	12	340	12	1,200	1,440	1	.....	.....	14	435	2	360	700	.....
Moosic Mountain Coal Co.,	19	259	2	106	350	2	.....	.....	2	120	.....	.....	.....	.....
Edgerton Coal Co.,	43	444	3	249	444	.....	.....	.....	8	538	.....	.....	.....	.....
St. Rick Creek Coal Co.,	12	486	1	645	1,192	3	.....	.....	9	1,063	3	2,314	1,700	1
Black Diamond Coal Co.,	3	70	2	150	150	.....	.....	.....	3	86	1	500	500	2
Finn Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals,	171	3,944	87	12,589	16,543	21	6	3	230	17,165	54	42,351	30,394	10

TABLE 3.—Second Anthracite District, 1903  
Number of Each Class of Employes at Each Colliery

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside									
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes	Total outside
Delaware and Hudson Co.	Lack & Wayne	1	2	1	108	225	60	10	5	24	21	550	1	5	10	53	1	78	1	161	794
Clinton	Lackawanna	1	2	1	151	114	41	4	2	22	15	319	1	2	1	8	1	57	1	71	268
No. 1 Carbonate	Lackawanna	1	2	1	109	120	47	4	2	25	19	319	1	2	3	9	47	51	51	373	692
Powderly	Lackawanna	1	1	1	189	198	77	12	33	33	25	539	1	3	10	30	30	33	92	131	731
Jermyn	Lackawanna	1	2	1	91	189	65	5	1	18	8	333	1	3	11	30	7	37	120	563	896
White Oak	Lackawanna	1	2	1	139	149	74	8	6	17	10	400	1	9	24	13	1	37	85	165	815
No. 2 Powderly	Lackawanna	1	1	5	178	196	84	13	2	35	25	515	1	8	20	33	55	2	106	225	625
No. 2 Olyphant	Lackawanna	1	2	4	149	172	52	4	2	25	3	412	1	7	6	51	30	1	69	165	680
Eddy Creek	Lackawanna	1	2	3	149	172	52	4	2	25	3	412	1	6	25	6	38	1	69	165	680
Grassy Island shaft and slope	Lackawanna	1	2	3	149	172	52	4	2	25	3	412	1	6	25	6	38	1	69	165	680
Totals		8	15	11	1,167	1,363	508	60	22	207	86	3,447	8	40	106	172	196	9	525	1,050	4,503
Hacket Brook washery	Lackawanna												1	1	2		9	1	18	32	32
Grassy Island washery	Lackawanna												1	1	4	9	21		10	40	40
Totals		8	15	11	1,167	1,363	508	60	22	207	86	3,447	10	42	112	181	229	10	553	1,137	4,584
Carney and Brown Coal Co.	Lackawanna	1			24	24	15			5		69	1	2	2	7	5	1	14	32	101
Murray	Lackawanna	2			161	91	63	8	2	25	2	357	1	1	14	19	33	67	5	62	262
Dolph Coal Co., Limited	Lackawanna	1			110	116	49	5	2	24	4	318	1	1	5	8	13	2	53	102	421
Hillside Coal and Iron Co.	Lackawanna	1			110	116	49	5	2	24	4	318	1	1	5	8	13	2	53	102	421
Eric	Lackawanna	1			110	116	49	5	2	24	4	318	1	1	5	8	13	2	53	102	421

Keystone, .....	1	.....	32	31	19	.....	4	.....	87	.....	1	2	2	6	2	.....	15	.....	28	.....	115
Totals, .....	2	1	118	147	68	5	2	28	4	465	1	2	7	10	25	15	2	68	131	536	
Pennsylvania Coal Co.	2	1	148	146	58	12	1	25	39	482	1	9	13	50	14	2	58	147	629		
No. 1 colliery, .....	1	.....	110	33	45	8	1	2	12	216	.....	1	1	3	28	17	1	32	84	306	
Gipsy Grove colliery, .....	3	1	308	171	161	20	2	27	51	638	.....	2	10	16	78	31	3	91	231	929	
Totals, .....	1	2	212	218	105	38	10	115	.....	707	1	2	10	21	52	79	3	99	267	974	
Price-Pancoast Coal Co.	1	2	212	218	105	38	10	115	.....	707	1	2	10	21	52	79	3	99	267	974	
Pancoast shaft, .....	1	2	6	218	105	38	10	115	.....	707	1	2	10	21	52	79	3	99	267	974	
Pancoast washery, .....	1	2	6	218	105	38	10	115	.....	707	1	2	10	21	52	79	3	99	267	974	
Totals, .....	1	2	60	35	18	7	8	28	.....	161	1	1	7	30	31	8	6	17	161	262	
Mt. Jessup Coal Co., Ltd.	1	1	83	77	23	8	3	11	.....	210	1	1	5	10	.....	.....	3	12	33	243	
Mt. Jessup, .....	1	1	83	77	23	8	3	11	.....	210	1	1	5	10	.....	.....	3	12	33	243	
Moosic Mountain Coal Co.	1	.....	61	57	12	2	.....	14	11	158	.....	1	10	4	10	0	3	51	97	255	
Moosic Mountain, .....	1	.....	61	57	12	2	.....	14	11	158	.....	1	10	4	10	0	3	51	97	255	
Edgerton Coal Co.	3	1	222	182	91	13	3	75	.....	591	.....	1	9	18	51	.....	2	113	194	785	
Sterrick Creek Coal Co.	1	.....	45	38	10	3	.....	1	.....	90	1	1	2	3	8	4	1	25	45	144	
Sterrick Creek, .....	1	.....	45	38	10	3	.....	1	.....	90	1	1	2	3	8	4	1	25	45	144	
Black Diamond Coal Co.	1	.....	10	10	6	2	1	3	.....	33	1	1	2	4	8	.....	1	.....	17	50	
Black Diamond, .....	1	.....	10	10	6	2	1	3	.....	33	1	1	2	4	8	.....	1	.....	17	50	
Finn Coal Co.	26	23	20	2,500	2,419	166	53	589	154	6,957	8	23	120	249	494	447	40	1,106	2,487	9,422	
Barton, .....	26	23	20	2,500	2,419	166	53	589	154	6,957	8	23	120	249	494	447	40	1,106	2,487	9,422	
Grand totals, .....	26	23	20	2,500	2,419	166	53	589	154	6,957	8	23	120	249	494	447	40	1,106	2,487	9,422	

\*Coal from Moosic Mountain colliery prepared at Mt. Jessup breaker.

TABLE 3.—Recapitulation

Delaware and Hudson Co., .....	8	15	11	1,167	1,363	508	60	22	207	86	3,447	.....	10	42	112	181	229	10	553	1,137	4,584
Carney and Brown Coal Co., .....	1	.....	24	24	15	8	.....	5	.....	.....	69	.....	1	.....	2	7	5	1	14	32	111
Dolph Coal Co., Limited, .....	2	1	164	91	62	8	2	35	2	.....	337	1	1	14	19	33	67	5	62	262	559
Hillside Coal and Iron Co., .....	2	1	138	117	68	5	2	28	4	.....	405	1	2	7	10	23	15	2	68	131	396
Pennsylvania Coal Co., .....	3	1	308	173	107	20	12	47	51	.....	638	1	2	7	10	15	78	31	3	91	351
Price-Pancoast Coal Co., .....	1	2	6	212	105	38	10	115	.....	707	1	1	10	21	52	70	3	2	19	101	329
Mt. Jessup Coal Co., Limited, .....	2	1	2	88	72	23	3	11	.....	210	1	1	5	10	.....	.....	8	2	13	33	243
Moosic Mountain Coal Co., .....	1	1	.....	61	57	12	2	.....	14	11	158	.....	1	10	4	10	0	3	51	97	255
Edgerton Coal Co., .....	1	1	222	182	91	13	3	75	.....	591	.....	1	9	18	51	.....	2	113	194	785	
Sterrick Creek Coal Co., .....	3	1	1	45	38	10	3	.....	1	.....	90	1	1	2	3	8	4	1	25	45	144
Black Diamond Coal Co., .....	1	.....	10	10	6	2	1	3	.....	33	1	1	2	4	8	.....	1	.....	17	50	
Black Diamond, .....	1	.....	10	10	6	2	1	3	.....	33	1	1	2	4	8	.....	1	.....	17	50	
Finn Coal Co., .....	26	23	20	2,500	2,419	166	53	589	154	6,957	8	23	120	249	494	447	40	1,106	2,487	9,422	
Grand totals, .....	26	23	20	2,500	2,419	166	53	589	154	6,957	8	23	120	249	494	447	40	1,106	2,487	9,422	

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Delaware and Hudson Co.														
Clinton	Lack. & Wayne	25.2	22.2	22	24	22.3	24.5	23.5	22	21.6	15.3	20.7	20.1	204
No. 1 Carbendale	Lackawanna	24.5	19.2	18	16.2	17	15	17.4	13.3	18.4	17.1	20	19	215
Powderly	Lackawanna	25	22	18.6	16	16.4	15	15.9	14.3	19.2	21.1	20	19.1	223
Jermyn	Lackawanna	23.3	22.7	27.2	25.7	22.7	25.2	23.7	25	18	11.6	20.3	21.6	207
White Oak	Lackawanna	25.9	24.7	25.2	23.1	22.3	22.4	25.6	24.1	20.3	18.1	20.7	19.1	272
No. 2 Powderly	Lackawanna	.....	.....	.....	.....	.....	.....	.....	.....	16.2	17.4	20.1	20.5	144
No. 1 Olyphant	Lackawanna	25.8	25.6	25.6	24.9	23	24.8	23.9	24.2	3.7	9	19.3	21.1	257
Dora Creek	Lackawanna	24.7	25.6	25.6	24.9	21.6	23.2	21.1	24.3	20.2	13.4	19.2	21.7	255
Grassy Island shaft and slope	Lackawanna	23.8	25.6	25.6	24.9	25	24.8	23.9	24.2	3.7	9	19.3	21.1	257
Averages	.....	24.7	23.4	23.5	23.5	21.2	21.9	22.3	21.4	17	14.7	20	20.4	233
Carney and Brown Coal Co.														
Murray	Lackawanna	23.1	20.8	18	21.6	18.8	21	18.6	19.2	18.2	14.4	18.4	13.8	226
Dolph Coal Co. Limited.														
Dolph	Lackawanna	18.7	20	16.9	17.9	19.8	20.8	22.4	21.7	17.7	12.3	14.1	15*5	218
Hillside Coal and Iron Co.														
Erie	Lackawanna	19.4	18	16.3	18.2	18.4	19.4	20.1	19.7	19.1	10.4	11	13	203
Keystone	Lackawanna	18.1	18.7	17.4	18.1	16	15.5	16.7	15.7	16	12.9	11.4	12.2	189
Averages	.....	18.7	18.3	16.8	18.1	17.2	17.4	18.4	17.7	17.5	11.6	11.2	12.6	196
Pennsylvania Coal Co.														
No. 1 colliery	Lackawanna	19.7	15.6	17.3	20.9	21.7	23.4	23.6	23.1	17	10.6	11.8	9.8	215
Gipsy Grove colliery	Lackawanna	18.2	16.2	17.3	21.3	18.6	23	20.6	20.6	16.8	10.6	11.6	9.7	208
Averages	.....	18.9	15.9	17.3	21.1	20.1	23.7	23.3	21.8	16.9	10.6	11.7	9.7	212
Price-Pancoat Coal Co.														
Pancoat shaft	Lackawanna	22	21	21.2	22.5	18.8	16.5	23	22	22	18.2	19	22	243



TABLE 4.—Second Anthracite District, 1903  
Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single.	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 6	John Ritter, .....	American, ..	Miner, .....	43	M.	1	4	White Oak, .....	Lackawanna, ..	Was thawing dynamite powder which he had placed in a powder tin, with his mining lamp under it, when it exploded and injured him fatally. He died January 18.
6	David Llewellyn, .....	Welsh, .....	Miner, .....	45	M.	1	6	Moosic Mountain, ..	Lackawanna, ..	While shoveling coal from under a piece of fire clay rock, which his laborer was afraid to work under, he was caught by it falling upon him and killed.
14	Abner Thomas, .....	Welsh, .....	Driver, .....	16	.....	.....	.....	Fancoast, .....	Lackawanna, ..	With stones on bumper of an empty car, and the other sliding on rail, spreader jumped off the track at frog of chamber branch, and the mule pulled it against a prop, squeezing him between and killing him.
30	Stephen Powlock, .....	Austrian, ...	Laborer, ...	28	S.	.....	.....	Keystone, .....	Lackawanna, ..	Was loading a car of coal near the face when a piece of top rock fell upon him. He died February 4.
Feb. 5	William Greenslade, ....	American, ..	Runner, ....	20	S.	.....	.....	Jermyn, .....	Lackawanna, ..	Was pulling a trip of loaded cars into the foot of slope, the rope was under the rear end of one loaded car, and he pulled to the drawhead of another, and while trying to get the rope, he placed his head between the cars. The car ahead of him jumped off and his head was squeezed, killing him.

14	John Pallfoot, .....	Polish, .....	Laborer, ....	20	S. ....	Edgerton, .....	Lackawanna, ..	Was trying to fire a blast after his miner had gone home. He charged the hole with powder and tamped it, after drawing the needle he placed a squib in the hole and ignited it. This squib became extinguished before burning to the powder, and he came back and re-ignited it. Before he could retreat to a place safety he was caught by a falling piece of top rock, and fatally injured. Died February 18.
19	William J. Fairfield, .....	American, ..	Driver, .....	14	S. ....	Gipsy Grove, .....	Lackawanna, ..	Killed instantly by falling down shaft.
20	John Farrell, .....	American, ..	Asst. driver boss, ..	49	S. ....	No. 1 Carbondale, ..	Lackawanna, ..	Was kicked in the head by a mule; fell under a loaded car and was crushed.
April	Michael Best, .....	Irish, .....	Miner, .....	25	S. ....	Clinton, .....	Wayne, .....	Was dead when taken from under car. Killed instantly by a piece of top rock falling upon him near the face of chamber while he was barring out a shot.
May	John Reedy, .....	Irish, .....	Runner, ....	29	....	Erie shaft, .....	Lackawanna, ..	Killed instantly by a runaway trip of cars near the foot of a gravity plane.
16	Paul Margotto, .....	Italian, .....	Miner, .....	44	M. 1	No. 2 shaft, Pa. Coal Co., ..	Lackawanna, ..	Killed by premature blast near face of chamber.
23	Charles Miesel, .....	American, ..	Runner, ....	21	S. ....	Gipsy Grove, ....	Lackawanna, ..	Killed instantly by a fall of rock. He was waiting for the laborer to finish his car and while waiting he picked up the miners' drill and commenced barring coal, when the piece fell upon him.
June	James McHale, .....	Irish, .....	Miner, .....	49	M. 1	Eddy Creek, ....	Lackawanna, ..	This man tried to take a piece of top rock down after commencing to work, but failed, and at 3.30 A. M. it fell upon him, injuring him so that he died when he reached his home.
3	Daniel Davis, .....	American, ..	Headman, ..	26	S. ....	Clinton, .....	Lackawanna, ..	This young man was trying to save his brother from being caught by a loaded car that was running down a track, and he was thrown against himself and injured so that he died the following day.
8	Samuel Robinson, .....	American, ..	Car oller, ...	15	S. ....	Grassy Island, ..	Lackawanna, ..	Was working on locomotive, and while trying to step on the bumper slipped and fell under and was killed.
9	Micheal Sisco, .....	Russian, ...	Laborer, ....	42	M. 1	Erie shaft, .....	Lackawanna, ..	Killed instantly by a fall of coal from pillar while trying to escape from the top rock that he thought was about to fall.
25	Joseph Greig, .....	Italian, .....	Laborer, ....	27	M. 1	Gipsy Grove, ....	Lackawanna, ..	Was killed by a piece of top rock falling upon him near the face of chamber. The miners were robbing the pillars between the heading and air-way. The miner knew the piece was dangerous, but neglected to secure it.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
July 3	John Sap, .....	Russian, ..	Laborer, ..	22	S. ....	.....	.....	Erie shaft, .....	Lackawanna, ..	Was helping to put a loaded car on the track and had his hand off the car. The car started to run and while doing so a piece of top rock fell upon him and killed him.
Aug. 7	David Morris, .....	Welsh, .....	Sinker, .....	32	S. ....	.....	.....	Mt. Jessup, .....	Lackawanna, ..	While descending the shaft on a bucket, the bucket struck against a plank that was projecting in the shaft, throwing him off the bucket to the bottom. He was killed instantly.
11	Martin Harte, .....	Irish, .....	Door tender, ..	70	M. 1	5	.....	No. 1 Carbondale, ..	Lackawanna, ..	The runner notified this man that he was going to run a loaded car, and to block his door open. When he ran the car the door was closed, the car smashed into the door, and killed the miner almost instantly.
11	Thomas L. Jones, .....	American, ..	Miner, .....	28	M. 1	1	.....	Clinton, .....	Lackawanna, ..	While in the act of standing a prop under a piece of middle rock that he was aware was unsafe, close to face of chamber, it fell upon him, killing him instantly.
15	Joseph Pepper, .....	Italian, .....	Outside lab. ....	45	M. 1	1	.....	Black Diamond, .....	Lackawanna, ..	Was picking slate off condemned cars when four loaded cars ran down against the cars he was on, and the train began to move down the track which was a very heavy grade. He tried to jump off and in some manner fell under and was killed.
26	Richard Reynolds, .....	English, .....	Miner, .....	38	M. 1	1	.....	Erie shaft, .....	Lackawanna, ..	After firing a shot in face of heading he was barring out some of the loose coal when a piece of top rock fell upon him. He died September 14.
Sept. 5	Andrew Barna, .....	Russian, ..	Laborer, ..	60	M. 1	.....	.....	Grassy Island, .....	Lackawanna, ..	Killed instantly by a fall of fire clay roof while walking from the upper cross-cut along the pillar to face of chamber.



9	Frank Lennia, .....	Austrian, ..	Laborer, ..	20	S. ....	Erie shaft, .....	Lackawanna, ..	Killed instantly by being struck with flying coals from a shot fired in the cross-cut that was being driven from the chamber next to him. The shot bursting the pillar.
22	Antonio Masteryan, ...	Italian, .....	Laborer, ....	22	S. ....	No. 2 shaft Pa. Coal Co.	Lackawanna, ..	Was shoveling coal from under a piece of top rock in which a hole was drilled and the two miners were tamping, getting ready to fire when it fell upon him, killing him instantly.
Oct.	William Harris, .....	American, ..	Pumpman, ..	22	S. ....	Mt. Jessup, .....	Lackawanna, ..	Was helping the tracklayer to press a man upon the side when a piece of top rock fell and crushed him, killing him instantly.
26	Patrick Gibbons, .....	American, ..	Laborer, ....	26	S. ....	Eddy Creek, .....	Lackawanna, ..	While leading a car near the face of heading, a piece of top rock fell from a slip and killed him.
Dec.	Andrew Chrust, .....	Austrian, ..	Ashman, ...	31	M. 1	No. 2 Olyphant, ..	Lackawanna, ..	Was notified that cars were about to be run through the ash room, but failed to heed warnings. Was struck by cars and knocked under them, injuring him internally. He died 12 hours later.
5	Frank Kotar, .....	Austrian, ..	Laborer, ....	26	S. ....	Clinton, .....	Lackawanna, ..	Was working near face of chamber, when a small piece fell from roof. He jumped over the side and was killed when he was falling, hitting him internally. He died on his way to hospital.
5	Frank Kropinski, .....	Polish, .....	Miner, .....	46	M. 1	No. 1 Carbondale, ..	Lackawanna, ..	Was taking powder out from a powder tin with one hand, with lamp in the other, when the powder ignited and he was burned by the explosion. Died from the effects December 8.
10	Michael O'Horo, .....	Irish, .....	Miner, .....	40	M. 1	Carney, .....	Lackawanna, ..	Injured internally by a fall of top rock near face where he was loading a car. Killed instantly.
14	Anthony Lesjach, .....	Austrian, ..	Laborer, ....	23	S. ....	Clinton, .....	Lackawanna, ..	Injured internally by a fall of top rock saddle, killing him instantly. This happened eight feet from face of chamber.

TABLE 5.—Second Anthracite District, 1903  
Non-Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 14	John Bouden, .....	English, .....	Miner, .....	57	M.	Erie shaft, .....	Lackawanna.	Was working in face of chamber, heard the top crack and ran back the chamber track fifteen feet, when a piece of top rock in the form of a saddle fell between two props and caught him, causing a compound fracture of leg below the knee.
14	Barto Parchoti, .....	Italian, .....	Miner, .....	25	S.	Moosic Mountain, ...	Lackawanna.	Was drawing a charge of powder that had missed fire and in some manner ignited the face and arms. Was burned about the face and arms.
14	Louis Carl, .....	Italian, .....	Laborer, .....	23	S.	Moosic Mountain, ...	Lackawanna.	Was helping his miner to draw a charge of powder which had missed fire, when in some manner he ignited the powder, burning him about face and arms.
19	Patrick Bassett, .....	American, .....	Driver, .....	17	S.	Powderly, .....	Lackawanna.	Was cleaning latches when the mule he was driving started the cars and caught his hand between the wheel of car and the latch, squeezing it.
23	Henry Walsh, .....	German, .....	Laborer, .....	38	M.	White Oak, .....	Lackawanna.	Was loading a car near face of chamber, when a piece of top rock fell and slid against him, squeezing him against the car and bruising him about the body severely.
27	Thomas Smith, .....	English, .....	Miner, .....	61	M.	Jermyn, .....	Lackawanna.	Less bruised and cut by top coal falling on him.
Feb. 6	Wm. Hoskins, .....	American, .....	Door boy, ....	14	S.	No. 1 shaft, Penna. Coal Co.	Lackawanna.	Squeezed about the body between an empty car and his door.
4	Henry Jamma, .....	Polish, .....	Miner, .....	30	M.	Grassy Island, .....	Lackawanna.	Leg bruised badly by a car running off the end of track and squeezing him against a lump of coal.
18	Walter Grotconski, ....	Polish, .....	Miner, .....	38	M.	Panocoast, .....	Lackawanna.	Injured about the face and eyes by some dynamite exploding.

March	26	Jacomit Raefel,	Italian,	Miner,	45	S.	Mt. Jessup,	Lackawanna,	Leg fractured by mine cars.
	10	Victor Natopski,	Polish,	Laborer,	25	M.	Pancoast,	Lackawanna,	Head and body injured by a fall of top rock.
	13	Stephen Vinanto,	Slavonian,	Laborer,	35	M.	Grassy Island,	Lackawanna,	Leg fractured by a piece of fire clay rock falling on him near face of airway.
	19	John Meehan,	American,	Stone repainer,	28	S.	Jermyn,	Lackawanna,	Squeezed by carriage at foot of shaft.
	19	Richard Hughes,	American,	Foot tender,	34	M.	Jermyn,	Lackawanna,	Shot at the body by carriage at foot of shaft.
	16	Andrew Matta,	Hungarian,	Door tender,	56	M.	Pancoast,	Lackawanna,	Leg fractured by a piece of coal flying from a shot.
	20	Michael Goodwidze,	Russian,	Laborer,	55	M.	Erie shaft,	Lackawanna,	Body bruised by a fall of top rock.
	20	Stephen Genowski,	Slavonian,	Miner,	38	M.	Gipsy Grove,	Lackawanna,	Back and neck injured by a fall of top rock near face of chamber.
	25	Joseph Cravoehak,	Polish,	Laborer,	32	M.	Eddy Creek,	Lackawanna,	Leg fractured by a fall of top slate near face of chamber.
	28	Frank Steklos,	Polish,	Miner,	40	M.	Edgerton,	Lackawanna,	Seriously injured about the body and head by a fall of top rock, back near the branch of chamber, where he was lifting an empty car on the track.
	28	George Nchiski,	Polish,	Laborer,	32	M.	Edgerton,	Lackawanna,	Swung an empty car about the body and head by a fall of top rock, back near chamber branch, where he was lifting an empty car on track.
April	3	Thos. Williams,	American,	Miner,	36	M.	Jermyn,	Lackawanna,	Back and leg injured by a fall of coal near face of chamber.
	14	Alex. Fedczak,	English,	Miner,	32	M.	Jermyn,	Lackawanna,	Legs cut and bruised by a fall of coal near face of chamber.
	16	Poncho Burnock,	Russian,	Laborer,	28	M.	Grassy Island,	Lackawanna,	Hip fractured by a piece of fire clay rock falling upon him near face of chamber.
	20	Henry Witby,	Polish,	Laborer,	24	S.	Erie shaft,	Lackawanna,	Leg fractured by cars inside.
	25	Martin Gallagher,	American,	Coal driver,	14	S.	Grassy Island,	Lackawanna,	Foot crushed by cars inside.
	25	John Kactura,	American,	Driver,	18	S.	Grassy Island,	Lackawanna,	Fractured pelvis by cars inside.
	27	George Mason,	Russian,	Laborer,	26	M.	Grassy Island,	Lackawanna,	Foot crushed by a fall of roof in face of airway.
	27	Edward Roberts,	American,	Asst. foreman,	27	S.	Eddy Creek,	Lackawanna,	Shoulder and legs injured by being squeezed between an empty car and a locomotive, outside.
May	8	Alex. Isiek,	American,	Runner,	17	S.	Eddy Creek,	Lackawanna,	Shoulder and leg injured by being squeezed between an empty car and a locomotive, outside.
	8	John Keough,	Slavonian,	Laborer,	25	M.	No. 2 shaft, Penn. Coal Co.,	Lackawanna,	Ribs fractured and body bruised by a fall of top rock near face of chamber.
	19	Frank Colatski,	American,	Driver,	19	S.	N. Cabondale,	Lackawanna,	Legs and body bruised by cars inside.
	19	Jasper Kwachie,	Polish,	Laborer,	41	M.	Eddy Creek,	Lackawanna,	Knee of headling by a fall of top slate near face of heading.
	27	Patrick Lynn,	Austrian,	Laborer,	40	M.	Clinton,	Lackawanna,	Hip fractured and leg fractured by a fall of top rock near face of heading.
June	11	Edward Rector,	Irish,	Miner,	40	M.	White Oak,	Lackawanna,	Dislocated joint of elbow by falling down from the top of a pile of coal in his chamber.
			Polish,	Laborer,	30	M.	Stierick Creek,	Lackawanna,	Head and shoulder bruised by a fall of rock near face of chamber.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single.	Name of Colliery	County	Nature and Cause of Accident in Brief
16	Thos. Jordan, .....	American, .....	Mine foreman, .....	43	M.	Powderly, .....	Lackawanna, ..	Spinal column injured by a fall of top rock.
18	James Henry, .....	American, .....	Laborer, .....	30	S.	Grassy Island, .....	Lackawanna, ..	Back and chest bruised by a piece of coal falling and squeezing him against the car.
20	Walter Caulski, .....	Polish, .....	Miner, .....	49	M.	Dolph, .....	Lackawanna, ..	Leg fractured by a fall of top rock near face of workings.
25	Antonio Greig, .....	Italian, .....	Laborer, .....	38	M.	Gipsy Grove, .....	Lackawanna, ..	Bristled at the body and head by a fall of top rock near face of workings.
29	John Saibada, .....	Slavonian, .....	Runner, .....	26	S.	No. 1 shaft, Penna. Coal Co.	Lackawanna, ..	Collar bone fractured by being squeezed by a loaded car against a pillar on narrow side near foot of chamber.
27	Andrew Gordan, .....	Polish, .....	Miner, .....	42	M.	Erie shaft, .....	Lackawanna, ..	Head and spine injured by a piece of top in shape of "bell" falling between two props, back on chamber track, fifty feet from face.
27	John Koval, .....	Slavonian, .....	Laborer, .....	24	S.	Moosic Mountain, .....	Lackawanna, ..	Leg bruised so badly that it was necessary to have it amputated, caused by a fall of top rock near face of chamber.
29	George Stephens, .....	American, .....	Runner, .....	29	S.	Jerryn, .....	Lackawanna, ..	Stomach injured by being struck with a piece of coal near face of chamber.
July 2	James Pasquerelli, .....	Italian, .....	Miner, .....	34	M.	Sterrick Creek, .....	Lackawanna, ..	Head and body injured by a fall of top slate near face of chamber.
July 1	Michael Coleman, .....	Irish, .....	Laborer, .....	32	M.	Grassy Island, .....	Lackawanna, ..	Head and neck injured while cleaning a fall on heading road, by a piece of top rock falling on him.
July 7	James Smith, .....	English, .....	Slope headman, .....	20	S.	Eddy Creek, .....	Lackawanna, ..	Ankle fractured by being struck with a rope on slope.
July 17	John Coyle, .....	German, .....	Laborer, .....	38	M.	Carney, .....	Lackawanna, ..	Leg fractured by a fall of top rock near face of chamber.
July 18	George Martin, .....	American, .....	Slate picker, .....	14	....	No. 1 Carbondale, ..	Lackawanna, ..	Leg fractured by falling from a beam to the ground at breaker.
July 24	Jacob Graustetter, .....	Austrian, .....	Miner, .....	36	M.	Clinton, .....	Lackawanna, ..	Both legs fractured by a fall of middle ledge of coal near face of chamber.
July 24	John Mullanny, .....	American, .....	Pumpman, .....	39	M.	Mt. Jessup, .....	Lackawanna, ..	Leg fractured by a piece of top rock falling on him.

Aug.	3	Anthony Bresk,	Polish,	.....	24	S.	Jermyn,	.....	Lackawanna,	Head and back injured by a fall of bone near face of chamber.
	10	James Morgan,	Welsh,	.....	41	M.	Grassy Island,	.....	Lackawanna,	Face, hands and body burned with powder which exploded in hole while he was tamping it.
	10	Peter Youshok,	Russian,	.....	30	M.	Grassy Island,	.....	Lackawanna,	Face and arms burned and cut by powder which exploded in hole while he was helping to tamp it.
	8	Anthony Rooke,	Italian,	.....	23	S.	Edgerton,	.....	Lackawanna,	Ankle fractured by a piece of top rock sliding from top of fall which he was cleaning.
	15	William Barrett,	Irish,	.....	40	M.	Sterrick Creek,	.....	Lackawanna,	Head injured by a piece of top rock falling in him near face of heading.
	24	Thomas Coleman,	American,	.....	27	M.	White Oak,	.....	Lackawanna,	Burned about face and arms with powder that he ignited while preparing a charge.
Sept.	1	John King,	American,	.....	34	M.	No. 1 shaft, Penna. Coal Co.	.....	Lackawanna,	Burned about face, hands and arms with powder that exploded while he was trying to force it back in hole.
	1	George Pimko,	Slavonian,	.....	29	M.	No. 1 shaft, Penna. Coal Co.	.....	Lackawanna,	Head cut by a piece of flying coal while helping to tamp hole, when powder exploded that burned John King.
	3	James Stead,	English,	.....	38	M.	Sterrick Creek,	.....	Lackawanna,	Leg fractured by a piece of top rock in shape of a bell that fell on him while changing the heading.
	3	Samuel Monalschang,	Italian,	.....	34	S.	Sterrick Creek,	.....	Lackawanna,	Leg fractured by a piece of top rock in shape of a "bell" falling on him while helping to tamp a hole near face.
	17	William Williams,	American,	.....	34	M.	Jermyn,	.....	Lackawanna,	Leg bruised by a fall of top coal near face of chamber.
	16	Michael Olanic,	Hungarian,	.....	40	M.	Sterrick Creek,	.....	Lackawanna,	Face and arms burned with powder which exploded in hole that he was forcing it back in at face of airway.
	21	John Cooney,	Irish,	.....	37	M.	Carney,	.....	Lackawanna,	Scalp injured by flying coals from a shot he was firing in a cross-cut.
	23	Michael Desanta,	Italian,	.....	23	S.	Carney,	.....	Lackawanna,	Body bruised by flying coals from a shot in the above cross-cut.
	25	Patrick Munley,	Irish,	.....	55	M.	Sterrick Creek,	.....	Lackawanna,	Leg fractured by a piece of "bell" shaped rock falling on him in cross-cut.
Oct.	30	Clarence Shimmer,	German,	.....	19	S.	Mt. Jessup,	.....	Lackawanna,	Arm fractured by a pipe falling on him.
	1	Morgan Davis,	Welsh,	.....	41	M.	Clinton,	.....	Wayne,	Both hands blown off and one eye blown out by the explosion of a box of percussion caps and one stick of dynamite powder while preparing a charge for hole.
	1	Thomas Roland,	American,	.....	17	S.	Sterrick Creek,	.....	Lackawanna,	Leg fractured by cars inside.
	7	John Penrose,	English,	.....	58	M.	Eric slatt,	.....	Lackawanna,	Body seriously injured by a fall of top rock near face of chamber.
Nov.	10	William Shevlin,	Irish,	.....	23	M.	Carney,	.....	Lackawanna,	Back injured by a fall of top coal.
	16	John Holsinger,	Russian,	.....	21	M.	Sterrick Creek,	.....	Lackawanna,	Leg fractured by cars inside.
	17	Win Hollander,	American,	.....	17	S.	Pancoast,	.....	Lackawanna,	Legs bruised and badly cut by cars inside.
	29	Edward Howarth,	American,	.....	17	S.	Pancoast,	.....	Lackawanna,	Prised and cut about body by premature blast.
	30	John Baker,	English,	.....	57	M.	Jermyn,	.....	Lackawanna,	

TABLE 5—Continued.

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Dec. 4	Jacob Siedteski, .....	Slavonian, .....	Miner, .....	35	M.	Moosic Mountain, ..	Lackawanna, ..	Fractured leg and fractured pelvis by a fall of top rock near face of heading.
8	Peter Epochick, .....	Slavonian, .....	Brakeman, .....	32	M.	Dolph, .....	Lackawanna, ..	Fractured femur by cars outside.
10	Michael Murrichone, ....	Italian, .....	Miner, .....	22	S.	Sterrick Creek, .....	Lackawanna, ..	Fractured arm and leg by premature blast.
15	Stanley Yankyduch, ....	Polish, .....	Driver, .....	17	S.	Pancoast, .....	Lackawanna, ..	Fractured cord in neck by falling against car inside.
16	Simon Matakonas, .....	Hungarian, ....	Doorman, ....	40	M.	Pancoast, .....	Lackawanna, ..	Fractured leg by being struck with a car near his door inside.
18	Thomas Gerrity, .....	Irish, .....	Laborer, .....	23	S.	Powderly, .....	Lackawanna, ..	Mule fell on him.

### Accidents by Falls of Coal, Slate and Roof

There were 33 fatal and 80 non-fatal accidents reported in this district during the year 1903. By referring to Table C it can be seen that 30 or 90.9 per cent of the fatal accidents occurred inside the mines, and 3, or 9.1 per cent, outside. The number of fatal accidents from falls of coal and roof, seems to keep pace with preceding years, which is positive evidence of being the greatest danger the miner has to cope with, and really the least feared. Of the 30 fatal accidents inside the mines, 17, or nearly 57 per cent., were caused by falls of coal and roof, and upon investigation it was learned that there were 6 miners killed by this cause. Four of these accidents resulted from carelessness on the part of the victims, and 2 were unavoidable.

There were 9 laborers killed by the same cause. Six of these accidents were due to the carelessness of the miner with whom they were working, and 3 of them were accidental. There were two other accidents from the same cause, one attributed to incompetency on the part of the victim, and the other accidental. Many excellent articles have been written by mine inspectors in the past on fatal accidents from this as well as other causes, and advice has been given as a result of a lifetime experience, that if followed would no doubt have been the means of reducing the number of fatalities from this cause far below what it is. In addition to the many wise suggestions in the past to guard against dangers of this kind, I venture to state that until there are competent men employed in each mine whose duty it is to visit a certain number of working places as frequently as they can possibly do so, and direct the securing, or removing of all danger from this source, the accidents from falls of roof will not be reduced to any great extent. It may be asked, why cannot the mine foreman or his assistants attend to this? I claim without the least fear of successful contradiction that it is utterly impossible for them to do so. Their time and their various other duties will not permit them. I can truthfully state that there is not one mine in this district in which I did not have occasion to call the attention of a number of miners to the extremely dangerous condition of the roof, and have them remove the danger before I left.

Fatal accidents from this source will occur as long as coal is mined, unless the miner uses every precaution known to him, and applies the remedies suggested by others for his safety.

#### By Mine Cars, Inside

There were five fatal accidents inside by mine cars, which is 16.66 per cent., of the number of fatal accidents, 40 per cent. of this

number was due to carelessness on the part of the victims, 40 per cent. was accidental, and 20 per cent. to a mistake made by the victims. I am pleased to state, that with few exceptions the officials in charge of the mines in this district, are careful to see that the roads are kept clean and free from obstacles that might be the means of causing an accident from this source. This class of employes covers large territories, and the dangers to which they are subjected are many and multiplied, for many times they run great risks, and frequently meet with accidents not attributable to themselves. The old methods of driving narrow gangways with room at intervals to pass moving cars with safety is fast giving way to the modern method which provides ample room on both sides of car, thereby reducing the danger on gangways to a minimum. Drivers and runners, as a rule, do not realize the dangers they are subjected to while performing their duties, hence they take uncalled for risks, and acquire a habit of carelessness in riding and handling cars, which frequently ends in fatal accidents, or serious injury to themselves or others. A habit prevails among drivers and runners in this district not calculated to promote health, and it should be stopped at once. I refer to their sitting on the bumpers of loaded and empty cars with one foot dragging along the rail, and the other resting upon the mules' spreader.

This habit has been condemned by the mine inspector of the old first district, and a remedy suggested, which, if applied, would be the means of reducing accidents of this kind. When it is shown that 40 per cent. of the number of fatal accidents that happened inside by mine cars for the year 1903 resulted from this cause, the necessity of enforcing strict discipline in this matter will be appreciated.

### By Blasts

The next most prolific cause of fatal accidents is by blasts, premature and otherwise. They can be prevented only by the miner and laborer exercising the precaution that is absolutely necessary on their part while engaged in preparing a charge of powder for a blast, and by giving the powder ample time to be exploded after the hole has been properly charged, sufficient alarm given to warn others, and retreating to a place of safety. Many accidents from this cause might be averted if the simple precautions were taken that are contained in the mine law. There were three fatal accidents from blasts, or 10 per cent. of the number of fatal accidents inside. Two of these happened through carelessness on the part of the victims igniting the squib, and the other one by contributory negligence on the part of the miner with whom the victim worked.



### By Dynamite and Blasting Powder

There were two fatal accidents from explosions of dynamite and blasting powder, or 6.66 per cent. of the total number inside. One of these occurred by dynamite exploding when the miner was thawing three sticks which he had placed in the lid of his powder tin under which he had placed two mining lamps. This habit exists throughout the district, where it is necessary to use this explosive, and many officials are very lax in their efforts to enforce strict compliance of the rules as laid down by the manufacturers of this explosive. In working small veins considerable dynamite is handled and used by the coal miner in blasting down the top or raising bottom to get sufficient height for the car and mule. This being the case, the miner that has occasion to use this explosive should have some knowledge of the proper method of handling and using the same with the least possible danger to himself. All frozen cartridges should be thawed, for when it is in a frozen condition it loses much of its efficiency. Its properties then change, and it is difficult to explode it with a cap. When it is in a frozen condition it should not be exposed to direct heat. The liability to accident by explosion can be reduced only by removing as far as it is possible to do so, the causes and conditions which lead to such. On account of the great importance of dynamite as an explosive in mining, and the number of accidents which happen from this source, some of which can be attributed to a lack of knowledge of handling and using this powder when in the above condition, I would suggest a strict adherence to general rules 29 and 31 of the Anthracite Mine Law, in addition to complying with the rules as laid down by the manufacturers of high explosives.

There was one fatal accident caused by removing blasting powder from a powder tin, with mining lamp not removed from the head, a spark from lamp falling into the powder resulting in an explosion, causing death to the victim. General rule 28 of the Mine Law provides a means of reducing accidents of this kind to a minimum.

#### Accidents from Miscellaneous Causes, Inside.

There were three fatal accidents from miscellaneous causes inside, two of which were accidental and one attributed to carelessness of the victim.

#### By Mine Cars, Outside.

There were three fatal accidents from cars outside, two of these were caused by mine cars, and were found to be accidental. The other one was caused by the railroad cars near the breaker. An inquest held on this, rendered a verdict of accidental death.

In conclusion, permit me to state that the various accidents which

are happening so frequently in and about the mines, and which are the result of causes that are well known to almost every one employed about the mines, will not be reduced, excepting by the mine officials enforcing strict discipline after properly instructing those who lack the knowledge necessary to guard themselves against the many dangers that surround them while engaged at their daily toil, and by every employe exercising the utmost care and obeying the instructions that are given them by others.

### General Condition of the Mines

The mines that are operated by the Delaware and Hudson Coal Company, with few exceptions, are in good condition. The volume of air entering these mines is sufficient to insure a healthy atmosphere for each person employed. The air current is not conducted to the face of the working places in a few of these mines. The foremen in charge are making some efforts to improve the condition. The roads, drainage and general condition as to safety are good.

At the Gipsy Grove and No. 1 shaft of the Pennsylvania Coal Company the volume of air entering the mine was found to be inadequate, and steps were taken to increase the total volume. The roads and drainage are fair.

At the Pancoast shaft of the Price-Pancoast Coal Company the quantity of air was found to be insufficient to dilute the copious flow of gas transpiring from the Dunmore vein to a safe limit. The officials in charge took steps at once to increase the volume of air, and remove as far as possible all danger. My last visit found it in first class condition.

The Moosic Mountain mine of the Moosic Mountain Coal Company needs improvement to better the condition of the ventilation, roads and drainage.

The Mount Jessup Coal Company is making improvements with a view of bettering the general condition, which is very much desired.

In the Sterrick Creek mines of the Sterrick Creek Coal Company the ventilation is weak in many places, but improvements are under way with a view of changing the general condition for the better.

The general condition of the Dolph mines of the Dolph Coal Company is good, excepting the ventilation in some places, which will be remedied by changes that are contemplated.

The mines of the Hillside Coal and Iron Company were found to be lacking sufficient ventilation. The officials have taken steps to remedy this. The condition as to safety is fair.

The general condition of the smaller companies is as follows:

Carney and Brown Coal Company, fair.

Edgerton Coal Company, fair.

Finn Coal Company, good.

Black Diamond Coal Company.—This mine was in a very bad condition generally, but on my last visit I found the ventilation greatly improved.

### COLLIERY IMPROVEMENTS

By the Delaware and Hudson Company

Clinton.—Sinking new slope from surface to Grassy vein, section 7x14 feet, present depth 125 feet.

Extension of present haulage in old slope Top vein 2,400 feet begun.

Erection of supply store 16x28 feet and office for mine foreman 14x18 feet. Installation of 3 cylinder boilers, 90 horse power total.

New local sales pockets in Carbondale City of 4,500 to 5,000 tons capacity, with elevator and conveyor driven by 26 horse power gas engine.

Carbondale No. 1.—Air shaft from surface to top vein, 151 feet, completed.

One ten foot ventilating fan driven by 26 horse power gasoline engine.

Powderly No. 2.—Erection of new breaker and washery combined. Machinery driven by one pair of 16x36 inch engines, 150 horse power. Conveyors driven by one pair of 18x36 inch engines, 90 horse power. Washery supplied with one 18x12x18 inch Jeansville Duplex pump of 1,900 gallons capacity. Installed six new return tubular boilers of 150 horse power each.

Jermyn No. 1.—One direct current generator of 180 kilowatts driven by direct connected engine. Mines wired for electric haulage, and one electric locomotive of 12 tons weight put in use. One 24x14 x36 inch Jeansville Duplex pump of 1,800 gallons capacity installed, but now under water and not being operated.

One new gravity plane 1,200 feet long. Foot of shaft, head and foot of inside slope wired and light furnished by arc lamps.

White Oak.—One 17 foot fan erected, driven by 14x36 inch engine to ventilate the Dunmore vein.

New slope sunk 500 feet in Dunmore vein.

Proposed 3,000 feet haulage road begun.

Grassy Island.—One three stage air compressor with 16x11½x5 5-8 inch diameter air cylinders, 22 inch diameter steam cylinder by 24 inch stroke, 140 horse power. One locomotive type boiler installed, 250 horse power. Three small air motors sent to this mine, but not all in use.

**New Shaft.**—Present depth 525 feet. Section of shaft 12x50 feet to be continued to Dummore vein. Erection of new Guibal fan at this shaft 28x8 feet, driven by a pair of Corliss engines 18x36 inches each.

**Eddy Creek.**—Tunnel being driven from Rock vein to Big vein, section 7x12 feet, not completed. Four new openings located along East bank of the Lackawanna river, near Priceburg. One of these to open the Pierce vein, and three to open the Church vein. New air shaft commenced, circular in shape, 14 feet diameter. One centrifugal pump of 500 gallon capacity, driven by electric motor.

Three Gardiner electric drills for coal mining put in use.

**No. 2 Olyphant.**—Three locomotive type boilers of 250 horse power each installed. One 22 and 38x16x48 inch Jeansville Duplex pump, capacity 3,000 gallons per minute.

One 60 K. W. electric generator belted to a 13x12 inch Ball engine.

#### By the Sterrick Creek Coal Company

**Sterrick Creek.**—To improve the ventilation, a rock air-way was driven from the slope workings of the Dummore vein up to the Clark vein, and two air shafts from the surface to the Clark vein were also completed. Several intake drifts from the surface to the Grassy vein have been abandoned, owing to their proximity to the Grassy Island Creek, and in their stead an air shaft, some distance away from the creek, has been sunk from the surface to said Grassy vein.

A new Jeansville pump has been placed in the Clark vein, near foot of No. 1 shaft, with a capacity of 2,000 gallons per minute.

A new Ingersoll-Sergeant Duplex air compressor, 20x24 inch steam cylinder, and compound air end 33½ inches and 20½x24 inches was added to original air plant.

A new shaft 12x30 feet is sunk to a depth of 100 feet, to be continued until it reaches the Dummore vein.

Three bore holes have been sunk from the surface, two to the Dummore vein, and one to the Clark vein.

The present two inside hoisting engines, together with a large one, are to be placed on the surface, and ropes are to be run down the bore holes into the mine. This will enlarge the present capacity, eventually making this colliery one of the largest producers.

#### By the Pennsylvania Coal Company

Work has been commenced at both ends of a new tunnel to be driven from the Lackawanna river to No. 1 shaft, No. 1 colliery, for

the purpose of draining all of the collieries above No. 1 shaft in the Dunmore district.

This tunnel when completed will be about 7,000 feet in length. The dimensions are as follows:

First 1,200 feet to be 8x6 feet.

The next 5,000 feet to be 15x7 feet.

The last 800 feet to be 8x6 feet.

The tunnel to be driven with a uniform grade of 4 inches in each and every 100 feet.

#### By the Price-Pancoast Coal Company

Pancoast Shaft.—Erection of two new brick supply houses, one 20x30 feet and the other 20x40 feet.

The old 20 foot ventilating fan has been repaired and put in fit condition to ventilate the Dunmore vein.

In No. 1 or Diamond vein a new gravity plane has been constructed 700 feet in length.

In No. 3 vein, two new gravity planes, and in No. 4 vein two new gravity planes have been constructed. The West slope has been extended for a distance of 700 feet to line near Lackawanna river.

The Dunmore vein has been opened and a slope driven on the north dip 1,000 feet. A hoisting engine has been put in here, capable of hoisting 200 cars per day. A slope on West side is being driven, present length 400 feet, with gangways driven east and southeast. Seven splits of air have been made with two more under way. A new barn has been made in this vein to hold 35 mules.

#### By the Finn Coal Company

Erection of new breaker, dimensions of which are 51x51 feet and height over wall 65 feet. One large screen, two sets of shakers 30 feet long. One set of elevators, distance between centers 45 feet.

Breaker engine 16x24 inch cylinder, 75 horse power. Capacity of breaker about 350 tons daily.

A tunnel driven from No. 1 Dunmore to No. 2 Dunmore vein; length 66 feet, section 6x14 feet.

A new second opening was driven from inside to the surface, a distance of 100 feet.

#### By the Black Diamond Coal Company

Erection of new fan, 12 feet in diameter, to ventilate No. 1 vein. The result is a marked improvement in the ventilation.

## Flooding of Mines in Carbondale District

On the 7th of October it began to rain and continued until the evening of the 9th. The Lackawanna river overflowed its banks from Carbondale to Scranton, resulting in great destruction to property along its path. At the old "pump house," in Carbondale, known as "Campbell's," there are two shafts a short distance west of the river. The tops of these shafts are but a few feet above the level of the bank of the river. Near the "pump house" the river overflowed its banks and the water poured down the shafts from early in the evening of the 8th until the following evening.

During this time millions of gallons of water poured into the mine. There were three men working night shift in a slope in No. 3 shaft at this time, and had it not been for the timely notice they received, in all probability they would have perished. As it was, they had to flee for their lives, wading through the water to their waists. Later in the evening it was learned that the river had cut a channel through the south bank near No. 1 slope, changing the course of the stream, causing it to flow down No. 1 slope in such volume that the slope was not large enough to take it. The lower levels of Nos. 1 and 3 were not long in being inundated, and the water then began to run to Powderly mine, which is connected to No. 1 mine, and operated by the same company. The water was not long in filling the inside slope in this mine, and then began pouring in to the Erie shaft workings, the adjoining mine which is operated by the Hillside Coal and Iron Company. The water rose so rapidly in this shaft, that notwithstanding the efforts of the mine officials, the pumps were covered in a very short time. When the water had risen to a certain point in this shaft, it then flowed to the Glenwood shaft workings, which are operated by the same company.

At 3 o'clock P. M. Saturday, October 10th, the water had reached a vertical height of 40 feet in the Glenwood shaft. From this point it ran into the Jermyn No. 1 shaft. This shaft is located at Jermyn and is operated by the Delaware and Hudson Coal Company. I visited this mine October 15th, and was informed that the water was 25 feet vertically above their pumps in the inside slope.

The flooding of all of those mines emphasizes the necessity of leaving sufficient barrier pillars along the line of adjoining properties in each vein for the safety of employes, and for the benefit of the operators. Had those mines been worked in days gone by with safe barrier pillars left along adjoining properties, it would have been the means of preventing the flooding of all of those mines, which happens frequently and means enforced idleness to a great number of men and boys, and an enormous expense to the operator.

### Inrush of Sand and Water into the Workings of the Eddy Creek Shaft of the Delaware and Hudson Company at Olyphant

At about 3 o'clock Friday afternoon, January 2, 1903, a cave-in occurred on one of the busiest street in Olyphant, when four buildings, including a large hotel, sunk fifty feet and were covered.

When it was learned that none of the occupants were lost, it was looked upon as almost miraculous. The large water main ran through near the center of this cave-in, and it was found that it was broken, and a large volume of water poured its way into the mine, carrying with it large quantities of sand and gravel, which caused much alarm for the safety of the men and boys employed in this part of the mine.

Fortunately, however, all the men and boys made their escape without injury, although many of them had to wade through mud and water above their waists.

On January 5th I visited this mine for the purpose of making a thorough examination of this particular part, hoping to ascertain the cause of cave-in, and to note the condition of workings, and if possible devise some means of preventing a repetition of the accident. I was met at the mine by Mr. Edward Roderick, then Mine Inspector of the First District, and after a brief consultation with the mine officials relative to the condition of the workings in this particular district, it was learned that the cave-in took place in old workings that were abandoned in 1896. The range of chambers that was affected by the wash from the cave-in was opened from a gangway driven from the top of "Hoye's" plane to the head of "Moyle's" slope, a distance of about 1,800 feet. "Moyle's" slope is sunk on the north-west dip of an "anticlinal," and "Hoye's" plane was driven on the southeast dip of same "anticlinal." The face of those chambers is on or near the apex of the "anticlinal." To reach this district it was necessary to travel from the head of "Moyle's" slope toward "Hoye's" plane, and in doing so we had to travel upon hands and knees for a distance of about 500 feet. The sand and gravel came within 18 inches of the roof of gangway for this entire length, which made it extremely difficult for the men and boys employed near this district to escape.

When we reached the district in which the cave-in occurred, we found the pillars to be very uniform in width and length, and the chambers the same. Many of the chambers were filled with rock which had been taken from other parts of the mine and unloaded there for protection of the pillars and roof. There was no indication of a "squeeze," and as the rock covering over the vein is not of a cohesive nature, it will yield under much less force, and will not transmit the pressure it receives to any great distance. The pro-

bable cause is that there may have existed at this point a local "pot hole," which would increase the depth of sand and gravel and decrease the thickness of the rock covering overlying the coal seam. The props may have been decaped under this roof at this point, and owing to the great weight of sand over this shallow rock, it yielded. To guard against a repetition of the above occurrence, suggestions were made, and I am pleased to state that the officials in charge put them into effect at once.

This company has bored a number of holes along the flats in this vicinity for the purpose of establishing proof of the thickness and nature of the covering overlying the coal seams. While it does not furnish absolute security against accident, I think it is the means of reducing the number of accidents from this source to a minimum, besides the saving of many mines from complete ruin.

### Ventilation

This important subject has been given the proper attention by some of the officials in this district, and they will agree with me when I say that they have been amply rewarded for making improvements that increase the ventilation, and that conduct the current to the face of each working place. I regret to state that this very important subject, which is one of the most essential in the successful development of a mine, is given passing attention only by a great number of mine officials in this district. In many cases this cannot be attributed to a lack of knowledge of the laws governing ventilation, but rather to a laxity on their part in allowing the ventilating currents to lag behind the working faces, until the condition of the workings becomes mendurable, and as such increases the many dangers to a great extent, and also increases the expenses of everything connected with the mining, preparing and transporting of the coal to the surface. The injury inflicted on the workmen where the above condition exists is entirely uncalled for, and cannot be too harshly condemned. It has been my experience where I found a few mines in this district operating under the above conditions that the officials in charge were invariably incompetent men. It is unpleasant to have to comment so severely, but the truth should not be hidden in such cases. To the officials mentioned it is useless to suggest a remedy that will relieve existing evils. According to the statements given in the air reports for each colliery in the district for the year 1903, the total quantity of air entering all of the mines in the district is 2,468,029 cubic feet per minute. There are 122 splits, or separate currents of air in the mines of the district, through which 1,834,362 cubic feet of air are circulating per minute. This provides for each person from 1,050 cubic feet to 184 cubic feet of air per minute. It



can be seen at a glance from the above, that the volume of air entering nearly all the mines, is sufficient to render a healthy atmosphere for each and every person employed therein, provided, it is conducted in the proper manner to the face of each working place. I regret to state that the number of mines properly ventilated in this district is few, while in a number of those unsatisfactorily ventilated they are endeavoring to comply with the requirements of the law, and are quite successful in doing so. There are a few others, whose sole object seems to be to evade the requirements of the law.

### Drainage

The condition of the collieries in the Second district in respect to drainage is good in many mines, while it is fair in others. The attention given these three essentials, viz: ventilation, roads and drainage by competent officials is very noticeable. We find that they who neglect the ventilation, also neglect the roads and drainage, with the result that the expenses of mining and bringing the coal to the surface are very high, and the danger attending the various branches of labor is increased to a great extent.

### Safety of Mines

The condition of the mines as to safety is very good. The writer is not aware of any danger that is lurking in any mine in the district which would be the means of imperiling the lives of the workmen. Each and every mine in the district is reported as being free from an accumulation of explosive gases. In mines where explosive gas is evolved the ventilating currents are sufficient to dilute and render harmless the gas transpiring from the coal and strata. There are seven mines in the district in which explosive gases are found. Six of these are not considered gaseous owing to the small quantity of gas exuding from the coal and strata, nevertheless, precaution is taken to prevent any cause which very often results in disaster. There is one mine in the district in which explosive gas is liberated in large quantities. This mine is operated by the Price-Pancoast Coal Company, and the quantity of air in circulation in this mine is sufficient to render a safe and healthy atmosphere.

### Mining Compared with Other Occupations

It is impossible to compare any of the various occupations of man with that of the miner. True it is, his hours of toil and labor each day, as a rule, are exceeded by the hosts of men that are engaged in other fields of manual labor, but the conditions which surround them

while engaged in their toil are such, that there can be no comparison. It is the miner that must delve a life of labor in those deep caverns, where darkness "reigns supreme." Surrounded by impending dangers, he performs his labor with the aid of a flickering light. He must have a trained eye to discover and escape those dangers that cannot be detected in any other way, such as "bells and saddles" in the roof, and explosive gas in the safety lamp. He must have a trained ear to assist him to guard against those dangers which it is impossible to see, and can be known only by sounding, such as pieces of top rock, slate or coal, which appear safe to the eye, but when sounded will indicate imminent danger. These are some of the dangers which constantly hang over the miner while he is actively engaged in his working place. In addition to these I might mention another great danger, namely, blasting powder. When we consider the quantity used for mining purposes, we will be surprised to learn that not more than 13 per cent. of the number of fatal accidents for 1902 in the anthracite district occurred from this source.

The miner very frequently meets with accidents from mine cars on gangways and slopes, and his life is in danger while ascending and descending the shaft. Those dangers are augmented in mines generating explosive gases.

Instead of using the naked light to illuminate his working place, he must substitute instead a lamp erroneously called a "safety lamp." The name given to this lamp would convey to the minds of many who are using them, that it is needless for them to use the precaution necessary on their part, while working in an atmosphere mixed with explosive gases, since the lamp is a "safety lamp." This lamp is safe only when it is in the hands of safe persons, and it was never intended to be used for the purpose of working in an atmosphere containing an explosive mixture of air and gas. Therefore, it should be called a testing lamp.

The illuminating power of those lamps compared with a candle, is from .16 to .90 depending upon the kind of lamp used. It can be seen from this how the dangers from gas are increased.

Inured to the many dangers which constantly hang over and about him, he trudges on with a light that faintly glimmers, seemingly oblivious to the presence of danger. Spurred on by earnest solicitation for the welfare of those whom he loves, he boldly advances to meet, and cope with those agents of death, that have slain thousands, whose names shall never be recorded in the pages of history. Philanthropy's voice is stilled and the sympathy extended to those committed to their care is blind to their needs. Our country cares for the widows and orphans of its sailors and soldiers, but turns a deaf ear, as it were, to the cries of the widows and orphans of the miner.

The act of April 22, A. D. 1903, "to provide a miners' home or homes for old, crippled and helpless employes of the coal mines of Pennsylvania and their wives, who have attained the age of fifty-five (55) years," is a humane act, but could not this great country provide a means of alleviating the sufferings of the widows and orphans who are permitted to live in want, and sometimes reluctantly become inmates of the poor houses? Since the real history of mine legislation, which begins with the Avondale disaster, September 6, 1869, when by the burning of the breaker over the mouth of the shaft the smoke and gases of combustion entered the mine and smothered one hundred and eight men and boys, there has been a number of wise laws enacted for the benefit of the employer and employe, and if in the near future a law could be enacted with the above purpose in view, it would meet with the approval of the Christian world.



# Third Anthracite District

LACKAWANNA COUNTY

---

Scranton, Pa., February 20, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of presenting my report as Inspector of Mines for the Third Anthracite District, for the year 1903, as provided by the act of 1901.

It contains the usual statistics. The accidents which took place during the year, and which have from time to time been reported to the Department, will be found in tabulated form.

Respectfully submitted,

H. O. PRYTHERCI,  
Inspector.

## Third Anthracite District, 1903

## SUMMARY OF STATISTICS

Number of mines in district, .....	25
Number of mines in operation, .....	25
Number of tons of coal produced, .....	4,643,514
Number of tons shipped to market, .....	4,203,343
Number of tons sold at mines to local trade, .....	213,490
Number of tons consumed at mines in generating steam and heat, .....	226,681
Number of persons employed inside the mines, .....	6,869
Number of persons employed outside, .....	2,240
Number of fatal accidents inside the mines, .....	26
Number of tons produced for each fatal accident inside,...	178,597
Number of persons employed per fatal accident inside,...	264
Number of fatal accidents outside, .....	4
Number of persons employed per fatal accident outside,...	560
Number of wives made widows by fatal accidents, .....	19
Number of children orphaned by fatal accidents, .....	49
Number of non-fatal accidents inside of mines, .....	79
Number of persons employed per non-fatal accident inside,	87
Number of non-fatal accidents outside, .....	6
Number of persons employed per non-fatal accident out- side, .....	373
Number of compressed air locomotives used inside, .....	3
Number of electric motors used inside, .....	19
Number of fans used for ventilation, .....	28
Number of gaseous mines in operation, .....	18
Number of non-gaseous mines in operation, .....	7

TABLE A. —Third Anthracite District, 1903

PRODUCTION OF COAL	
Names of Companies	Tons.
Delaware, Lackawanna and Western Railroad Company..	2,132,144
Delaware and Hudson Company, .....	559,630
Bull's Head Coal Company, .....	27,316
Pennsylvania Coal Company, .....	202,634
A. D. and F. M. Spencer, .....	78,200
Nay Aug Coal Company, .....	52,156
Green Ridge Coal Company, .....	170,442
Scranton Coal Company, .....	1,026,862
People's Coal Company, .....	330,817
J. J. Gibbons, .....	8,950
Mountain Lake Coal Company, .....	4,250
Economy Light, Heat and Power Company.....	49,813
	<hr/>
Total, .....	4,643,514
	<hr/> <hr/>
Production by Counties	
Lackawanna, .....	4,643,514
	<hr/> <hr/>

TABLE B.—Third Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number of persons employed; number employed per accident

Names of Companies	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Delaware, Lackawanna, and Western R. R. Co.,	12	1	13	43	6	49	177,704	49,592	3,044	926	3,970	251	71	151	99%
Delaware and Hudson Co.,	4	2	6	7	1	8	189,908	79,917	1,019	229	1,258	252	146	119	96%
Bull's Head Coal Co.,				1		1		27,316	48	27	75		48		
Navy Aug Coal Co.,				1		1		52,156	21	39	63		43		
Green Ridge Coal Co.,	1	1	2	4		4	170,442	42,610	386	99	485	386	96	91	
Seranton Coal Co.,	8	8	16	17		17	128,378	66,404	1,525	627	2,152	191	191	99	
People's Coal Co.,	1		1	6		6	330,811	53,136	349	120	469	349	58		
Totals and averages for district, .....	26	4	30	79	6	85	178,337	58,779	6,869	2,240	9,109	264	87	360	37%







TABLE E.—Third Anthracite District, 1903  
Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines

	Inside													Outside							Grand total
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Book-keepers and clerks	All other employes	Total outside	
January, .....				1					1		2								1	1	3
February, .....				2		1			1		4								1	1	5
March, .....				1		1					2								1	1	3
April, .....				1		1					2								1	1	3
May, .....				1		1					2								1	1	3
June, .....				1		1					2								1	1	3
July, .....				1		1					2								1	1	3
August, .....				2		1					3								1	1	4
September, .....				1		1					2								1	1	3
October, .....				2		1			1		4								1	1	5
November, .....				1		1			1		3								1	1	4
December, .....				1		1			1		3								1	1	4
Total, .....				14	5	3			4		26								4	4	30



TABLE G.—Third Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	English	Welsh	Scotch	Irish	German	Polish	Slavonian	Russian	Totals
January, .....	1									3
February, .....				1						4
March, .....	1									4
April, .....	1							1		4
May, .....						1	1			2
June, .....	1								1	2
July, .....	7				1					8
August, .....							1			1
September, .....	1	1			1		1			4
October, .....										
November, .....	1		1				1			3
December, .....					1					1
Totals, .....	7	1	1	1	10	1	6	1	2	30

TABLE H.—Third Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Hungarian	Slavonian	Lithuanian	Austrian	Russian	Jew	Totals
January, .....	1	1	5	3			1						11
February, .....				1							1		2
March, .....			1	1									2
April, .....		1		1									2
May, .....		1				1				2			4
June, .....		1		2									4
July, .....	3	1		2									6
August, .....	2	1		4	1			1					9
September, .....	2			1	1				1				5
October, .....			2	1	2	1		1	1				7
November, .....	1	1	2	1	2	4		1				1	12
December, .....			1	2		2		1	1				7
Totals, .....	15	7	9	22	4	16	2	3	3	2	1	1	85

TABLE I.—Third Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

Names of Operators and Mines	Kind of openings	Gasous or non-gasous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
L., L. and W. R. R. Co.	Shaft...	Gasous,	Fan.....	{ 18	4.5	4.5	132	{ 9	Open running,	Steam,...	12	159,900	127,750	312,060	491	259
Bellevue shaft, .....	Slope...	Non-gas,	Fan.....	{ 14	4.0	4.0	118	{ 9	Open running,	Steam,...	2	43,029	24,710	47,778	52	471
Bull's Head slope, .....	Shaft...	Gasous,	Fan.....	{ 12	3.5	3.5	100	{ 1.0	Open running,	Steam,...	8	59,150	58,780	133,221	211	262
Hyde Park, .....	Shaft...	Gasous,	Fan.....	{ 11	4.0	4.0	100	{ 9	Open running,	Steam,...	11	214,334	198,219	227,230	211	939
Diamond, .....	Shaft...	Gasous,	Fan.....	{ 16	6.0	4.5	92	{ 7	Open running,	Steam,...	5	94,580	86,540	107,460	275	314
Tripp, .....	Slope...	Gasous,	Fan.....	{ 14	4	4	92	{ 9	Open running,	Steam,...	7	144,479	98,862	148,700	311	369
Tripp slope, .....	Drift...	Non-gas,	Fan.....	{ 14	4	4	127	{ 3	Open running,	Steam,...	10	117,919	131,740	141,340	314	343
Erissin, .....	Shaft...	Gasous,	Fan.....	{ 13	3.5	4	140	{ 1.9	Open running,	Steam,...	8	141,527	160,310	221,405	316	477
Cayusa, .....	Shaft...	Gasous,	Fan.....	{ 20	6.0	5.6	68	{ 3	Open running,	Steam,...	10	181,327	160,310	221,405	316	477
Manville, .....	Shaft...	Gasous,	Fan.....	{ 29	6.0	5.6	76	{ 1.4	Open running,	Steam,...	10	269,220	220,420	281,120	510	452
Delaware and Hudson Co.	Shaft...	Gasous,	Fan.....	{ 20	6	5.0	75	{ 1.3	Open running,	Steam,...	10	269,220	220,420	281,120	510	452
Dickson, .....	Slope...	Gasous,	Fan.....	{ 20	4	4.5	84	{ 1.4	Guthed,.....	Steam,...	8	165,430	165,540	166,930	415	339
Von Storch slope, .....	Slope...	Gasous,	Fan.....	{ 23	5	5.0	80	{ 2.2	Open running,	Steam,...	3	47,000	16,569	27,500	38	424
Bull's Head Coal Co.	Slope...	Non-gas,	Natural, .....	29	6.5	5.0	75	1.3	Open running,	Steam,...	7	138,500	99,785	166,755	228	298
Bull's Head Slope, .....	Shaft...	Gasous,	Fan.....	29	6.5	5.0	75	1.3	Guthed,.....	Steam,...	7	138,500	99,785	166,755	228	298
Pennsylvania Coal Co.	Shaft...	Gasous,	Fan.....	29	6.5	5.0	75	1.3	Guthed,.....	Steam,...	7	138,500	99,785	166,755	228	298
No. 5 shaft, .....	Shaft...	Gasous,	Fan.....	29	6.5	5.0	75	1.3	Guthed,.....	Steam,...	7	138,500	99,785	166,755	228	298



TABLE 1.—Third Anthracite District, 1903  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
Delaware, Lackawanna and Western R. R. Co.	Lackawanna,	R. A. Phillips; C. E. Toby, Assistant.	Scranton,.....	E. J. Evans,.....	Scranton,.....	Del., Lack. and Western
Lellevue slope,.....	Lackawanna,	R. A. Phillips; C. E. Toby, Assistant.	Scranton,.....	E. J. Evans,.....	Scranton,.....	Del., Lack. and Western
Bellevue slope,.....	Lackawanna,	R. A. Phillips; C. E. Toby, Assistant.	Scranton,.....	T. J. Williams,.....	Scranton,.....	Del., Lack. and Western
Hyde Park,.....	Lackawanna,	R. A. Phillips; C. E. Toby, Assistant.	Scranton,.....	Walter Reese,.....	Scranton,.....	Del., Lack. and Western
Diamond,.....	Lackawanna,	R. A. Phillips; C. E. Toby, Assistant.	Scranton,.....	Walter Reese,.....	Scranton,.....	Del., Lack. and Western
Tripp,.....	Lackawanna,	R. A. Phillips; C. E. Toby, Assistant.	Scranton,.....	Walter Reese,.....	Scranton,.....	Del., Lack. and Western
Tripp slope,.....	Lackawanna,	R. A. Phillips; C. E. Toby, Assistant.	Scranton,.....	Walter Reese,.....	Scranton,.....	Del., Lack. and Western
Tripp drill,.....	Lackawanna,	R. A. Phillips; C. E. Toby, Assistant.	Scranton,.....	Walter Reese,.....	Scranton,.....	Del., Lack. and Western
Pishin,.....	Lackawanna,	R. A. Phillips; C. E. Toby, Assistant.	Scranton,.....	Walter Reese,.....	Scranton,.....	Del., Lack. and Western
Cayuga,.....	Lackawanna,	R. A. Phillips; C. E. Toby, Assistant.	Scranton,.....	Walter Reese,.....	Scranton,.....	Del., Lack. and Western
Manville,.....	Lackawanna,	R. A. Phillips; C. E. Toby, Assistant.	Scranton,.....	Walter Reese,.....	Scranton,.....	Del., Lack. and Western
Diamond washery,.....	Lackawanna,	R. A. Phillips; C. E. Toby, Assistant.	Scranton,.....	Fred. C. Smith,.....	Scranton,.....	Del., Lack. and Western
Oxford washery,.....	Lackawanna,	R. A. Phillips; C. E. Toby, Assistant.	Scranton,.....	Fred. C. Smith,.....	Scranton,.....	Del., Lack. and Western
Delaware and Hudson Co.	Lackawanna,	C. C. Rose,.....	Scranton,.....	Finley Ross,.....	Scranton,.....	Delaware and Hudson
Dickson,.....	Lackawanna,	C. C. Rose,.....	Scranton,.....	Finley Ross,.....	Scranton,.....	Delaware and Hudson
Von Storel,.....	Lackawanna,	C. C. Rose,.....	.....	Thos. Baggett,.....	Scranton,.....	Delaware and Hudson
Bull's Head Coal Co.	Lackawanna,	.....	.....	.....	.....	.....
Bull's Head slope,.....	Lackawanna,	.....	.....	.....	.....	.....
Pennsylvania Coal Co.	Lackawanna,	W. A. May,.....	Dunmore,.....	W. W. Inglis,.....	Dunmore,.....	Erle
No. 5 shaft,.....	Lackawanna,	.....	.....	.....	.....	.....
A. D. and F. M. Spencer. Spencer Nos. 1 and 2 shafts,.....	Lackawanna,	.....	Dunmore,.....	H. M. Spencer,.....	Dunmore,.....	Erle



Nay Aug Coal Co. Nay Aug slope, .....	Lackawanna, Lackawanna, .....	.....	Thos. H. Bray, Thos. H. Bray, .....	Scranton, Scranton, .....	Del., Lack. and Western Del., Lack. and Western
Green Ridge Coal Co. Green Ridge slope, .....	Lackawanna, Lackawanna, .....	W. L. Connell, .....	.....	.....	Erie.
Scranton Coal Co. Fine Brook, .....	Lackawanna, Lackawanna, .....	John R. Bryden, .....	Wm. L. Allen, .....	Peckville, .....	Ontario and Western
Capouse, Mount Pleasant, .....	Lackawanna, Lackawanna, .....	John R. Bryden, .....	Wm. L. Allen, .....	Peckville, .....	Ontario and Western
West Ridge, Capouse washery, .....	Lackawanna, Lackawanna, .....	John R. Bryden, .....	Wm. L. Allen, .....	Peckville, .....	Ontario and Western
Mt. Pleasant washery, .....	Lackawanna, Lackawanna, .....	John R. Bryden, .....	Wm. L. Allen, .....	Peckville, .....	Ontario and Western
People's Coal Co. Oxford, .....	Lackawanna, Lackawanna, .....	John G. Shepherd, .....	Ino. G. Hayes, .....	Scranton, .....	Del., Lack. and Western
J. J. Gibbons, .....	Lackawanna, Lackawanna, .....	J. J. Gibbons, .....	.....	.....	.....
Mountain Lake Coal Co., .....	Lackawanna, Lackawanna, .....	Queen & Ruddy, .....	.....	.....	.....
Economy Light Heat and Washery, .....	Lackawanna, Lackawanna, .....	W. J. Northrup, .....	.....	.....	.....

TABLE 2.—Third Anthracite District, 1903  
 Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured,  
 number of kegs of powder used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Delaware, Lackawanna and Western R. R. Co.	Lackawanna..	379,122	.....	14,914	394,036	*	790	2	22	12,578	2,700	102
Bellevue, .....	Lackawanna..	290,803	415	18,837	310,641	224	610	1	7	11,973	4,837	76
Hyde Park, .....	Lackawanna..	377,763	21,692	6,075	405,430	258	440	1	8	13,229	3,112	78
Diamond, .....	Lackawanna..	299,820	22,333	6,200	328,353	239	430	1	8	10,214	5,150	72
Brimish, .....	Lackawanna..	212,127	17,200	6,200	235,527	223	634	1	1	10,214	5,150	50
Carvers, .....	Lackawanna..	172,784	14,600	1,870	189,254	224	449	1	1	11,781	17,200	41
Manville, .....	Lackawanna..	1,782,417	76,140	51,735	1,910,292	220	3,878	13	49	70,821	31,588	420
Diamond washery, .....	Lackawanna..	180,214	7,300	.....	197,514	167	55	.....	.....	13	19	4
Oxford washery, .....	Lackawanna..	14,579	.....	59	14,638	50	37	.....	.....	.....	.....	.....
Totals, .....	.....	204,793	7,300	59	212,152	108	82	.....	.....	13	19	4
Delaware and Hudson Co.	Lackawanna..	1,987,210	82,440	51,794	2,121,444	.....	3,970	13	49	70,824	33,607	424
Dickson, .....	Lackawanna..	264,289	50	4,291	268,580	281	602	2	6	15,972	15,840	52
Von Storch, .....	Lackawanna..	245,794	43,173	4,083	293,050	219	656	1	1	11,845	9,315	64
Totals, .....	.....	508,083	43,223	8,374	559,630	255	1,258	6	7	27,817	25,164	116
Bull's Head Coal Co.	Lackawanna..	13,981	1,500	11,835	17,316	148	75	.....	1	975	150	19

\*Totals in this column are averages.

No. shaft.	192,198	4,137	6,299	292,634	213	377	8,840	2,521	56
Pennsylvania Coal Co.									
No. 5 shaft, Lackawanna, .....	192,198	4,137	6,299	292,634	213	377	8,840	2,521	56
A. D. & F. M. Spencer.									
Spencer Nos. 1 and 2 shafts, Lackawanna, .....	73,270	5,000		78,270	108	292	2,600	5,240	5
Nay Aug Coal Co.									
Mine, Lackawanna, .....	32,178	2,081	81	34,240	113	63	560	75	10
Bank or washery, Lackawanna, .....	17,811		5	17,816	103	*			
Totals, .....	49,989	2,081	86	52,156	168	63	560	75	10
Green Ridge Coal Co.									
Green Ridge slope, Lackawanna, .....	120,670	11,165	68,607	170,442	214	465	8,217	5,000	58
Seranton Coal Co.									
Pine Brook, Lackawanna, .....	976,675	18,000	3,296	985,971	185	802	14,549	11,119	89
Capouse, Lackawanna, .....	281,511	14,500	2,968	301,979	185	573	8,159	6,304	55
Mt. Pleasant, Lackawanna, .....	141,116	14,000	2,372	157,488	153	449	9,504	5,300	49
West Ridge, Lackawanna, .....	51,407	5,800	1,221	58,428	118	194	3,542	2,200	24
Totals, .....	753,709	50,300	9,857	813,866	160	2,023	36,514	23,013	247
Capouse washery, Lackawanna, .....	105,060	2,000	207	107,267	95	74			
Mt. Pleasant washery, Lackawanna, .....	99,089	3,500	3,149	105,729	110	55			
Totals, .....	204,140	5,500	3,356	212,996	103	129			
People's Coal Co.									
Oxford, Lackawanna, .....	357,849	55,800	13,213	1,026,862					
Totals, .....									
J. J. Gibbons.									
Mine, Lackawanna, .....	241,560	18,725	70,532	330,817	286	469	11,150	550	100
Mountain Lake Coal Co.									
Mine, Lackawanna, .....									
Totals, .....	48,653	1,000	160	40,813	212	22			1
Economy Light, Heat and Power Co.									
Washery, Lackawanna, .....	4,203,245	226,081	213,490	4,643,514					
Grand totals, .....									
Totals, .....	4,203,245	226,081	213,490	4,643,514	9,109	30	168,282	96,180	1,063

\*Employees included in Nay Aug Slope.

TABLE 2—Recapitulation

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Not including washeries)	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Delaware, Lackawanna and Western R. R. Co.	Lackawanna.	1,997,210	83,440	51,794	2,132,444	230	3,970	13	49	70,834	33,607	424
Delaware and Hudson Co.	Lackawanna.	598,033	43,223	8,374	559,030	255	1,258	6	7	27,817	25,164	115
Bull's Head Coal Co.	Lackawanna.	13,981	1,500	11,535	57,316	146	75	1	1	975	150	19
Pennsylvania Coal and Coke Co.	Lackawanna.	192,198	4,137	6,299	202,634	213	377	.....	.....	8,840	2,521	56
N. D. & F. M. Spencer.	Lackawanna.	73,200	5,000	6,299	78,200	108	202	.....	.....	2,600	5,500	25
Nay Aug Coal Co.	Lackawanna.	49,939	2,081	.....	75,156	113	63	.....	.....	.....	.....	10
Green Ridge Coal Co.	Lackawanna.	120,670	11,165	86	52,156	113	63	.....	.....	.....	75	10
Scranton Coal Co.	Lackawanna.	937,849	11,165	38,697	170,442	214	485	.....	.....	8,217	5,600	53
People's Coal Co.	Lackawanna.	241,569	18,725	13,213	1,026,802	160	2,152	8	17	36,514	23,013	247
J. J. Gibbons.	Lackawanna.	.....	309	8,650	8,390,817	586	469	1	6	11,150	550	109
Mountain Lake Coal Co.	Lackawanna.	.....	250	4,000	8,350	566	16	.....	.....	473	.....	3
Economy Light, Heat and Power Co.	Lackawanna.	48,653	1,000	100	4,250	229	29	.....	.....	300	.....	.....
Totals.	.....	4,293,343	226,681	213,490	4,643,314	2,92	9,109	30	85	168,282	96,180	1,068



TABLE 2--Continued

Names of Operators and Collieries	County	Number of Boilers			Total horse power	Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute--gallons	Number of electric dynamos	Number of air compressors
		Cylindrical				Steam	Air	Electric							
		Horse power	Tubular	Horse power											
A. D. & F. M. Spencer.	Lackawanna.	11	475	2	150	625	.....	.....	21	475	6	.....	.....	.....	.....
Spencer Nos. 1 and 2 shafts, .....	Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nay Aug Coal Co.	Lackawanna.	.....	.....	3	180	180	.....	.....	6	218	.....	.....	.....	.....	.....
Mine, .....	Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bank or washery, .....	Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Green Ridge Coal Co.	Lackawanna.	21	535	3	375	900	.....	.....	11	1,480	.....	.....	.....	.....	.....
Green Ridge slope, .....	Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scranton Coal Co.	Lackawanna.	.....	.....	5	1,000	1,000	.....	.....	7	781	.....	.....	.....	.....	.....
Pine Brook, .....	Lackawanna.	.....	.....	4	750	750	.....	.....	.....	.....	.....	.....	.....	.....	.....
Capouse, .....	Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mt. Pleasant, .....	Lackawanna.	12	180	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Ridge, .....	Lackawanna.	.....	.....	5	400	400	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	Lackawanna.	12	180	17	2,330	2,510	3	.....	36	3,372	13	8,065	7,232	1	.....
Capous washery, .....	Lackawanna.	.....	.....	3	450	450	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mt. Pleasant washery, .....	Lackawanna.	.....	.....	3	405	405	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	Lackawanna.	.....	.....	6	855	855	.....	.....	.....	.....	.....	.....	.....	.....	.....
People's Coal Co.	Lackawanna.	12	180	23	3,185	3,365	3	.....	39	3,477	18	12,105	10,732	1	.....
Oxford, .....	Lackawanna.	2	400	5	750	1,200	.....	.....	13	697	3	1,575	750	1	.....

J. J. Gibbons.

Mine, .....	Lackawanna, .....	1	50	50	1	20	20	20	20	20	20	20	20
Mine, .....	Lackawanna, .....	1	20	20	1	25	25	25	25	25	25	25	25
Economy Light, Heat and Power Co. Washery, .....	Lackawanna, .....	2	200	200	4	120	120	120	120	120	120	120	120
Grand totals, .....	Lackawanna, .....	47	4,708	14,948	10	3	19	266	17,472	56	32,378	23,021	8 2

TABLE 2—Recapitulation

Delaware, Lackawanna and Western R. R. Co., .....	18	306	9,000	9,306	7	14	94	7,453	23	14,954	9,307	4
Delaware and Hudson Co., .....	9	2,700	2,700	2,700	3	3	54	2,840	3	2,860	1,380	1
Bull's Head Coal Co., .....	3	52	52	52	5	5	5	137	1	184	272	1
Pennsylvania Coal Co., .....	11	475	450	450	26	26	16	520	6	584	572	1
A. D. and F. M. Spencer, .....	3	150	150	150	3	3	10	518	1	518	518	1
Nay Aug Coal Co., .....	3	375	375	375	3	3	11	1,480	18	12,405	10,732	1
Green Ridge Coal Co., .....	11	125	375	375	3	3	33	3,477	3	1,575	750	1
Seranton Coal Co., .....	12	450	3,385	3,385	3	3	13	667	3	1,575	750	1
Lehigh Valley Coal Co., .....	2	450	750	1,200	5	5	2	20	2	25	25	1
Gibbons, .....	1	20	50	50	1	1	4	120	2	23,021	23,021	8
Mountain Lake Coal Co., .....	1	20	200	200	2	2	2	25	2	25	25	1
Economy Light, Heat and Power Co., .....	17	4,708	14,940	19,648	19	3	19	266	56	32,378	23,021	8 2
Totals, .....	17	4,708	14,940	19,648	19	3	19	266	56	32,378	23,021	8 2

TABLE 3.—Third Anthracite District, 1903  
Number of Each Class of Employees at Each Colliery

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes	Total outside	
Delaware, Lackawanna and Western R. R. Co.	Lackawanna	3	...	6	210	290	98	14	5	35	49	658	...	1	1	10	58	35	2	59	152	790
Bellevue shaft and slope	Lackawanna	1	...	2	119	152	67	13	2	29	38	470	...	1	1	18	51	42	3	59	152	710
Dyke and	Lackawanna	2	...	3	198	202	67	12	4	43	30	565	...	1	10	19	51	42	3	51	173	710
Brislin	Lackawanna	...	...	3	155	170	84	38	5	14	53	502	...	1	6	9	50	19	3	65	133	632
Cayuga	Lackawanna	1	...	4	165	165	66	14	2	35	58	512	...	2	5	10	68	...	2	53	142	654
Manville	Lackawanna	1	...	5	125	125	49	5	1	23	5	342	...	1	5	13	42	9	3	35	107	449
Totals		10	3	27	1,002	1,036	422	77	19	212	221	3,029	...	7	37	70	319	61	13	342	840	3,878
Diamond washery	Lackawanna	1	...	...	1	...	...	...	1	5	...	8	...	1	2	4	3	...	...	34	47	55
Oxford washery	Lackawanna	1	...	...	3	...	...	...	3	3	...	7	...	1	...	3	...	...	...	25	39	37
Totals		2	...	...	1	...	...	...	4	8	...	15	...	2	2	7	3	...	3	59	77	92
Delaware and Hudson Co.	Lackawanna	12	3	27	1,093	1,036	422	77	23	220	221	3,044	...	1	9	39	322	61	15	401	926	3,970
Dickson	Lackawanna	1	2	5	163	163	72	14	2	68	4	494	...	1	3	12	30	12	2	48	108	602
Van Storch	Lackawanna	1	1	5	177	178	75	13	2	66	6	525	...	1	14	18	7	27	2	61	131	656
Totals		2	3	10	340	341	148	27	4	134	10	1,019	...	1	2	17	39	33	4	109	239	1,258



Bull's Head Coal Co.	1	16	16	7	1	7	48	1	2	2	4	6	2	10	27	75				
Bull's Head, .....																				
Pennsylvania Coal Co.	1	124	112	41	5	5	14	365	1	4	5	24	16	20	72	377				
No. 5 shaft, .....																				
A. D. and F. M. Spencer.	1	1	39	39	24	6	24	5	146	1	2	7	4	1	25	202				
Spencer Nos. 1 and 2 shafts, .....																				
Nay Aug Coal Co.	1	8	8	4	4	3	3	24	1	4	5	8	2	19	39	63				
Nay Aug slope, .....																				
Nay Aug washery,* .....																				
Totals .....	1	8	8	4	4	3	3	24	1	4	5	8	2	19	39	63				
Green Ridge Coal Co.	2	3	122	122	84	12	3	17	21	386	1	1	9	10	11	2	3	62	99	485
Green Ridge slope, .....																				
Seranton Coal Co.	1	5	175	195	106	61	5	75	624	1	1	10	56	41	5	54	178	802		
Pine Brook, .....																				
Campbells, .....	1	3	116	128	83	13	4	80	429	1	1	11	11	43	32	5	45	149	578	
Mt. Pleasant, .....	1	2	115	90	54	16	5	59	345	1	1	6	11	34	17	2	32	104	449	
West Ridge, .....	1	2	38	30	28	3	1	24	127	1	1	4	4	16	13	1	27	67	194	
Capouse washery, .....	4	4	444	443	271	93	15	238	1,525	4	4	31	36	149	103	13	158	493	2,023	
Mt. Pleasant washery, .....																				
Totals .....	4	12	444	413	271	93	15	238	1,525	6	6	35	48	163	106	13	250	627	2,152	
People's Coal Co.	1	2	107	135	47	14	34	9	249	1	1	8	9	35	7	59	120	469		
Oxford, .....																				
J. J. Gibbons.	1	2	3	3	2	1	1	10	10	1	1	1	1	1	1	2	6	16		
Mountain Lake Coal Co.	1	4	4	4	4	4	13	13	13	1	3	1	3	1	2	7	20			
Economy Light, Heat & Power Co.	27	56	2,210	2,560	1,054	235	52	445	518	6,869	12	24	122	205	615	234	53	975	2,240	9,109
Washery, .....																				
Grand totals, .....																				

\*Employees included in Nay Aug slope.

TABLE 3—Recapitulation

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside							Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Book-keepers and clerks	All other employes	Total outside
Delaware	Lackawanna	12	3	27	1,063	1,036	422	77	23	239	221	3,644	1	9	33	77	322	61	16	401	926	3,970
Western R. R. Co.	Lackawanna	2	3	10	340	341	148	27	4	134	10	1,919	1	2	17	30	37	34	4	199	239	1,258
Dellaware and Hudson Co.	Lackawanna	1	1	1	16	16	7	1	1	7	5	48	1	2	2	2	4	6	2	10	27	75
Bull's Head Coal Co.	Lackawanna	1	1	1	124	113	41	5	1	5	14	305	1	1	4	5	24	16	2	20	72	377
Pennsylvania Coal Co.	Lackawanna	1	1	1	39	39	21	6	6	24	5	146	1	1	2	14	7	4	1	25	56	202
A. D. and F. M. Spencer	Lackawanna	1	1	1	8	8	4	.....	.....	3	.....	24	1	.....	4	5	.....	.....	2	19	31	63
Nay Aug Coal Co.	Lackawanna	2	1	3	122	123	84	12	3	17	21	285	1	1	9	10	11	2	3	62	99	485
Green Ridge Coal Co.	Lackawanna	4	4	13	444	433	271	33	15	.....	38	1,535	6	6	35	48	163	196	13	250	627	2,152
Seranton Coal Co.	Lackawanna	1	1	1	107	108	47	13	.....	34	9	349	1	1	3	9	35	.....	7	59	120	469
People's Coal Co.	Lackawanna	1	1	1	3	3	2	.....	.....	1	.....	10	1	.....	1	1	.....	.....	1	2	6	16
Hoboken	Lackawanna	1	1	1	4	4	4	.....	.....	.....	.....	13	.....	.....	.....	.....	.....	.....	.....	1	2	20
Monaca Lignite Coal Co.	Lackawanna	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mountain Light, Heat and Power Co.	Lackawanna	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals		27	12	56	2,210	2,260	1,051	235	52	445	518	6,869	12	24	122	205	615	534	53	975	2,240	9,106

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Total	
		January	February	March	April	May	June	July	August	September	October	November	December		
Delaware, Lackawanna and Western R. R. Co.	Lackawanna.	22.8	19.4	7.1	23.4	22.1	21.3	21.1	21.1	19.5	12.8	18.0	15.1	22.4	224
Bellevue shaft and slope, .....	Lackawanna.	25.6	19.6	17.0	23.5	22.4	21.5	21.7	22.4	21.1	15.1	15.9	15.8	16.8	242
Hyde Park, .....	Lackawanna.	23.5	15.8	14.6	21.6	21.4	21.7	22.3	21.7	20.8	13.1	18.2	16.2	228	
Diamond, .....	Lackawanna.	24.0	18.0	9.1	21.7	21.8	21.5	21.6	22.3	21.1	13.4	17.7	16.9	239	
Brisban, .....	Lackawanna.	24.6	17.1	13.0	22.5	20.9	22.5	21.7	20.2	18.9	12.7	15.7	13.2	223	
Cayuga, .....	Lackawanna.	22.0	19.3	21.2	22.4	20.2	20.2	21.9	20.5	18.7	12.5	18.0	16.3	244	
Manville, .....	Lackawanna.	23.7	18.2	13.7	22.5	21.5	21.0	21.7	21.4	20.0	13.3	17.2	15.1	220	
Averages, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Delaware and Hudson Co.	Lackawanna.	22.2	23	22.3	23.1	21.4	23.6	23.7	23.4	20.4	15.1	22	22.7	261	
Dickson, .....	Lackawanna.	25.2	23.6	24.4	16.5	23.1	22.3	23.5	24	19.2	4.4	19.6	22.7	249	
Von Storch, .....	Lackawanna.	22.7	23.2	23.3	19.8	22.2	22.0	23.6	23.7	19.8	9.7	19.8	22.7	256	
Averages, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bull's Head Coal Co.	Lackawanna.	18	7	13	13	13	13	13	13	10	11	11	11	146	
No. 5 shaft, .....	Lackawanna.	21.2	16.4	17.1	21.1	19	20.3	21.2	21.3	16.4	13.3	14.2	11.8	215	
Pennsylvania Coal Co.	Lackawanna.	6.6	7.3	8.4	7.4	10.0	12.0	12.4	12.0	9.4	7.5	9.2	5.3	168	
A. D. and F. M. Spencer.	Lackawanna.	10.6	12.5	14	12.8	11.3	11.1	7.4	8	6.5	5.1	7.1	5.8	113	
Nay Aug slope, .....	Lackawanna.	21.5	15.2	18.7	19.3	17.2	19.2	20.7	16.9	19	14.2	14.4	17.4	214	
Green Ridge Coal Co.	Lackawanna.	18.4	17.4	16.3	17.9	16.2	17.8	17	16.3	14.7	9.9	12.2	10.5	185	
Green Ridge slope, .....	Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Seranton Coal Co.	Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Pine Brook, .....	Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

TABLE 3—Continued

Names of Operators and Collieries	County	Number of days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Capouse, .....	Lackawanna..	20.6	18	19.9	18.6	16.7	16.6	16.6	13.5	13.8	8.2	12.5	10	185
Mc Pleasant, .....	Lackawanna..	17.9	15.9	17.7	16.4	15.4	14.7	.....	4.3	13.8	7.7	11.0	10	152
West Ridge, .....	Lackawanna..	13.9	11.9	12.7	13.8	10.8	10.2	9.4	8.2	12.9	6.6	7.1	7.8	118
Averages, .....	.....	17.4	15.8	16.6	16.4	14.8	14.8	14.3	13.1	12.3	8.1	10.7	9.3	160
People's Coal Co.	Lackawanna..	29	25.8	18.7	25.9	24.4	25.9	25.5	27.8	24.2	17.8	20.8	22.5	286
J. J. Gibbon.	Lackawanna..	24	24	24	20	21	18	20	20	25	26	18	26	266
Mountain Lake Coal Co.	Lackawanna..	20	21	22	18	16	17	19	18	24	16	20	18	229
Averages, .....	.....	19.6	17	17.2	17.9	17.3	17.8	18.1	17.6	17	12.9	14.8	15	202



TABLE 4.—Third Anthracite District, 1903  
Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single			Name of Colliery	County	Nature and Cause of Accident in Brief
					Number of widows	Number of orphans				
Jan. 12	Michael Gaughen, .....	Irish, .....	Laborer, .....	54	S.	.....	.....	Green Ridge breaker.	Lackawanna,	Smothered in culm chute while in the act of starting the culm to run. Fatally injured by cars on the inside haulage road. Fatally injured by an explosion of powder while riding on an electric motor. Killed by falling under moving mine cars, which he had just uncoupled at the head of an inside slope. Fatally injured by falling roof rock at the shaft. Died February 8. Fell into shaft from the ascending cage. Died March 13. Instantly killed by a fall of roof at the face of a chamber in the rock vein. Fatally injured by falling roof rock in No. 2 Dunmore vein. Died March 4. Was standing on the front bumper of a moving mine car and was crushed between the roof and the coal in the car. He died. Killed by a blast. Was in the act of charging a hole from which some gas was issuing. The gas became ignited and a premature explosion of the blast followed. Instantly killed by flying coal from a blast. He thought the shot had "missed," and was in the act of returning to it. Fell into counter chute and was instantly killed.
26	Benjamin Lewis, .....	American, ..	Co. man, .....	52	M.	1	3	Von Storch slope.	Lackawanna,	
27	Michael Hughes, .....	Irish, .....	Miner, .....	48	M.	1	4	Bellevue shaft, ...	Lackawanna,	
Feb. 3	Dennis McMahon, .....	Irish, .....	Headman, ..	27	S.	.....	.....	Green Ridge slope.	Lackawanna,	
7	Patrick Hamegan, .....	Irish, .....	Miner, .....	48	M.	1	.....	Cayuga, .....	Lackawanna,	
10	Frank Lithusky, .....	Russian, ..	Laborer, .....	29	S.	.....	.....	Mount Pleasant, ..	Lackawanna,	
24	Robert Marshall, .....	Scotch, ....	Miner, .....	33	M.	1	4	Drisbin, .....	Lackawanna,	
March 3	Patrick Regan, .....	Irish, .....	Miner, .....	33	S.	.....	.....	Pine Brook, .....	Lackawanna,	
5	Albert Martin, .....	American, ..	Driver, .....	18	S.	.....	.....	Tripp slope, .....	Lackawanna,	
9	Thomas Allen, .....	Irish, .....	Miner, .....	38	M.	1	2	Dickson, .....	Lackawanna,	
11	John Brennan, .....	Irish, .....	Miner, .....	50	M.	1	10	Pine Brook, .....	Lackawanna,	
April 9	Michael Roman, .....	Slavonian, ..	Laborer, .....	21	S.	.....	.....	Diamond breaker.	Lackawanna,	

25	Janatz Rutschavage, .....	Polish, .....	Miner, .....	30	M.	1	2	Dickson, .....	Lackawanna, .....	Killed by railroad cars, outside. He was in the act of crossing the tracks to the ticket slanty, when the cars bumped him. He died the same day.
27	Ernest Nowalk, .....	American, .....	Driver, .....	15	S.	...	...	Brislin, .....	Lackawanna, .....	Killed by falling under moving mine cars at the head of No. 3 plane, Clark vein.
29	Alex. Redda, .....	Polish, .....	Laborer, .....	19	S.	...	...	Cayuga, .....	Lackawanna, .....	Waited on to a plane, and was struck and results by a passing trip of moving cars.
May	Conrad Fassold, .....	German, .....	Miner, .....	46	M.	1	6	Oxford, .....	Lackawanna, .....	Instantly killed by a fall of roof at the face of a chamber in the Big vein.
26	George Snresky, .....	Polish, .....	Laborer, .....	35	M.	1	3	Pine Brook, .....	Lackawanna, .....	Killed by falling roof rock at a point twenty-five feet from the face of a chamber in Dunmore No. 2 vein.
June	Adam Lucas, .....	Russian, .....	Miner, .....	34	M.	1	4	Manville, .....	Lackawanna, .....	Instantly killed by a blast in the bottom rock, which he was in the act of firing.
17	Francis Tully, .....	American, .....	Driver, .....	16	S.	...	...	Von Storch slope, .....	Lackawanna, .....	Was riding a mule and fell off. His feet caught in the harness and he was dragged and killed.
July	Patrick Lavelle, .....	Irish, .....	Miner, .....	59	M.	1	4	Capouse, .....	Lackawanna, .....	Killed by a fall of rock. He was in the act of returning to the face after a
24	Edward Murphy, .....	American, .....	Runner, .....	20	S.	...	...	Von Storch slope, .....	Lackawanna, .....	Instantly killed by a fall of rock at a point twenty-five feet from the face of a chamber in the Big vein.
Aug.	Peter Zennes, .....	Polish, .....	Miner, .....	33	S.	...	...	Tripp slope, .....	Lackawanna, .....	Instantly killed by falling top coal in rock vein.
Sept.	John Moran, .....	Irish, .....	Laborer, .....	40	M.	1	2	Von Storch slope, .....	Lackawanna, .....	Killed by a fall of roof in cross cut in
4	William Nogles, .....	American, .....	Miner, .....	26	M.	1	3	Hyde Park, .....	Lackawanna, .....	restanding discharged props.
18	Edward Phillips, .....	English, .....	Miner, .....	69	M.	1	...	West Ridge, .....	Lackawanna, .....	Killed by a fall of roof in the "Eight N. C. vein.
21	John Wise, .....	Polish, .....	Laborer, .....	38	M.	1	...	Mt. Pleasant, .....	Lackawanna, .....	Killed by a fall of coal in the act of firing coal from blast.
3	Griffith Davies, .....	Welsh, .....	Timberman, .....	40	M.	1	...	Capouse, .....	Lackawanna, .....	Killed by a fall of roof rock.
5	Stanley Roch, .....	Polish, .....	Miner, .....	23	M.	1	...	Pine Brook, .....	Lackawanna, .....	Killed by a fall of coal from a blast.
9	Lot Ludwig, .....	American, .....	Miner, .....	37	M.	1	...	Diamond, .....	Lackawanna, .....	Instantly killed by a blast he was in the act of firing.
Dec.	Patrick Carrol, .....	Irish, .....	Doorman, .....	66	M.	1	...	Belleuve shaft, .....	Lackawanna, .....	Crushed between a trip of loaded cars and the rib and instantly killed.

TABLE 5.—Third Anthracite District, 1903  
Non-Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 5	James O'Malley, .....	Irish, .....	Laborer, .....	37	M.	Hyde Park, .....	Lackawanna,	Injured on scalp, back and chest by falling rock.
13	Edward Taylor, .....	Welsh, .....	Runner, .....	18	S.	Capouse, .....	Lackawanna,	Arm fractured between a mine car and the rib.
21	Paul Dominic, .....	Hungarian, .....	Miner, .....	33	M.	Green Ridge, .....	Lackawanna,	Leg fractured by falling roof in No. 1 vein.
27	Thomas Lance, .....	Welsh, .....	Miner, .....	43	M.	Bellevue shaft, .....	Lackawanna,	These men were more or less injured by explosion of a keg of powder. They were riding on the top of the mine cars, which act was a violation of the colliery rules.
27	Wm. Needham, .....	Welsh, .....	Runner, .....	23	M.	Bellevue shaft, .....	Lackawanna,	
27	Wm. Needham, .....	American, .....	Runner, .....	19	S.	Bellevue shaft, .....	Lackawanna,	
27	Edward Miller, .....	English, .....	Runner, .....	20	S.	Bellevue shaft, .....	Lackawanna,	
27	Jchn Mangun, .....	Irish, .....	Brakeman, .....	19	S.	Bellevue shaft, .....	Lackawanna,	
27	James Gentz, .....	Irish, .....	Runner, .....	20	S.	Bellevue shaft, .....	Lackawanna,	
27	Wm. Williams, .....	Irish, .....	Motorman, .....	23	M.	Bellevue shaft, .....	Lackawanna,	
30	Al. Williams, .....	Welsh, .....	Door boy, .....	15	S.	Mount Pleasant, .....	Lackawanna,	
Feb. 2	Thisophil Mellinsky, .....	Russian, .....	Laborer, .....	20	S.	Bull's Head slope, .....	Lackawanna,	
26	Hugh Morphy, .....	Irish, .....	Driver, .....	17	S.	Green Ridge slope, .....	Lackawanna,	
March 3	Bryan Moran, .....	Irish, .....	Miner, .....	38	M.	Dickson, .....	Lackawanna,	Slightly injured by a blast.
12	John McAndrew, .....	Irish, .....	Miner, .....	45	M.	Cayuga, .....	Lackawanna,	Leg dislocated and two ribs fractured by falling rock.
11	George Morgan, .....	Welsh, .....	Laborer, .....	22	S.	Bellevue shaft, .....	Lackawanna,	Head cut and internally injured by a fall of roof.
April 13	Henry Barber, .....	American, .....	Driver, .....	25	S.	Oxford, .....	Lackawanna,	Fingers crushed between the bumpers of cars.
13	William Davies, .....	American, .....	Driver, .....	16	S.	Oxford, .....	Lackawanna,	Fingers crushed by mine cars.
13	Walter Haggerty, .....	Irish, .....	Miner, .....	53	M.	Hyde Park, .....	Lackawanna,	Collar bone fractured by flying coal from a blast.
28	Henry Russell, .....	American, .....	Driver, .....	17	S.	Oxford, .....	Lackawanna,	Arm and leg fractured by runaway cars, inside.
30	William Gayther, .....	English, .....	Miner, .....	35	M.	Bellevue shaft, .....	Lackawanna,	Hands and face slightly burned by an explosion of gas.
May 8	Lewis Paywa, .....	Polish, .....	Miner, .....	45	M.	Pine Brook, .....	Lackawanna,	Injured by flying coal from a blast.
11	John Davies, .....	American, .....	Door boy, .....	14	S.	Hyde Park, .....	Lackawanna,	Burned by mine lamp.
14	Simon T. Evans, .....	American, .....	Driver, .....	16	S.	Oxford, .....	Lackawanna,	Leg taken off by mine cars.



June	14	John Moser, Austrian, Driver, 28 S.	Dumper, 28 S.	Diamond breaker, Lackawanna, Capouse, Lackawanna, Brisbane, Lackawanna, Bellevue shaft, Lackawanna, Miner, Lackawanna.	Finger taken off by mine cars, outside. Severely injured by falling top coal. Kicked in stomach by a mule. Lip cut open by a kick from a mule. Hand and face burned by exploding powder.
	15	John Gish, Polish, Miner, 32 S.	Miner, 32 S.	Cayuga, Lackawanna.	Hips and back bruised by a piece of falling roof rock.
	16	Patrick Mahon, Irish, Miner, 53 M.	Miner, 53 M.	Bellevue shaft, Lackawanna.	Back injured by falling rock.
	19	B. Savage, Polish, Laborer, 46 M.	Laborer, 46 M.	Von Storch slope, Lackawanna.	Back injured by falling rock, inside.
	25	George Dorsey, American, Driver, 16 S.	Driver, 16 S.	Hyde Park, Lackawanna.	Injured by falling off the bumper of a moving mine car.
	26	Archie Edwards, American, Driver, 16 S.	Driver, 16 S.	Tripp drift, Lackawanna.	Injured between car and mule while unhitching on the "fly."
July	2	John Judge, American, Driver, 16 S.	Driver, 16 S.	Hyde Park breaker, Lackawanna.	Compound fracture of the leg, caused by falling roof rock.
	8	Elezer Morgans, American, Miner, 35 M.	Miner, 35 M.	Tripp shaft, Lackawanna.	Hip bone fractured by falling top coal.
	10	William Williams, American, Miner, 40 M.	Miner, 40 M.	Capouse, Lackawanna.	Ribs fractured by fall of bony.
	10	Richard Coleman, Polish, Miner, 29 S.	Laborer, 29 S.	Nay Aug slope, Lackawanna.	Leg fractured by a premature blast.
	11	John Peleskie, Polish, Miner, 36 M.	Miner, 36 M.	Oxford, Lackawanna.	Face injured by a premature blast.
	14	Felix Mimosky, Lithuanian, Miner, 19 S.	Runner, 19 S.	Brisbin, Lackawanna.	Seriously injured. Caught between mine collar bone fractured by haulage rope.
	18	James McCarty, English, Driver boss, 56 S.	Driver boss, 56 S.	Bellevue slope, Lackawanna.	Burned on hands and face while handling powder carelessly.
Aug.	3	William Johnson, English, Miner, 45 M.	Miner, 45 M.	Hyde Park, Lackawanna.	Burned on hands and face by an explosion of gas at face of working place.
	3	Frank McDonald, Irish, Miner, 43 M.	Miner, 43 M.	Bellevue shaft, Lackawanna.	Burned on hands and face by an explosion of gas at the face of chamber.
	8	John Golden, Irish, Miner, 31 M.	Miner, 31 M.	Bellevue shaft, Lackawanna.	Hip dislocated by a fall of roof rock.
	8	E. Scabill, Irish, Laborer, 40 M.	Laborer, 40 M.	Bellevue shaft, Lackawanna.	Knee dislocated by the cage striking the bottom.
	8	Charles Burke, Irish, Runner, 24 S.	Runner, 24 S.	Bellevue shaft, Lackawanna.	Kicked by a mule and rendered unconscious.
	8	Charles Pepper, Polish, Miner, 27 M.	Miner, 27 M.	Capouse, Lackawanna.	Slightly injured by falling rock in Diamond vein.
	10	Charles Grassfield, German, Fire boss, 40 M.	Fire boss, 40 M.	Oxford, Lackawanna.	Slightly injured by falling rock in Diamond vein.
	13	John Nowalk, Slavonian, Driver, 18 S.	Driver, 18 S.	Brisbin, Lackawanna.	Slightly injured by falling rock in Diamond vein.
Sept.	4	Paul Snyder, German, Miner, 55 M.	Miner, 55 M.	Capouse, Lackawanna.	Slightly injured by falling rock in Diamond vein.
	10	Anthony Patchineba, Polish, Miner, 39 M.	Miner, 39 M.	Mt. Pleasant, Lackawanna.	Slightly injured by falling rock in Diamond vein.
	10	John Smith, Polish, Laborer, 38 S.	Laborer, 38 S.	Mt. Pleasant, Lackawanna.	Slightly injured by falling rock in Diamond vein.
	10	William Russell, American, Driver, 18 S.	Driver, 18 S.	West Ridge, Lackawanna.	Slightly injured by falling rock in Diamond vein.
	11	John Wright, Irish, Miner, 43 M.	Miner, 43 M.	Bellevue shaft, Lackawanna.	Back injured by falling roof rock.
	15	Charles Adams, American, Driver, 14 S.	Driver, 14 S.	Hyde Park breaker, Lackawanna.	Leg fractured by falling off a mule's back.
	17	Patrick Flaherty, Irish, Miner, 56 M.	Miner, 56 M.	Diamond, Lackawanna.	Arm fractured by flying coal from blast.
	21	Thomas Collins, Irish, Laborer, 18 S.	Laborer, 18 S.	Bellevue shaft, Lackawanna.	Leg fractured by falling roof rock.
	23	Mike Jump, Polish, Footman, 41 M.	Footman, 41 M.	Diamond breaker, Lackawanna.	Leg fractured and shoulder dislocated. Rib fractured by a runaway car.
Oct.	5	Thomas McGuire, Irish, Miner, 63 M.	Miner, 63 M.	Cayuga, Lackawanna.	Ribs fractured by falling roof rock at face of chamber.
	7	Anthony Stimsnkle, Lithuanian, Laborer, 45 M.	Laborer, 45 M.	Manville, Lackawanna.	Injured on head by flying coal from blast.
	14	Ralph Yerkman, Polish, Miner, 47 M.	Miner, 47 M.	Pine Brook, Lackawanna.	Two legs fractured by flying coal from a blast.

TABLE 5--Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Nov.	16 Frank Blanchard, .....	American, .....	Driver, .....	18	S.	Bellevue shaft, .....	Lackawanna,	Kicked by a mule. Leg injured by falling roof rock. Ribs fractured by falling under moving mine cars. Back and hips injured by falling reef rock. M. Jones fractured by falling roof rock. Hall fractured by falling roof rock. Back broken by cars, inside. Back and shoulders injured by falling roof rock. Struck by flying coal from blast. Leg fractured by cars, inside. Slightly injured by an explosion of gas. Three ribs fractured by falling roof rock. Slightly burned by an explosion of gas. Injured by flying coal from his own blast. Leg fractured by falling top coal. Leg fractured by falling top coal. Leg fractured by falling off the bumper of a moving mine car. Back injured by falling roof rock. Leg fractured by falling roof rock.
	16 Michael Penoch, .....	Slovakian, .....	Laborer, .....	18	S.	Green Ridge slope, .....	Lackawanna,	
	17 John Campbell, .....	Irish, .....	Runner, .....	23	S.	Capouse, .....	Lackawanna,	
	10 Charles Schnader, .....	German, .....	Miner, .....	41	M.	Brisbin, .....	Lackawanna,	
	11 Simon Tetter, .....	Polish, .....	Laborer, .....	22	S.	Capouse, .....	Lackawanna,	
	12 E. J. Aldrich, .....	American, .....	Carpenter, .....	46	M.	Dickson, .....	Lackawanna,	
	12 William Pierce, .....	Welsh, .....	Footman, .....	30	M.	Brisbin, .....	Lackawanna,	
	13 Ed. Edwards, .....	Welsh, .....	Miner, .....	56	M.	Bellevue shaft, .....	Lackawanna,	
	13 John Coumisky, .....	Polish, .....	Miner, .....	29	M.	Mt. Pleasant, .....	Lackawanna,	
	18 Henry Bashinsky, .....	Jew, .....	Driver, .....	16	S.	Tripp slope, .....	Lackawanna,	
	18 Rupprey Brown, .....	English, .....	Laborer, .....	46	M.	Dickson, .....	Lackawanna,	
	18 John Suka, .....	Hungarian, .....	Laborer, .....	23	S.	Dickson, .....	Lackawanna,	
	25 John Kowalda, .....	German, .....	Laborer, .....	24	S.	Dickson, .....	Lackawanna,	
25 John Cook, .....	Polish, .....	Miner, .....	30	S.	Brisbin, .....	Lackawanna,		
27 Anthony Rice, .....	Polish, .....	Miner, .....	33	M.	West Ridge, .....	Lackawanna,		
10 Charles Guyonic, .....	Slovakian, .....	Miner, .....	33	M.	Green Ridge slope, .....	Lackawanna,		
11 John Zenesky, .....	Polish, .....	Miner, .....	28	M.	Dickson, .....	Lackawanna,		
12 Joseph Gustitus, .....	Lithuanian, .....	Laborer, .....	18	S.	Dickson, .....	Lackawanna,		
14 John Grahahan, .....	Irish, .....	Runner, .....	18	S.	Capouse, .....	Lackawanna,		
15 John Naughton, .....	Irish, .....	Miner, .....	40	M.	Brisbin, .....	Lackawanna,		
Dec.	18 John E. Samuels, .....	Welsh, .....	Miner, .....	41	M.	West Ridge, .....	Lackawanna,	
	21 Anthony Cromsey, .....	Polish, .....	Laborer, .....	35	S.	Brisbin, .....	Lackawanna,	

### Description of Accidents

The tables that make up a part of this report will show the accidents classified as to causes, occupation and nationality of the killed and injured.

In the reports for past years the accidents have been described at some length, either singly or in groups under heads, Falls of Roof and Coal, Explosions of Gas, Cars Inside, Cars Outside, Miscellaneous Inside, Miscellaneous Outside, etc. In reviewing the reports of my investigations of the several accidents for 1903, I fail to see that any special feature has been revealed requiring particular mention or description. Therefore, any detail that will be written touching the accidents of this year will be much in the nature of a repetition of what has been written in the past, on the same subject, in the yearly reports already issued.

Based on my observation and experience in investigating the accidents of the year 1903, I would say, such accidents from falls of roof and coal as could be classed avoidable, would have been avoided in most cases by a more careful examination of the roof before starting to work in the morning, and after each blast the immediate re-standng of the discharged timbers after paying due heed to every indication of possible danger by sounding.

### Explosions of Gas

During the year not a single fatal accident from this cause is reported. Twelve non-fatal ones are recorded. The victims of the greater number of these were but slightly injured. The greater number of the accidents resulted from the careless handling of brattices near the face of gaseous places.

### Cars, Inside

It will continue to be the duty of the Mine Inspector to call attention to the dangerous practice resorted to by drivers and runners, viz: That of riding on the bumpers of moving mine cars, and sliding the foot along the track. While attention has repeatedly been called to this matter and special efforts made to discontinue the dangerous practice, still accidents from this cause continue to occur.

### Powder and Dynamite

The one fatal and nine non-fatal accidents due to this cause resulted from a number of workmen riding on an electric motor in a mine on their way to work in the morning, after repeated warnings

not to do so. One of the company had a keg, containing twenty-five pounds of powder, which was exploded by some means, probably a spark from a lamp or the electric wire.

### Blasts

In firing wet holes, it is more than probable that the squib in many cases is shortened, but every means of proving this to be the fact is destroyed with the accident. The tendency to return too soon to the face, thinking the squib has missed fire, and insufficient care in selecting a place of safety to retreat to while the blast is going off, tend to increase the number of accidents from this cause.

### Accidents Outside

One of the victims of the outside accidents lost his life in the culm chute of the Green Ridge Breaker; one lost his life by being run over by railroad cars, one fell into a counter-chute, in the Diamond breaker and was crushed by a revolving screen, and one was killed by being dragged by a mule. In addition to these four fatal accidents, six non-fatal accidents occurred on the outside. Four of these are credited to mine cars outside, and the remainder to miscellaneous causes, uncoupling cars on the "fly," falling off mule's back while riding to or from barns, etc.

Inasmuch as the question is often asked, "How is it that those who are careless are not prosecuted by the mine inspectors as provided by law?" I would answer,—those who transgress in this particular, concerning whom the Inspector has information are generally among those who suffer by the accidents, and therefore, perhaps, no further good could be accomplished by a process at law.

In former reports comparisons were made with the figures of previous years, the annual reports affording the means to do this, but this comparing of results cannot be done this year, inasmuch as the district covered by this report, namely the Third, has been in existence just one year.

### Condition of Mines and Ventilation

The condition of the mines as to ventilation, will compare favorably with their condition at the time of the last report. More coal has been mined, and consequently the excavations have extended in proportion, and the territory to be examined daily is continually increasing in area. As to ventilation, Table I will show the actual quantity of air in circulation as reported to this office in December, 1903, the number of splits or currents and the number of persons

employed in each split, in each of the mines of the district. The table shows that the law is being well observed in this respect. Inasmuch as the figures for each mine are given, no comments as to the quantity of air in circulation are required. I would add, however, that the total quantity of air in circulation does not in every case show the condition of the ventilation of the working face. On this account while the quantity entering the mine is sufficient, the distribution of the current is sometimes found defective in non-gaseous mines. Whenever this is found to be the case the Inspector has had but little difficulty in having the defect remedied at once. In gaseous mines this distribution of the current cannot be neglected without serious consequences, as gas immediately accumulates in the face.

#### Drainage

Little cause for complaint on account of defective drainage exists in this district, particularly in the workings of the lower or deeper veins, which are for the most part dry, more so in fact, than is desirable. The inspector has during the year deemed it his duty in some cases to recommend that the main roads be sprinkled with water, to prevent dust from contaminating the fresh air currents entering the workings. This suggestion has been carried out with beneficial results. However, in some cases in which the shallow veins are worked, trouble is met in the workings, particularly in the spring and fall of the year. Not so much on account of drainage, in the common acceptance of the word, as from the fact that surface water penetrates the strata, descending like rain for a short time into the workings of the surface veins. Under these circumstances, no efforts are spared to maintain dry and clean roads in the mines.

#### Mine Foremen's Examinations

The annual examination of candidates for certificates as mine foremen and assistant mine foremen was held October 8 and 9, 1903, in the City Hall, Scranton, Pa. The following named persons were recommended to the Chief of Department of Mines, as having passed a satisfactory examination:

##### Mine Foremen

Horace L. Johns, Thomas F. Sheehau, Charles Hillard, Thomas Ford, John V. James.

##### Assistant Mine Foremen

Benjamin C. Evans, John H. Williams, Thomas J. Gwynne, Thomas Thomas, Jr., David J. Thomas, John S. Cole, David J. Thomas, Thomas W. Watkins, Joseph R. Burns, James J. Cusick.



# Fourth Anthracite District

LACKAWANNA AND LUZERNE COUNTIES

Scranton, Pa., February 18, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of herewith presenting my report as Inspector of Mines for the Fourth Anthracite District, for the year ending December 31, 1903. The quantity of coal produced during the year was 5,411,814 tons. The number of lives lost was 42, leaving 20 widows and 42 orphans. The number of non-fatal accidents was 117, making the total number of casualties in and about the mines 159.

In addition to the tabulated statistics, I send herewith a brief description of each accident in and about the mines; also, a statement of the condition of the mines as to ventilation and drainage.

Respectfully submitted,

D. T. WILLIAMS,  
Inspector.

## Fourth Anthracite District, 1903

## SUMMARY OF STATISTICS

Number of mines in district, .....	25
Number of mines in operation, .....	25
Number of tons of coal produced, .....	5,411,814
Number of tons shipped to market, .....	5,150,784
Number of tons sold at mines to local trade, .....	51,585
Number of tons consumed at mines in generating steam and heat, .....	209,445
Number of persons employed inside the mines, .....	7,582
Number of persons employed outside, .....	2 876
Number of fatal accidents inside the mines, .....	35
Number of tons produced for each fatal accident inside, ..	154,623
Number of persons employed per fatal accident inside, ...	217
Number of fatal accidents outside, .....	7
Number of persons employed per fatal accident outside, ..	411
Number of wives made widows by fatal accidents, .....	20
Number of children orphaned by fatal accidents, .....	42
Number of non-fatal accidents inside of mines, .....	104
Number of persons employed per non-fatal accident inside, ..	73
Number of non-fatal accidents outside, .....	13
Number of persons employed per non-fatal accident out- side, .....	221
Number of electric motors used inside, .....	3
Number of fans used for ventilation, .....	28
Number of furnaces used for ventilation, .....	2
Number of gaseous mines in operation, .....	21
Number of non-gaseous mines in operation, .....	4

---



TABLE A.—Fourth Anthracite District, 1903.

PRODUCTION OF COAL	
Names of Companies	Tons
Delaware, Lackawanna and Western Railroad Company, .	3,323,758
Austin Coal Company, . . . . .	66,894
Delaware and Hudson Company, . . . . .	331,742
Pennsylvania Coal Company, . . . . .	79,860
Wm. Connell and Company, . . . . .	117,678
Lehigh Valley Coal Company, . . . . .	569,299
Jermyn and Company, . . . . .	478,736
Elliott, McClure and Company, . . . . .	193,378
Gibbons Coal Company, . . . . .	26,235
Temple Iron Company, . . . . .	142,392
North American Coal Company, . . . . .	52,244
Brookside Coal Company, . . . . .	29,597
	<hr/>
Total, . . . . .	5,411,814
	<hr/> <hr/>
Production by Counties	
Lackawanna, . . . . .	5,269,422
Luzerne, . . . . .	142,392
	<hr/>
Total, . . . . .	5,411,814
	<hr/> <hr/>

TABLE B.—Fourth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number of persons employed; number employed per accident

Names of Companies	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number or employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per fatal accident	Number of employes outside per non-fatal accident
	Fatal Accidents	Non-Fatal Accidents		Fatal Accidents	Non-Fatal Accidents										
	Inside	Outside	Total	Inside	Outside	Total									
Delaware, Lackawanna and Western R. R. Co.	16	4	20	56	8	64	57,729	3,700	1,374	5,074	231	66	343	172	
Austin Coal Co.	2	1	3	1	1	2	66,854	113	50	1,133	103	46	50	162	
Delaware and Hudson Co.	2	1	3	14	2	16	25,174	158	324	1,082	379	76	324	180	
Pennsylvania Coal Co.	2	1	3	1	1	2	10,993	180	180	398	279	58	180	130	
Wm. Connell and Co.	4	1	5	5	1	6	29,419	266	107	308	374	58	266	378	
Lehigh Valley Coal Co.	2	1	3	8	1	9	28,419	629	978	997	214	79	214	278	
Jermyn and Co.	6	1	7	16	1	17	79,789	29,921	317	588	1,905	153	57	288	
Elliott, McClure and Co.	1	1	2	2	1	3	192,378	38,676	247	178	595	347	69	288	
Temple Iron Co.	2	1	3	2	1	3	71,196	247	28	295	193	133	28	28	
North American Coal Co.	1	1	2	1	1	2	.....	37	47	.....	.....	.....	.....	.....	
Miscellaneous companies	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Totals and averages for district	35	7	42	104	13	117	154,633	7,582	2,876	10,458	217	73	411	221	





TABLE E.—Fourth Anthracite District, 1903  
Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines

	Inside											Outside										
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes	Total outside	Grand total	
January	1			3	3	1	1				1								1	1	2	
February				1	1	1													1	1	2	
March				1	1	1		2			1								1	1	2	
April				1	1	1	1	1											1	1	2	
May				1	1	1	1	1											1	1	2	
June				1	1	1	1	1											1	1	2	
July				1	1	1	1	1											1	1	2	
August				1	1	1	1	1											1	1	2	
September				1	1	1	1	1											1	1	2	
October				1	1	1	1	1											1	1	2	
November				1	1	1	1	1											1	1	2	
December				1	1	1	1	1											1	1	2	
Totals	1			12	11	4	2	3	3	2	35		1					6	7	42		



TABLE G.—Fourth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	English	Welsh	Irish	Polish	Italian	Slavonian	Russian	Totals
January, .....	1		1		3	1	1		7
February, .....					3	1			5
March, .....	4		1						6
April, .....	1								1
May, .....	1	1	2						4
June, .....	1	1		1				1	4
July, .....	1				2		1		4
August, .....				1					1
September, .....				2	2				4
October, .....						1			1
November, .....						1			1
December, .....		1			1	1			4
Totals, .....	9	3	6	2	11	8	2	1	42

TABLE H.—Fourth Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Hungarian	Italian	Slavonian	Lithuanian	Austrian	Russian	Swiss	Totals
January, .....		1	2	2	1	5	1		1					13
February, .....	2			1		3	1		1	1				11
March, .....	4	1		1		3		2						9
April, .....	1	1		1		6		3					2	16
May, .....			3	2		5		3	1					14
June, .....		1	1			1		1						5
July, .....	1		1			5		1					1	12
August, .....	2		1	1		2		1						7
September, .....	1	1	2	3		5								13
October, .....	2			1							1			4
November, .....	1		2	1		1				1		1		7
December, .....	3		1	1		1								6
Totals, .....	21	4	13	14	2	38	2	12	4	2	1	1	3	117

TABLE I.—Fourth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

Names of Operators and Mines	Kind of opening	Gasous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person	
D., L. and W. R. R. Co.	Archbold, .....	Gaseous,	Fan, .....	16	3.5	3.5	150	.6	Open running,	Steam, ...	7	148,010	131,540	151,940	301	447	
	Shoan, .....	Gaseous,	Fan, .....	24	6	6.9	66	1.78	Guibal, .....	Steam, ...	6	154,880	32,765	168,410	215	422	
	Central, .....	Gaseous,	Fan, .....	14	4	4	118	.9	Open running,	Steam, ...	7	183,894	78,897	381,281	169	406	
	Continental, .....	Gaseous,	Fan, .....	14	4	4	111	.9	Open running,	Steam, ...	10	132,273	121,300	121,300	349	349	
	Dodge, .....	Gaseous,	Fan, .....	16	4.5	4.5	114	1.25	Open running,	Steam, ...	10	132,273	121,300	121,300	363	349	
	Holden, .....	Gaseous,	Fan, .....	25	8	6	40	1.5	Open running,	Steam, ...	3	149,724	68,358	106,600	191	347	
	Hampton, .....	Gaseous,	Fan, .....	12	4	4	123	.7	Open running,	Steam, ...	4	73,764	53,848	81,182	222	242	
	Pyne, .....	Gaseous,	Fan, .....	16	4.9	4.5	108	1.1	Guibal, .....	Steam, ...	11	156,354	119,569	160,585	483	273	
	Taylor shaft, .....	Gaseous,	Fan, .....	25	8	6	55	1.1	Open running,	Steam, ...	4	195,492	54,930	209,876	121	454	
	Taylor drift, .....	Non-gas.	Fan, .....	12	3.5	3	110	.7	Open running,	Steam, ...	4	195,492	112,029	.....	235	477	
	Austin Coal Co.	Drift, .....	Non-gas.	Fan, .....	12	2.5	3.5	55	.5	Open running,	Steam, ...	2	41,020	30,402	47,710	76	400
		Shaft, .....	Gaseous,	Fan, .....	20	5	5	52	.9	Open running,	Steam, ...	7	101,100	88,740	113,150	109	407
Pennsylvania Coal Co.	Old Forge No. 1, .....	Gaseous,	Fan, .....	20	5	5	53	.6	Open running,	Steam, ...	5	88,495	77,652	125,400	224	346	
	Old Forge No. 2, .....	Gaseous,	Fan, .....	17	4.5	4.5	50	.4	Open running,	Steam, ...	2	46,670	46,969	47,440	130	315	
	Old Forge slope, .....	Non-gas.	Fan, .....	17	4.5	4.5	50	.4	Open running,	Steam, ...	2	46,670	46,969	47,440	130	315	
Wm. Connell and Co.	No. 4 or Meadow Brook, .....	Non-gas.	Fan, .....	16	4	4	80	1	Open running,	Steam, ...	4	50,500	48,000	56,700	104	461	
	National, .....	Gaseous,	Fan, .....	16	4	4	120	1.5	Open running,	Steam, ...	3	58,000	53,500	65,800	132	405	
Lehigh Valley Coal Co.	Shaft, .....	Gaseous,	Fan, .....	18	5	5	75	.75	Open running,	Steam, ...	5	168,140	84,620	114,240	325	290	
	Lawrence shaft and drift, .....	Gaseous,	Fan, .....	18	5	5	75	.75	Open running,	Steam, ...	5	68,500	10,960	76,800	118	516	



Delaware and Hudson Co. Greenwood New No. 1, .....	Shaft...	Gaseous, Non-gas.	Fan.....	17	5	5	65	.3	Open running, Nat. vent.,.....	Steam....	2	57,300	25,300	41,550	121	269
Greenwood Old No. 1, .....	Shaft...	Non-gas.	Natural,	.....	.....	.....	.....	.....	Nat. vent.,.....	Steam....	2	26,400	27,900	31,900	101	276
Greenwood New County vein, .....	Drift...	Non-gas.	Natural,	.....	.....	.....	.....	.....	Nat. vent.,.....	Steam....	1	6,400	3,300	8,100	14	378
Delaware and Hudson Coal Co. Greenwood No. 12, .....	Drift...	Non-gas.	Furnace,	.....	.....	.....	.....	.....	.....	.....	1	11,670	13,800	15,200	65	212
Greenwood No. 8, .....	Drift...	Non-gas.	Furnace,	.....	.....	.....	.....	.....	.....	.....	1	18,000	17,500	19,500	64	273
Greenwood No. 5, .....	Drift...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	1	11,000	10,700	11,800	18	584
Greenwood No. 2 slope, .....	Slope...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	1	5,000	4,500	6,200	18	250
Greenwood No. 2 shaft, .....	Shaft...	Gaseous,	Fan.....	17	5	5	65	.4	Open running,	Steam....	2	42,100	40,650	46,540	125	329
Greenwood drift, .....	Drift...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	1	14,520	13,440	14,950	45	269
Spring Brook, .....	Shaft...	Gaseous,	Fan.....	15	3	3.5	60	.3	Open running,	Steam....	2	37,950	29,250	50,550	48	609
Spring Brook No. 1 drift, .....	Slope...	Non-gas.	Fan.....	15	4	4	100	.3	Open running,	Steam....	2	31,890	28,365	37,150	108	276
Spring Brook No. 2 drift, .....	Drift...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	1	4,000	3,600	5,000	10	340
.....	Drift...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	1	5,000	3,600	5,000	11	434
Jermyn and Co. Jermyn No. 1, .....	Shaft...	Gaseous,	Fan.....	14	4.5	4	90	1.1	Open running,	Steam....	8	134,000	111,000	143,000	490	227
.....	Shaft...	Gaseous,	Fan.....	18	4.6	4	80	1	Open running,	Steam....	8	84,580	82,685	86,255	278	248
.....	Shaft...	Gaseous,	Fan.....	18	4.25	4	90	1	Open running,	Steam....	8	84,580	82,685	86,255	278	248
Elliot, McClure and Co. Sibley, .....	Shaft...	Gaseous,	Fan.....	15	4	4	115	1.3	Open running,	Steam....	6	72,000	66,500	75,500	265	251
Temple Iron Co. Babylon, .....	Shaft...	Gaseous,	Fan.....	29	6.5	6	75	1.1	Gubbal.....	Steam....	2	39,800	25,500	41,600	75	473
Babylon, .....	Slope...	Non-gas.	Fan.....	12	4	4	85	1	Gubbal.....	Steam....	3	38,900	36,400	41,200	118	319

TABLE 1.—Fourth Anthracite District, 1903.  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
Delaware, Lackawanna and Western R. Co.						
Archbald, .....	Lackawanna, .....	R. A. Phillips, .....	Scranton, .....	Thos. J. Williams, .....	Scranton, .....	D., L. and W.
Sloan, .....	Lackawanna, .....	R. A. Phillips, .....	Scranton, .....	Thos. J. Williams, .....	Scranton, .....	D., L. and W.
Central, .....	Lackawanna, .....	R. A. Phillips, .....	Scranton, .....	Thos. J. Williams, .....	Scranton, .....	D., L. and W.
Continental, .....	Lackawanna, .....	R. A. Phillips, .....	Scranton, .....	E. J. Evans, .....	Scranton, .....	D., L. and W.
Dodge, .....	Lackawanna, .....	R. A. Phillips, .....	Scranton, .....	Thos. J. Williams, .....	Scranton, .....	D., L. and W.
Holmes, .....	Lackawanna, .....	R. A. Phillips, .....	Scranton, .....	Thos. J. Williams, .....	Scranton, .....	D., L. and W.
Hampton, .....	Lackawanna, .....	R. A. Phillips, .....	Scranton, .....	Thos. J. Williams, .....	Scranton, .....	D., L. and W.
Pyne, .....	Lackawanna, .....	R. A. Phillips, .....	Scranton, .....	E. J. Evans, .....	Scranton, .....	D., L. and W.
Taylor, .....	Lackawanna, .....	R. A. Phillips, .....	Scranton, .....	E. J. Evans, .....	Scranton, .....	D., L. and W.
Washeries—						
Bellevue, .....	Lackawanna, .....	R. A. Phillips, .....	Scranton, .....	Fred. C. Smith, .....	Scranton, .....	D., L. and W.
Hampton, .....	Lackawanna, .....	R. A. Phillips, .....	Scranton, .....	Fred. C. Smith, .....	Scranton, .....	D., L. and W.
Taylor, .....	Lackawanna, .....	R. A. Phillips, .....	Scranton, .....	Thos. J. Williams, .....	Scranton, .....	D., L. and W.
Pyne, .....	Lackawanna, .....	R. A. Phillips, .....	Scranton, .....	Thos. J. Williams, .....	Scranton, .....	D., L. and W.
Austin Coal Co.						
Austin tunnel, .....	Lackawanna, .....	W. G. Robertson, .....	Scranton, .....	Moses D. Evans, .....	Old Forge, .....	Lehigh Valley.
Pennsylvania Coal Co.						
Old Forge No. 1 shaft, .....	Lackawanna, .....	W. A. May, .....	Scranton, .....	H. F. McMillan, .....	West Pittston, .....	E. and W. V.
Old Forge slope, .....	Lackawanna, .....	W. W. Ingalls, .....	Scranton, .....	H. F. McMillan, .....	West Pittston, .....	E. and W. V.
Old Forge No. 2 shaft, .....	Lackawanna, .....	W. W. Ingalls, .....	Scranton, .....	H. F. McMillan, .....	West Pittston, .....	E. and W. V.
Delaware and Hudson Co.						
Greenwood No. 1 shaft, .....	Lackawanna, .....	C. C. Rose, .....	Scranton, .....	E. R. Petebone, .....	Scranton, .....	Delaware and Hudson
Greenwood No. 5 drift, .....	Lackawanna, .....	C. C. Rose, .....	Scranton, .....	E. R. Petebone, .....	Scranton, .....	Delaware and Hudson
Greenwood No. 8 drift, .....	Lackawanna, .....	C. C. Rose, .....	Scranton, .....	E. R. Petebone, .....	Scranton, .....	Delaware and Hudson
Greenwood No. 12 drift, .....	Lackawanna, .....	C. C. Rose, .....	Scranton, .....	E. R. Petebone, .....	Scranton, .....	Delaware and Hudson
Greenwood No. 13 drift, .....	Lackawanna, .....	C. C. Rose, .....	Scranton, .....	E. R. Petebone, .....	Scranton, .....	Delaware and Hudson
Greenwood No. 2 shaft, .....	Lackawanna, .....	C. C. Rose, .....	Scranton, .....	E. R. Petebone, .....	Scranton, .....	Delaware and Hudson
Greenwood No. 6 drift, .....	Lackawanna, .....	C. C. Rose, .....	Scranton, .....	E. R. Petebone, .....	Scranton, .....	Delaware and Hudson
Greenwood drift, .....	Lackawanna, .....	C. C. Rose, .....	Scranton, .....	E. R. Petebone, .....	Scranton, .....	Delaware and Hudson
Spring Brook shaft, .....	Lackawanna, .....	C. C. Rose, .....	Scranton, .....	E. R. Petebone, .....	Scranton, .....	Delaware and Hudson
Spring Brook slope, .....	Lackawanna, .....	C. C. Rose, .....	Scranton, .....	E. R. Petebone, .....	Scranton, .....	Delaware and Hudson
Washery—						
Greenwood washery, .....	Lackawanna, .....	C. C. Rose, .....	Scranton, .....	E. R. Petebone, .....	Scranton, .....	Delaware and Hudson

Wm. Connell and Co. National shaft, Meadow Brook tunnel,	Lackawanna, Lackawanna,	E. H. Ripple, E. H. Ripple,	Scranton, Scranton,	S. T. Jones, S. T. Jones,	Scranton, Scranton,	D., L. and W. D., L. and W.
Lehigh Valley Coal Co. William A., Lawrence, Drifts 1 and 2,	Lackawanna, Lackawanna, Lackawanna,	S. D. Warriner, S. D. Warriner, S. D. Warriner,	Wilkes-Barre, Wilkes-Barre, Wilkes-Barre,	Thos. Thomas, Thos. Thomas, Thos. Thomas,	West Pittston, West Pittston, West Pittston,	Lehigh Valley Lehigh Valley Lehigh Valley
Jermyn and Co. Jermyn No. 1, Jermyn No. 2, Jermyn No. 3,	Lackawanna, Lackawanna, Lackawanna,	E. B. Jermyn, E. B. Jermyn, E. B. Jermyn,	Rendam, Rendam, Rendam,	E. B. Jermyn, E. B. Jermyn, E. B. Jermyn,	Rendam, Rendam, Rendam,	N. Y., O and W. N. Y., O and W. N. Y., O and W.
Elliott McClure and Co. Sibley,	Lackawanna,	R. W. Rees,	Rendam,	W. Penn Morgan,	Scranton,	Lehigh Valley
Gibbons Coal Co. Gibbons mine,	Lackawanna,	Michael Gibbons,	Scranton,	Michael Gibbons,	Dunmore,	
Temple Iron Co. Babylon,	Luzerne,	F. H. Hemelright,	Scranton,	George Steele,	West Pittston,	Lehigh Valley
North American Coal Co. National washery,	Lackawanna,	H. W. Saums,	Wilkes-Barre,			Delaware and Hudson
Brookside Coal Co. Brookside washery,	Lackawanna,	M. F. Dolphin,	Scranton,			

TABLE 2.—Fourth Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number and used by employees	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Delaware, Lackawanna and Western R. R. Co.	Lackawanna..	395,555	14,419	611	350,555	220	750	4	6	13,513	618	76
Archbald, .....	Lackawanna..	372,224	6,227	338	378,849	242	680	7	7	10,483	75	75
Smith and Central, .....	Lackawanna..	233,547	674	1,688	235,209	229	557	3	7	9,246	1,623	71
Cody and Central, .....	Lackawanna..	328,987	474	468	329,425	225	626	2	16	13,568	538	65
Dodge, .....	Lackawanna..	188,137	12,775	586	202,458	226	417	1	10	7,172	575	64
Holden, .....	Lackawanna..	198,757	.....	250	199,007	243	367	.....	3	6,959	200	51
Hampton, .....	Lackawanna..	452,947	18,392	1,727	473,066	228	750	3	9	12,338	1,600	112
Pyne, .....	Lackawanna..	325,518	17,479	7,486	350,483	217	701	5	4	12,768	1,835	85
Taylor, .....	Lackawanna..	2,436,672	70,436	12,614	2,519,722	229	4,848	18	62	86,079	6,989	589
Bellevue washery, .....	Lackawanna..	284,130	.....	.....	284,130	246	57	.....	1	8	8	3
Hampton washery, .....	Lackawanna..	206,127	.....	.....	206,127	210	25	.....	1	.....	.....	.....
Taylor washery, .....	Lackawanna..	254,288	7,360	.....	262,387	159	27	.....	.....	.....	.....	.....
Pyne washery, .....	Lackawanna..	40,933	586	.....	41,491	70	22	.....	.....	.....	.....	.....
Central boiler plant, .....	Lackawanna..	796,180	7,856	.....	804,036	183	196	1	1	8	8	7
Totals, .....	Austin Coal Co.	3,222,852	78,202	12,614	3,222,758	.....	5,074	20	64	86,087	6,997	586
Austin tunnel, .....	Lackawanna..	61,427	3,300	2,167	66,894	117	153	1	1	1,761	917	14

\*Totals in this column are averages. †Total 183 tons used for steam was shipped from collieries of the company.

Delaware and Hudson Co.																		
	Greenwood No. 1	139,493	12,702	2,042	214,237	218	814	.....	6	15,486	19,670	84						
	Greenwood No. 2	53,962	6,290	1,033	61,291	213	240	3	2	4,769	7,434	27						
	Springbrook	233,455	18,992	3,681	275,328	216	1,054	3	12	20,253	27,104	155						
	Greenwood washery	56,214	.....	.....	56,214	158	28	.....	.....	.....	.....	.....						
	Totals	309,669	18,992	3,681	331,742	.....	1,082	3	12	20,253	27,104	155						
Pennsylvania Coal Co.																		
	Old Forge	75,854	3,830	176	79,860	43	738	3	1	2,982	2,834	68						
	National shaft	102,661	7,000	6,517	117,678	156	215	.....	1	2,745	3,500	29						
	Meadow Brook tunnel	102,661	1,500	.....	.....	156	152	4	4	4,370	8,600	25						
	Totals	102,661	8,500	6,517	117,678	156	367	4	5	7,115	12,100	54						
Lehigh Valley Coal Co.																		
	William A.	331,190	23,610	3,017	337,817	222	645	2	5	10,429	12,575	67						
	Lawrence	139,270	12,212	.....	211,482	213	262	.....	4	3,710	600	22						
	Totals	590,460	35,822	3,017	569,299	223	907	2	9	14,139	13,175	89						
Jermyn and Co.																		
	Jermyn No. 1	255,969	16,887	4,273	277,074	217	688	6	9	14,024	9,700	54						
	Jermyn No. 2	189,587	12,075	.....	201,662	174	517	.....	8	9,157	18,475	29						
	Totals	445,496	28,962	4,273	478,736	196	1,205	6	17	23,781	28,175	83						
Elliott, McClure and Co.																		
	Sibley	174,718	16,425	2,235	193,378	201	525	1	5	7,114	1,275	45						
Gibbons Coal Co.																		
	Gibbons mine	8,151	1,000	16,675	26,236	244	64	.....	.....	1,062	100	20						
Temple Iron Co.																		
	Babylon	193,980	8,412	.....	142,392	178	295	2	2	4,919	2,600	49						
North American Coal Co.																		
	National washery	47,759	3,910	575	52,244	107	28	.....	1	.....	.....	3						
Brookside Coal Co.																		
	Brookside washery	27,347	2,000	250	29,597	158	20	.....	.....	.....	.....	.....						
	Grand totals	5,150,784	298,445	51,585	5,411,814	.....	10,458	42	117	169,245	95,277	1,176						

\*Totals in this column are averages.

TABLE 2—Recapitulation

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Not including washeries)	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Delaware, Lackawanna and Western R. R. Co.,	Lackawanna	3,232,852	78,292	12,614	3,323,758	229	5,074	20	64	86,087	6,897	596
Austin Coal Co.,	Lackawanna	61,427	3,300	2,167	66,894	117	153	1	1	1,761	917	14
Delaware and Hudson Co.,	Lackawanna	309,669	18,982	3,081	331,742	216	1,082	3	12	20,255	27,104	155
Pennsylvania Coal Co.,	Lackawanna	75,854	3,830	176	79,860	43	738	3	1	2,882	2,834	68
Wm. Connell and Co.,	Lackawanna	102,651	8,509	6,517	117,678	156	367	4	5	7,115	12,100	54
Lehigh Valley Coal Co.,	Lackawanna	530,460	33,822	3,017	569,299	233	907	2	9	14,139	13,175	89
Lehigh Valley Coal Co.,	Lackawanna	445,456	28,962	3,253	478,756	196	1,205	6	17	23,781	28,175	82
Lehigh Valley Coal Co.,	Lackawanna	178,543	11,085	3,253	196,298	201	625	1	5	7,134	1,275	46
Gibbons Coal Co.,	Lackawanna	118,543	11,000	16,519	149,292	178	294	2	5	4,919	2,600	49
Temple Iron Co.,	Luzerne	133,680	8,412	.....	142,392	107	28	.....	.....	.....	.....	.....
North American Coal Co.,	Lackawanna	47,759	3,910	575	52,244	107	28	.....	.....	.....	.....	.....
Brookside Coal Co.,	Lackawanna	27,347	2,000	250	29,597	158	20	.....	.....	.....	.....	.....
Totals,	.....	5,150,784	209,445	51,585	5,411,814	172	10,458	42	117	169,215	95,277	1,176



TABLE 2—Continued

Names of Operators and Collieries	County	Number of Boilers				Total horse power			Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—Gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Tubular	Horse power	Horse power	Steam	Air	Electric	Horse power	Horse power	Horse power							
Greenwood No. 2, .....	Lackawanna..	6	180	4	500	680	1	586	12	586	1	600	300	1	600	300	1	
Spring Brook, .....	Lackawanna..			2	250	220		328	3	328	1	300	150		300	150		
Totals, .....		22	580	6	750	1,330	3	1,284	31	1,284	5	2,700	1,650	1	1,650	1,650	1	
Pennsylvania Coal Co. Old Forge, .....	Lackawanna..			8	1,160	1,160	2	1,280	22	1,280	3	3,136	2,021		2,021	2,021		1
Wm. Connell and Co. National shaft, .....	Lackawanna..			6	900	900		290	6	290	3	1,800	1,200		1,200	1,200		
Meadow Brook tunnel, .....	Lackawanna..	2	50			50	1	100	3	100								
Totals, .....		2	50	6	900	950	1	390	9	390	3	1,800	1,200		1,200	1,200		
Lehigh Valley Coal Co. William A, .....	Lackawanna..	18	720	1	150	870		1,000	15	1,000	3	18,000	1,500	1	1,500	1,500	1	1
Lawrence, .....	Lackawanna..	19	600			600		500	10	500								
Totals, .....		33	1,320	1	150	1,470		1,500	25	1,500	3	18,000	1,500	1	1,500	1,500	1	1
Jermyn and Co. Jermyn No. 1, .....	Lackawanna..	3	90	7	1,050	1,140	1	819	11	819	4	2,500	800		800	800		
Jermyn No. 2, .....	Lackawanna..	15	450			450		700	9	700	1	500	250		250	250		
Totals, .....		18	540	7	1,050	1,590	1	1,519	20	1,519	5	3,000	1,050		1,050	1,050		
Elliott, McClure and Co. Sibley, .....	Lackawanna..			8	1,150	1,150			12		2	2,900	1,800		1,800	1,800		1





TABLE 3.—Fourth Anthracite District, 1903  
Number of Each Class of Employes at Each Colliery

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners, laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Outside foremen	Blacksmiths and carpenters	Blacksmiths and firemen	State pickers (boys)	State pickers (men)	Track-keepers and clerks	All other employes	Total outside		
Delaware, Lackawanna and Western R. R. Co.		1	1	3	219	215	74	14	2	82	12	603	1	7	11	81	31	2	64	147	750	
Archbald, .....	Lackawanna, .....	2	3	3	168	158	40	18	5	64	50	500	2	5	7	79	20	79	180	680		
Sloan and Central, .....	Lackawanna, .....	1	1	1	163	152	36	12	40	55	437	1	6	6	7	83	13	2	73	180		
Continental, .....	Lackawanna, .....	1	1	2	108	108	23	15	3	43	33	237	1	2	7	45	15	47	120	417		
Dodge, .....	Lackawanna, .....	1	1	2	86	86	22	7	13	25	256	1	5	2	7	45	9	34	111	367		
Hobart, .....	Lackawanna, .....	1	1	4	196	207	60	9	35	54	570	2	8	14	14	54	25	74	180	750		
Pyne, .....	Lackawanna, .....	2	3	3	131	131	47	17	75	6	538	2	7	17	56	18	3	60	163	701		
Taylor, .....	Lackawanna, .....	10	5	27	1,257	1,266	497	105	372	295	3,678	11	46	71	401	132	18	431	1,170	4,848		
Belleve washery, .....	Lackawanna, .....	1	1	1	.....	.....	.....	.....	.....	8	9	1	1	3	1	1	1	38	48	57		
Hampton washery, .....	Lackawanna, .....	1	1	1	.....	.....	.....	.....	5	6	6	1	4	1	6	.....	.....	41	53	59		
Taylor washery, .....	Lackawanna, .....	1	1	1	.....	.....	.....	.....	.....	5	7	1	4	5	.....	.....	1	38	50	67		
Pyne washery, .....	Lackawanna, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	23	23		
Central boiler plant, .....	Lackawanna, .....	3	.....	.....	1	.....	.....	.....	5	13	22	4	6	10	14	6	2	132	174	196		
Totals, .....	.....	13	5	27	1,258	1,266	497	109	377	218	3,700	17	52	92	415	138	20	640	1,374	5,674		

Austin Coal Co.	Austin tunnel, .....	1	.....	40	30	18	.....	1	9	4	163	1	3	4	6	8	1	27	50	153	
Delaware and Hudson Co.	Greenwood No. 1, .....	1	2	1	3	210	196	89	39	5	17	28	560	1	15	21	36	6	143	224	814
Greenwood No. 2, .....	Spring Brook, .....	1	.....	71	56	21	4	1	14	.....	168	1	3	6	27	1	1	33	72	240	
Greenwood washery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Totals, .....	.....	3	1	3	231	252	110	43	6	31	28	758	3	18	30	67	10	4	192	824	1,082
Pennsylvania Coal Co.	Old Forge, .....	2	1	3	238	150	82	7	1	24	10	558	1	5	15	44	54	2	59	180	738
Wm. Cornell and Co.	Meadow Brook tunnel, .....	1	.....	50	45	26	7	.....	9	.....	138	.....	4	2	.....	.....	.....	.....	8	14	102
National, .....	.....	1	.....	43	30	25	5	2	19	.....	128	1	4	10	30	4	3	13	87	219	
Totals, .....	.....	2	.....	95	75	51	12	2	28	.....	266	1	8	12	50	4	3	21	101	307	
Lehigh Valley Coal Co.	William A., .....	1	2	2	200	120	83	3	4	58	9	482	1	10	11	45	23	2	69	103	645
Lawrence, .....	.....	1	.....	76	20	26	2	1	16	4	147	1	7	7	32	5	2	61	115	292	
Totals, .....	.....	2	2	3	276	140	109	5	5	74	13	629	2	17	18	77	30	4	130	278	937
Jermyn and Co.	Jermyn No. 1, .....	1	2	3	290	178	58	20	6	53	.....	521	1	6	14	60	30	2	51	167	688
Jermyn No. 2, .....	.....	1	.....	146	137	65	10	2	33	.....	396	1	6	11	40	21	2	31	121	317	
Totals, .....	.....	2	2	5	346	315	123	30	8	86	.....	917	2	12	25	109	51	4	85	288	1,005
Elliott, McClure and Co.	Sibley, .....	1	2	2	130	100	55	15	7	27	8	347	1	7	8	91	20	2	40	178	595
Gibbons Coal Co.	.....	1	.....	15	15	4	.....	.....	2	.....	37	1	1	3	10	1	3	8	27	64	
Temple Iron Co.	Babylon, .....	1	1	1	110	82	33	6	2	12	19	297	1	3	7	.....	.....	.....	17	28	235
North American Coal Co.	National washery,* .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	4	.....	.....	.....	1	28	28
Brookside Coal Co.	Brookside washery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	3	4	1	.....	10	20	20
Grand totals, .....	.....	28	11	45	2,789	2,465	992	227	52	670	300	7,582	32	128	221	873	317	44	1,261	2,876	10,458

\*Abandoned June 27.

TABLE 3—Recapitulation

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside							Grand total inside and outside		
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners, laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks		All other employes	Total outside
Delaware, Lackawanna and Western R. R. Co., .....	Lackawanna, .....	13	5	27	1,258	1,286	497	100	50	377	218	3,700	17	52	92	415	138	20	640	1,374	5,074
Austin Coal Co., .....	Lackawanna, .....	1	1	1	940	30	18	.....	1	9	4	103	3	3	3	6	8	1	27	50	133
Delaware and Hudson Co., .....	Lackawanna, .....	3	1	3	233	252	130	43	6	31	28	438	3	18	39	67	10	1	124	354	792
Pennsylvania coal Co., .....	Lackawanna, .....	1	1	1	283	75	57	12	1	24	10	268	1	8	13	54	2	2	23	104	387
Wm. Condit and Co., .....	Lackawanna, .....	1	1	1	285	140	109	5	5	73	13	629	2	17	18	77	30	4	130	378	907
Lehigh Valley Coal Co., .....	Lackawanna, .....	1	1	1	276	315	123	30	8	86	13	917	2	12	25	109	51*	4	185	588	1,205
Remyn and Co., .....	Lackawanna, .....	1	1	1	130	100	55	13	1	27	8	347	1	7	8	91	20	2	49	178	525
Elliott, McClure and Co., .....	Lackawanna, .....	1	1	1	15	15	4	.....	.....	.....	.....	37	1	1	1	1	1	3	8	57	64
Gibbons Coal Co., .....	Luzerne, .....	1	1	1	110	82	33	6	2	12	19	257	1	1	3	7	.....	.....	17	23	285
Temple Iron Co., .....	Lackawanna, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
North American Coal Co., .....	Lackawanna, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brookside Coal Co., .....	Lackawanna, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	28	14	45	2,789	2,465	992	227	52	670	300	7,582	32	125	221	873	317	44	1,261	2,876	10,458

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Delaware, Lackawanna and Western R. R. Co.	Lackawanna..	24.7	19.1	9.7	17.7	20.5	22.2	22.5	21.3	18.6	11.1	15.7	16.8	220
Archbald.....	Lackawanna..	24.8	18.6	13.6	13.7	22.6	22.4	22.8	21.8	21.0	15.1	18.2	15.4	242
Stoan and Central.....	Lackawanna..	21.8	13.6	14.8	13.6	21.3	21.9	21.2	22.1	18.1	12.6	18.6	16.2	239
Continental.....	Lackawanna..	22.6	19.2	14.8	17.2	20.2	20.9	21.2	20.1	20.2	8.8	18	17.3	225
Dodge.....	Lackawanna..	23.6	17.6	13.3	17.2	20.2	22.5	22.5	22.5	18.2	12.6	18.2	15.4	236
Holden.....	Lackawanna..	24.6	19.8	16.2	24.0	23.6	27.5	24.9	22.5	20.3	14.4	17.1	17.4	243
Hampton.....	Lackawanna..	22.8	14.8	11.3	23.1	21.9	18.9	21.9	16.3	20.5	13.1	17.1	17.4	243
Pyne.....	Lackawanna..	22.9	18.2	11.2	17.6	20.5	21.9	22.2	19.2	19.2	9.6	14.8	17.2	247
Taylor.....	Lackawanna..	23.7	18.9	13.4	21.2	21.2	21.4	21.9	21.4	19.2	12.3	17.5	16.7	239
Averages.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Austin tunnel.....	Lackawanna..	10.4	9.1	13.4	9.1	8.1	9.7	9.8	9.8	9.8	8.6	8.9	10.4	117
Austin Coal Co.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Greenwood Nos 1 and 2.....	Lackawanna..	20.8	20	19	20	17	18	20	21	16	13	15	18	218
Spring Brook.....	Lackawanna..	19.2	16.3	18	20	19	17	20	18	17	12	17	19	213
Averages.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.....	Lackawanna..	20	18.2	18.5	20	18	17.5	20	19.5	16.5	12.5	16	18.5	216
Old Forge.....	Lackawanna..	17	13	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
Wm. Connell and Co.....	Lackawanna..	16.4	13.7	12	15	14	13	14	13	14	8	12	11	156
Meadow Brook tunnel.....	Lackawanna..	16.4	13.7	12	15	14	13	14	13	14	8	12	11	156
National.....	Lackawanna..	16.4	13.7	12	15	14	13	14	13	14	8	12	11	156
Averages.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lehigh Valley Coal Co.....	Lackawanna..	25	22.3	23	19.9	20.1	19.8	22.1	20.4	18.4	11.8	12.8	15.9	232
William A.....	Lackawanna..	25	22.3	23	19.9	20.1	19.8	22.1	20.4	18.4	11.8	12.8	15.9	232

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals	
		January	February	March	April	May	June	July	August	September	October	November	December		
Lawrence, .....	Lackawanna, .....	23.4	20	21	19.1	18.1	18.1	19.1	19.1	19.8	16.5	11.4	11.9	14.1	213
Averages, .....	.....	24.2	21.2	22	19.5	19.1	18.9	20.6	20.6	20.1	17.5	11.6	12.3	15.0	223
Jermyn and Co.	Lackawanna, .....	19	16	15	19	20	23	24	23	19	17	7	17	16	217
Jermyn No. 1, .....	Lackawanna, .....	18	16	15	17	20	22	8	7	17	17	7	14	13	174
Jermyn No. 2, .....	Lackawanna, .....	18.5	16	15	18	20	22	16	15	15	18	7	15.5	14.5	196
Averages, .....	.....	18.5	16	15	18	20	22	16	15	15	18	7	15.5	14.5	196
Sibley, .....	Lackawanna, .....	21.7	17.9	14.9	6	18.6	20.7	20.5	20.7	17	17	12.3	12.4	17.9	201
Gibbons mine, .....	Lackawanna, .....	26	22	19	21	20	19	14	13	21	21	22	21	26	244
Averages, .....	.....	26	22	19	21	20	19	14	13	21	21	22	21	26	244
Babylon, .....	Luzerne, .....	17.5	14.5	17.9	17.3	15.8	15.9	16.2	17.8	15.1	15.1	9.9	8.7	10.9	178
Averages, .....	.....	19.6	16.5	15.9	16.3	17.2	17.6	17	16.7	16.5	16.5	11.6	13.8	15.7	.....

TABLE 3—Recapitulation

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Delaware, Lackawanna and Western R. R. Co., Coal Co., .....	Lackawanna, ..	23.7	18.9	13.4	21.2	21.2	21.4	21.9	21.4	19.2	12.3	17.5	16.7	229
Delaware and Hudson Co., .....	Lackawanna, ..	19.4	9.1	13.4	9.1	8.1	9.7	9.8	9.8	9.8	8.6	8.9	10.4	117
Pennsylvania Coal Co., .....	Lackawanna, ..	20	13.2	13.5	20	18	17.5	20	19.5	16.5	12.5	16	18.5	216
Wm. Coppell and Co., .....	Lackawanna, ..	17.4	13.7	13	13	14	13	14	13	14	8	13	11	43
Lehigh Valley Coal Co., .....	Lackawanna, ..	24.2	21.2	22	15.5	14.1	23.9	20.6	20.1	17.5	11.6	12.3	15	156
Jermyn and Co., .....	Lackawanna, ..	18.5	16.2	15	18	20	23.9	20.5	20.7	18	15.3	15.5	14.5	196
Elliott, McClure and Co., .....	Lackawanna, ..	21.7	17.9	14.9	6	18.6	20.7	20.5	20.7	21	22.3	12.4	17.9	233
Gibbons Coal Co., .....	Lackawanna, ..	20	23	19	21	20	14	14	13	21	22	2	26	244
Temple Iron Co., .....	Luzerne, .....	17.5	14.5	17.9	17.3	15.8	15.9	13.2	17.8	15.1	9.9	8.7	10.9	178
Averages, .....	.....	19.6	15.5	15.9	16.3	17.2	17.6	17	16.7	16.5	11.6	13.8	15.7	180

TABLE 4.—Fourth Anthracite District, 1903  
Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 5	James Mora, .....	Polish, .....	Door-boy, .. 15	S. ....	.....	.....	.....	Jermyn No. 1, ....	Lackawanna, ..	Died from injuries inflicted by cars on gangway road.
14	Edward David, .....	Welsh, .....	Time-keeper, 21	S. ....	.....	.....	.....	Taylor, .....	Lackawanna, ..	David was instantly killed by explosion when he was running his arms against the ribs.
14	Charles Reed, .....	American, ..	Machinist foreman, .. 30	M. ....	.....	.....	.....	Taylor, .....	Lackawanna, ..	Reed was severely burned and died 11 days after the accident.
14	John Conosky, .....	Polish, .....	Laborer, .....	28	M. 1	1	.....	Sibley, .....	Lackawanna, ..	Died January 15 from injuries inflicted by being struck on the head by a piece of bone which fell from the roof in the face of chamber in Clark vein.
18	John Hightosh, .....	Slavonian, ..	Ashman, ... 28	M. 1	1	.....	.....	Hampton boiler plant, .....	Lackawanna, ..	Fatally injured by falling down ash-tower, a distance of 60 feet.
22	Joseph Paesong, .....	Italian, .....	Laborer, ... 38	M. 1	5	.....	.....	William A, .....	Lackawanna, ..	Killed by fall of rock in face of gangway in Red Ash vein.
26	Frank Borack, .....	Polish, .....	Laborer, ... 35	M. 1	5	.....	.....	Jermyn No. 1, ....	Lackawanna, ..	Burned by explosion of gas in old workings.
5	Roas Vender, .....	Italian, .....	Miner, ... 27	M. 1	1	.....	.....	Old Forge No. 1, ..	Lackawanna, ..	Killed by trip of empty cars.
6	Edward Nabraski, .....	Polish, .....	Driver, .....	27	S. ....	.....	.....	Old Forge No. 2, ..	Lackawanna, ..	Killed by loaded trip of cars.
18	George Mellis, .....	Polish, .....	Miner, ... 33	M. 1	3	.....	.....	Babylon, .....	Luzerne, .....	Killed by being knocked down on a sharp piece of coal by a falling prop.
26	Josph Sabani, .....	Italian, .....	Miner, ... 28	S. ....	.....	.....	.....	Meadow Brook tunnel, .....	Lackawanna, ..	Fatally injured by fall of roof in face of chamber. Died February 29 at Lackawanna Hospital.
26	Addm Romanofski, .....	Polish, .....	Laborer, ... 27	S. ....	.....	.....	.....	Holden, .....	Lackawanna, ..	Fatally injured by fall of roof in face of gangway. Died same night.
5	Thomas O'Hara, .....	American, ..	Driver, ... 16	S. ....	.....	.....	.....	Jermyn No. 1, ....	Lackawanna, ..	Kicked in stomach by a mule. Died next day.
13	Harry Moses, .....	American, ..	Driver, ... 18	S. ....	.....	.....	.....	Babylon, .....	Luzerne, .....	Fatally squeezed between car and rib.
14	Tony Corp, .....	Italian, .....	Outside la- borer, .. 45	M. 1	.....	.....	.....	Archbald, .....	Lackawanna, ..	Fatally injured by being caught under props falling from railroad cars. Died March 19.



16	Julian Cooper, .....	American, ..	Foreman, ..	M. 1	S	Meadow tunnel, Brook	Lackawanna, ..	These men were fatally injured by fall of roof on side of gangway. Cooper died March 29. Aylesworth died night of March 16.
16	Charles Aylsworth, ....	American, ..	Laborer, ....	M. 1	1	Meadow tunnel, Brook	Lackawanna, ..	Fatally squeezed between car and rib.
27	David H. Williams, ....	Welsh, .....	Plane man, ..	S	.....	Archbald, .....	Lackawanna, ..	Killed by fall of roof on main road.
1	William Dougher, .....	American, ..	Runner, ....	S	.....	Jermyn No. 1, .....	Lackawanna, ..	Killed by fall of roof in face of chamber
9	James Heffer, .....	English, .....	Miner, .....	M. 1	3	Archbald, .....	Lackawanna, ..	in face of vein.
9	David Hughes, .....	Welsh, .....	Miner, .....	46	S	Continental, .....	Lackawanna, ..	Killed in Rock vein of coal in face of chamber
18	William P. Evans, ....	Welsh, .....	Mason, .....	63	M. 1	Pyne, .....	Lackawanna, ..	Died May 28 as result of being severely burned by powder.
23	Patrick Shea, .....	American, ..	Helper, .....	15	S	Taylor, .....	Lackawanna, ..	Died May 27 as a result of being kicked by a mule.
1	Winfield Decker, .....	American, ..	Driver, .....	16	S	Spring Brook, .....	Lackawanna, ..	Fatally injured by falling under a truck.
4	John Wilson, .....	English, .....	Miner, .....	25	S	Spring Brook, .....	Lackawanna, ..	Fatally injured in face of chamber by a premature blast.
15	Peter J. O'Conner, .....	Irish, .....	Laborer, ....	60	M. 1	Old Forge No. 1, ..	Lackawanna, ..	Suffocated by down-slide of culm at foot of culm dump. Coroner's jury rendered verdict.
19	John Swist, .....	Russian, ....	Laborer, ....	26	M. 1	Taylor, .....	Lackawanna, ..	Killed by fall of roof in face of chamber
15	Stanley Kaudufer, .....	Polish, .....	Laborer, ....	28	M. 1	Pyne, .....	Lackawanna, ..	Killed by fall of roof in face of chamber on ditch.
17	Frank Penkoski, .....	Polish, .....	Miner, .....	39	M. 1	Continental, .....	Lackawanna, ..	Instantly killed in face of chamber by fall of roof.
20	John Loyko, .....	Slavonian, ..	Loader, ....	34	M. 1	Pyne, .....	Lackawanna, ..	Fatally injured by being caught under box car.
29	Oliver Wilson, .....	American, ..	Carpenter, ..	75	M. 1	Austin, .....	Lackawanna, ..	Squeezed between cars.
10	William Deskin, .....	Irish, .....	Laborer, ....	32	S	Archbald, .....	Lackawanna, ..	Killed by being squeezed between car and rib.
11	Joseph Zuhurn, .....	Polish, .....	Laborer, ....	22	S	Jermyn No. 1, ....	Lackawanna, ..	Fatally injured by fall of roof.
22	Theodore Bodisid, .....	Polish, .....	Laborer, ....	40	M. 1	Taylor, .....	Lackawanna, ..	Killed by fall of bony coal in face of chamber in Clark vein.
23	Jenkin Thomas, .....	Welsh, .....	Miner, .....	45	W	Dodge, .....	Lackawanna, ..	Killed by flying coal from blast.
28	Thomas J. Evans, .....	Welsh, .....	Miner, .....	27	S	Dodge, .....	Lackawanna, ..	Killed by fall of roof in face of chamber.
23	John Cavignaro, .....	Italian, .....	Miner, .....	60	M. 1	Meadow tunnel, Brook	Lackawanna, ..	Killed by fall of top coal in face of chamber.
26	William Ross, .....	Italian, .....	Laborer, ....	45	M. 1	Hampton washery, ..	Lackawanna, ..	Killed by falling into conveyor line and being drawn a distance of 400 feet.
14	Dom Belotritch, .....	Italian, .....	Laborer, ....	34	S	William A, .....	Lackawanna, ..	Killed by fall of coal in face of chamber in Clark vein.
15	Eli Jones, .....	English, .....	Miner, .....	68	S	Continental, .....	Lackawanna, ..	Killed by fall of roof in face of chamber in rock vein.
19	Frederico Pacifico, .....	Italian, .....	Miner, .....	25	S	Spring Brook, ....	Lackawanna, ..	Killed by fall of roof in face of chamber in Red Ash vein.
21	Powell Adomovitch, .....	Polish, .....	Laborer, ....	23	S	Jermyn No. 1, ....	Lackawanna, ..	Killed by falling down shaft a distance of 39 feet.

TABLE 5.—Fourth Anthracite District, 1903  
Non-Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 2	Andrew Grush,	Polish,	Miner,	22	S.	Jermyn,	Lackawanna,	Leg fractured by fall of roof.
5	Gottlieb Cofnik,	German,	Headman,	24	S.	Pyne,	Lackawanna,	Foot, injured by being caught under bumper of car.
8	David Edwards,	Welsh,	Fire boss,	57	M.	Dodge,	Lackawanna,	Leg fractured by haulage rope, inside.
8	John Lebecki,	Polish,	Miner,	52	M.	Dodge,	Lackawanna,	Leg fractured by haulage rope, inside.
8	Thomas Rusk,	Polish,	Helper,	19	S.	Hollan,	Lackawanna,	Hip squeezed between mine car and rib.
10	Matt Sullivan,	Irish,	Track man,	33	S.	William A.	Lackawanna,	Slightly injured by an explosion of gas.
13	Alex. Orhonic,	Polish,	Miner,	27	S.	Greenwood No. 1,	Lackawanna,	Back and spine injured by fall of roof.
14	Anthony Kozlowski,	Polish,	Runner,	29	S.	Austin,	Lackawanna,	Skull fractured by mine car.
15	Powell Gunia,	Slavonian,	Ash man,	46	M.	Hampton boiler plant,	Lackawanna,	Injured by falling down ash-tower, a distance of 69 feet.
19	Andrew Guall,	Hungarian,	Leader,	45	M.	Taylor,	Lackawanna,	Toes crushed by railroad car underneath the breaker.
21	Daniel Evans,	Welsh,	Driver,	18	S.	Pyne,	Lackawanna,	Thigh injured by being caught in stretcher chain.
27	Peter Coyne,	Irish,	Oiler,	17	S.	Greenwood No. 2,	Lackawanna,	While in the act of oiling conveyor line his hand was caught, cutting off three fingers.
Feb. 28	Harry Smith,	English,	Runner, outside,	14	S.	Jermyn No. 1,	Lackawanna,	Finger crushed while spragging a car.
7	Frank Lehetski,	Slavonian,	Driver,	16	S.	Sibley,	Lackawanna,	Leg fractured by falling under loaded trip of cars.
7	William Cosmark,	Hungarian,	Driver,	46	S.	Jermyn No. 2,	Lackawanna,	Thumb crushed; playing with rope while in motion.
11	Joseph Malterta,	American,	Miner,	22	S.	Meadow Brook tunnel,	Lackawanna,	These men were burned and wounded by a premature blast.
11	Ernest Pergini,	Italian,	Laborer,	21	S.	Meadow Brook tunnel,	Lackawanna,	
14	Joseph Zavelbo,	Polish,	Miner,	42	M.	Jermyn No. 1,	Lackawanna,	Leg fractured while running away from blast.
24	Simon Sabatka,	Lithuanian,	Miner,	40	M.	Babylon,	Luzerne,	Leg fractured by fall of roof.
24	Martin Brovami,	Polish,	Miner,	31	M.	Jermyn No. 2,	Lackawanna,	Leg fractured by being struck by a piece of board while riding on bumper of car.
25	James Conkey,	American,	Slope headman,	16	S.	Old Forge No. 1,	Lackawanna,	

March	26	Jacob Stikle, .....	Polish, .....	Laborer, .....	27	M. Pyne, .....	Lackawanna, .....	Right arm and left leg fractured by fall of top coal.
	28	Alex. Stannick, .....	Polish, .....	Laborer, .....	44	M. Central, .....	Lackawanna, .....	Scalp wounded and otherwise slightly injured by a fall of top coal.
	28	Tony Combarto, .....	Italian, .....	Miner, .....	50	M. Jermyn No. 2, .....	Lackawanna, .....	Both arms injured by a cap exploding in his hand.
	4	Patrick Hayes, .....	Irish, .....	Laborer, .....	35	S. Pyne, .....	Lackawanna, .....	Cap fractured by falling over rail- ing at foot of shaft.
	8	William Gallagher, .....	American, .....	Fuelman, .....	23	S. Greenwood No. 1, .....	Lackawanna, .....	Hands scalded by boiling water.
	10	Joseph Bastie, .....	Polish, .....	Laborer, .....	29	M. Jermyn No. 2, .....	Lackawanna, .....	Both legs fractured by fall of roof.
	11	John Dudek, .....	Polish, .....	Laborer, .....	25	S. Continental, .....	Lackawanna, .....	Leg fractured and scalp wounded by fall of roof.
	14	Peter Kopenski, .....	Polish, .....	Laborer, .....	28	M. Taylor, .....	Lackawanna, .....	Back and head injured by fall of roof.
	16	Rosa Schina, .....	Italian, .....	Miner, .....	27	M. Jermyn No. 1, .....	Lackawanna, .....	Injured by fall of roof.
	26	Robert Metcalf, .....	American, .....	Driver, .....	18	S. Babylon, .....	Lazerne, .....	Arm fractured and three ribs cracked by fall of roof.
26	John Burke, .....	American, .....	Driver, .....	18	S. National, .....	Lackawanna, .....	Foot squeezed by being caught under bumper of car.	
31	Nicholas Sossing, .....	American, .....	Runner, .....	21	S. William A, .....	Lackawanna, .....	Foot squeezed between the bumpers of two cars.	
April	2	Michael Shill, .....	Swiss, .....	Laborer, .....	23	S. Pyne, .....	Lackawanna, .....	Collar bone fractured by being squeezed by two car and mule.
	3	John Breen, .....	Irish, .....	Laborer, .....	60	M. Meadow Brook tunnel, .....	Lackawanna, .....	Leg fractured by fall of roof.
	6	Joseph Sinkner, .....	Polish, .....	Footman, .....	22	S. Holden, .....	Lackawanna, .....	Hip dislocated by being squeezed between cars.
	7	Ralf Dunn, .....	American, .....	Runner, .....	19	S. Central, .....	Lackawanna, .....	Ankle sprained by being caught under bumper of car.
	7	John Muskovitch, .....	Polish, .....	Miner, .....	28	S. Dodge, .....	Lackawanna, .....	Hands and face burned by powder.
	8	Joseph Flisk, .....	Italian, .....	Laborer, .....	18	S. National washery, .....	Lackawanna, .....	Legs scalded by boiling water.
	8	Alex. Hoover, .....	Swiss, .....	Miner, .....	55	M. Pyne, .....	Lackawanna, .....	Leg fractured by fall of bonecy.
	8	Michael Garb, .....	Polish, .....	Laborer, .....	27	S. Pyne, .....	Lackawanna, .....	Leg fractured by fall of bonecy.
	9	William Rowlan, .....	German, .....	Miner, .....	60	M. Lawrence, .....	Lackawanna, .....	Ribs fractured by fall of bonecy.
	10	John Ahnsley, .....	English, .....	Miner, .....	39	M. Jermyn No. 1, .....	Lackawanna, .....	Shoulder and ankle dislocated by a fall of rock falling from the roof.
15	John Carnavally, .....	Italian, .....	Miner, .....	26	M. William A, .....	Lackawanna, .....	Slightly injured by being knocked down by a trip of cars on slope.	
15	Charles Stralley, .....	Irish, .....	Laborer, .....	26	S. William A, .....	Lackawanna, .....	Arm and leg injured by fall of top coal.	
18	James Bartley, .....	Irish, .....	Runner, .....	25	S. Dodge, .....	Lackawanna, .....	Injured by being dragged along main road by a loaded trip of cars.	
23	Martin Fejgmski, .....	Polish, .....	Miner, .....	23	M. Dodge, .....	Lackawanna, .....	Hands and face slightly burned by premature blast.	
23	John Stone, .....	Polish, .....	Laborer, .....	41	M. Dodge, .....	Lackawanna, .....	Leg fractured and ankle bruised by premature blast.	
29	John Coha, .....	Polish, .....	Miner, .....	27	M. Holden, .....	Lackawanna, .....	Burned on face and hands by explosion of gas.	
May	1	Michael Supper, .....	Polish, .....	Laborer, .....	40	M. Taylor, .....	Lackawanna, .....	Leg and ribs fractured by a fall of coal.
	1	Nicolo Cardoman, .....	Italian, .....	Miner, .....	41	M. Jermyn No. 1, .....	Lackawanna, .....	Head injured by a fall of rock.
	2	Joseph Semenza, .....	Italian, .....	Miner, .....	20	S. Sibilsy, .....	Lackawanna, .....	These men were injured by running into a trip of cars coming down a plane.
	2	Gaetano di Antonis, .....	Italian, .....	Laborer, .....	42	M. Central, .....	Lackawanna, .....	Leg fractured by a falling prop.
	3	Thomas Carey, .....	Irish, .....	Miner, .....	23	M. Central, .....	Lackawanna, .....	Back strained and ribs fractured by a fall of rock.
	5	Alex. Czapolicki, .....	Polish, .....	Miner, .....	33	M. Continental, .....	Lackawanna, .....	

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
May 6	Andro Niddick, .....	Slavonian, ..	Driver, .....	16	S.	Holden, .....	Lackawanna, ..	Two ribs fractured and abrasion of skin on leg by falling under car.
8	George Sheehan, .....	Irish, .....	Runner, .....	29	M.	Dodge, .....	Lackawanna, ..	Fractured ribs and knee cap dislocated by a fall of roof.
9	John R. Lewis, .....	Welsh, .....	Driver, .....	16	S.	Dodge, .....	Lackawanna, ..	Injured internally by being squeezed between car and rib.
12	Thomas Edwards, .....	Welsh, .....	Fire boss, .....	46	M.	Continental, .....	Lackawanna, ..	Severe cut on foot by a fall of roof.
14	William J. Bowen, .....	Welsh, .....	Driver, .....	19	S.	Archbald, .....	Lackawanna, ..	Leg fractured by a fall of bone.
23	Joseph Jonas, .....	Polish, .....	Laborer, .....	43	M.	Dodge, .....	Lackawanna, ..	Dislocated hip and scalp wound by a fall of roof.
23	Joseph Snopic, .....	Polish, .....	Laborer, .....	32	M.	Holden, .....	Lackawanna, ..	Back bruised by a fall of roof.
25	Stanley Sedlick, .....	Polish, .....	Laborer, .....	33	M.	Hampton, .....	Lackawanna, ..	Leg fractured by fall of coal.
4	George Horton, .....	English, .....	Laborer, .....	22	S.	Spring Brook, .....	Lackawanna, ..	Arm fractured by premature blast.
5	John Davis, .....	Welsh, .....	Rock man, .....	45	M.	Archbald, .....	Lackawanna, ..	Back injured by fall of roof.
8	Dominick Dipiot, .....	Italian, .....	Laborer, .....	24	M.	Sibley, .....	Lackawanna, ..	These men were slightly injured by being thrown off cage at foot of shaft.
8	Joseph Gurrilla, .....	Polish, .....	Miner, .....	38	S.	Jermyn No. 1, .....	Lackawanna, ..	Leg fractured by falling under car.
9	Andrew Bochniuch, .....	Polish, .....	Laborer, .....	33	M.	Dodge, .....	Lackawanna, ..	Capitulum of several bones in left foot by fall of roof.
6	Luke Grady, .....	American, ..	Miner, .....	30	S.	Taylor, .....	Lackawanna, ..	Arm fractured by fall of coal.
14	William Tomlak, .....	Polish, .....	Driver, .....	17	S.	Shan, .....	Lackawanna, ..	Foot crushed under wheel of car.
14	William Tomlak, .....	Polish, .....	Laborer, .....	31	M.	Archbald, .....	Lackawanna, ..	Squeezed between car and rib in chamber.
15	Adam Yluskuski, .....	Polish, .....	Miner, .....	35	M.	Lawrence, .....	Lackawanna, ..	Leg fractured by flying coal from blast.
16	Frank Owens, .....	American, ..	Fire boss, .....	28	S.	Jermyn No. 2, .....	Lackawanna, ..	Ankle bruised by flying piece of coal from concussion of a cave.
17	Andrew Beshintek, .....	Slavonian, ..	Water bailer, .....	32	M.	Jermyn No. 2, .....	Lackawanna, ..	These men were slightly burned on face and hands by an explosion of gas.
17	Michael Pinta, .....	Polish, .....	Water bailer, .....	34	M.	Jermyn No. 2, .....	Lackawanna, ..	Injured internally by a fall of rock.
17	Michael Bokoski, .....	Polish, .....	Laborer, .....	33	M.	Continental, .....	Lackawanna, ..	Jaw bone fractured by a lever at head of breaker.
20	William Fairclough, .....	American, ..	Breaker machinist	22	S.	Holden, .....	Lackawanna, ..	Shoulder between two cars at foot of shaft.
25	Frank Friedle, .....	American, ..	Footman, .....	22	S.	Holden, .....	Lackawanna, ..	Leg fractured by being caught under the tippie on head of breaker.
25	Casper Indorf, .....	Swiss, .....	Headman, .....	35	M.	Pyne, .....	Lackawanna, ..	Head and face bruised by a fall of roof.
5	Joseph Zarembo, .....	Polish, .....	Laborer, .....	32	S.	Dodge, .....	Lackawanna, ..	Head cut and wrist dislocated by fall of roof.
7	Mazzarino Palazini, .....	Italian, .....	Laborer, .....	26	S.	Meadow Brook tunnel.	Lackawanna, ..	

10	George O'Boyle, .....	American, ..	Runner, .....	21	S.	Spring Brook, .....	Laekawanna, ..	Two fingers cut off by being run over by cars.
11	Charles Fahy, .....	Irish, .....	Driver, .....	19	S.	Dodge, .....	Laekawanna, ..	Pelvis fractured by cars.
17	Frank Condroski, .....	Polish, .....	Laborer, .....	28	M.	Greenwood No. 2, .....	Laekawanna, ..	Back bruised by car at face of chamber.
27	Isaac Evans, .....	Welsh, .....	Miner, .....	57	M.	Holden, .....	Laekawanna, ..	Injured by fall of roof at face of chamber.
27	Bimer Shiras, .....	Polish, .....	Plane man, .....	22	S.	William A, .....	Laekawanna, ..	Leg fractured by cars.
27	Joseph Baroski, .....	Polish, .....	Laborer, .....	22	S.	Continental, .....	Laekawanna, ..	Abdomen bruised and chest cut by fall of roof.
8	Joseph Murray, .....	Irish, .....	Runner, .....	18	S.	Greenwood No. 1, .....	Laekawanna, ..	Leg fractured by cars.
11	Felix Jacob, .....	Polish, .....	Laborer, .....	20	S.	Dodge, .....	Laekawanna, ..	Scalp wounded by fall of roof.
12	Michael Shincavish, .....	Polish, .....	Miner, .....	37	M.	Greenwood No. 1, .....	Laekawanna, ..	Leg fractured by fall of roof.
12	William Cooper, .....	American, ..	Laborer, .....	23	M.	Continental, .....	Laekawanna, ..	Severely injured by fall of roof.
13	Joseph Chapman, .....	English, .....	Rock man, .....	45	M.	Jermyn No. 1, .....	Laekawanna, ..	Leg fractured by rock from a blast.
15	Joseph Lewis, .....	Welsh, .....	Miner, .....	41	S.	Central, .....	Laekawanna, ..	Back fractured by fall of roof.
18	Thomas Hopkins, .....	Irish, .....	Laborer, .....	41	S.	Archbald, .....	Laekawanna, ..	Leg fractured by fall of roof.
23	Joseph Dombroski, .....	Polish, .....	Miner, .....	32	M.	Dodge, .....	Laekawanna, ..	Back sprained and scalp wounded by fall of roof.
24	Michael Kink, .....	Irish, .....	Runner, .....	19	S.	Greenwood No. 1, .....	Laekawanna, ..	Two toes cut off by cars.
24	Harry Smith, .....	Welsh, .....	Runner, .....	21	M.	Continental, .....	Laekawanna, ..	Compound fracture of leg by cars.
25	Michael Conoboy, .....	American, ..	Slope man, .....	20	S.	Spring Brook, .....	Laekawanna, ..	Arm fractured by being thrown against a prop.
26	John Noboloski, .....	Polish, .....	Laborer, .....	22	S.	Pyne, .....	Laekawanna, ..	Collar bone fractured; in trying to sprag a car he ran against another car on the "slagway."
6	Paul Mzumlok, .....	Austrian, .....	Driver, .....	17	S.	Jermyn No. 2, .....	Laekawanna, ..	Kidneys, abdomen by mule while connecting the trasses.
7	Martin Waters, .....	Irish, .....	Laborer, .....	69	S.	Lawrence, .....	Laekawanna, ..	Leg bruised by being bumped by cars.
22	Elisha Drake, .....	American, ..	Laborer, .....	50	M.	Spring Brook, .....	Laekawanna, ..	Skull fractured and both eyes severely burned by blast.
26	Robert Comer, .....	American, ..	Miner, .....	31	S.	Lawrence, .....	Laekawanna, ..	Leg fractured by stone rolling down on goph, in face of chamber.
10	John Ruderwiski, .....	Polish, .....	Leader, .....	37	M.	Ballyvaughan washery, .....	Laekawanna, ..	Arm badly crushed by falling under railroad car.
12	Joseph Williams, .....	Welsh, .....	Miner, .....	35	M.	Dodge, .....	Laekawanna, ..	Back bruised by a "rock bell" falling on him.
13	Edgar Davis, .....	Welsh, .....	Pump man, .....	23	M.	Greenwood No. 1, .....	Laekawanna, ..	Hand bruised by having it caught under pump.
10	Leonard Schlager, .....	American, ..	Driver, .....	20	S.	Shoan, .....	Laekawanna, ..	Fingers crushed while engaging car.
16	John G. Jennings, .....	Irish, .....	Miner, .....	68	M.	Holden, .....	Laekawanna, ..	Two ribs fractured and injured internally by being squeezed between cars and ribs.
23	Joseph Bukas, .....	Lithuanian, ..	Miner, .....	32	M.	Dodge, .....	Laekawanna, ..	Contusion of elbow and shoulder by fall of roof.
23	Andrew Guaso, .....	Russian, .....	Headman, .....	29	M.	Archbald, .....	Laekawanna, ..	Fractured shin bone and cut on leg.
2	Joseph Hughes, .....	Welsh, .....	Miner, .....	31	M.	Central, .....	Laekawanna, ..	Body cut and bruised by fall of roof.
7	Thomas V. Jones, .....	American, ..	Miner, .....	40	M.	Hampton, .....	Laekawanna, ..	Body bruised by fall of roof.
11	Joseph Dyson, .....	American, ..	Leader, .....	25	M.	Archbald, .....	Laekawanna, ..	Leg fractured and body bruised by being caught between wheel on top of brake staff and stringers forming coal pockets.
12	Joseph Crowchuck, .....	Irish, .....	Miner, .....	45	M.	Jermyn No. 1, .....	Laekawanna, ..	Forehead, eyes and arm burned by charge of powder exploding in hole.
23	Fred. Lentz, .....	American, ..	Driver, .....	17	S.	Hampton, .....	Laekawanna, ..	Face and mouth cut by being kicked by a charge.
24	Thomas Jeffries, .....	Irish, .....	Footman, .....	32	S.	Holden, .....	Laekawanna, ..	Leg fractured by being struck by rope at foot of plane.

Sept.

Oct.

Nov.

Dec.

### Accidents by Falls of Coal, Slate and Roof

During the year 1903, 42 persons were killed or fatally injured, and 117 were more or less seriously injured in and about the mines of the Fourth Anthracite District. Of the above number 19 were killed or fatally injured, and 42 seriously injured by falls of roof and coal. These are by a large percentage the most numerous class of accidents and are in the majority of cases due to the miner returning to the face of his working place in the powder smoke to see the results of a blast, when the roof or coal which had been loosened by the blast, and which cannot be seen, owing to the smoke, falls upon him, causing fatal or serious injury.

A number of accidents by falls occur because the roof and face have not been examined and sounded in order to ascertain whether or not anything is loose, so that it can be pulled down or secured with props. Props are often discharged by blasts from under the roof and large pieces of coal that are more than half loosened are left hanging and fall after the miner returns. In some cases where props have been discharged laborers have been fatally or seriously injured by falls of coal or roof due to the miner permitting them to go to the face to load a car of coal without first ascertaining the condition of the roof and overhanging coal. If all the miners were to use more judgment and be more careful after firing a blast before returning to work, a large percentage of the accidents by falls of roof and coal would be averted.

### Accidents by Explosion of Gas

Three were fatally and four seriously injured by explosion of gas. The explosion at the Taylor colliery of the Delaware, Lackawanna and Western Railroad Company, on the morning of January 14, by which Edward David was instantly killed and Charles Reed was so seriously injured that he died a few days later, was the result of the water rising unexpectedly at the foot of the up-cast shaft, causing a quantity of gas to accumulate in the return air-way. Reed and David were going to examine a pipe line, David opened a trap-door leading to the air-way, his naked light came in contact with the gas and a fearful explosion occurred. Roas Vender was fatally burned by gas in Old Forge No. 1, on February 5, as the result of his own carelessness. It appearing from information elicited at the investigation that he went into the old workings after being warned by other men not to go. His naked light came into contact with a small body of gas, burning him severely, from which he died 14 days later.

Those slightly burned were burned by the men igniting small

quantities of gas in face of working places. This frightful source of accidents in the mines, the causes, means of prevention, or plans by which their frequent occurrence might be reduced have been so exhaustively treated in former annual reports by the several mine inspectors, that scarcely anything new can be said about the subject.

### By Blasts and Powder

There were 3 fatal and 14 serious injuries from explosions of blasts and powder. Each accident resulted from inexcusable recklessness on the part of the victim. Two of the fatal accidents were due to the miners going back to the hole too soon, not giving the blast time to explode, and the other was due to the victim going to a keg of powder with his lighted lamp on his head, a spark falling from his lamp into the powder which exploded.

Another chief cause of such accidents is the miners taking the butt end of the drill to drive the cartridge in the hole. The drill striking fire explodes the cartridge, resulting in fatal or serious injury to the victim. Every miner knows this practice of ramming cartridges with the butt end of a drill to be extremely dangerous, and all will admit it, and yet otherwise careful and intelligent men lose their lives every year by clinging to the dangerous practice.

### By Cars Inside

There were 6 fatal and 30 non-fatal accidents by cars inside the mines during the year. The chief causes of these accidents are as follows:

James Mora, a door-boy at Jermyn No. 1 colliery, was away from his post of duty and fell asleep on side of the gangway and on hearing the trip of cars coming attempted to run ahead to his door, and was struck by the trip, inflicting injuries from which he died the same day.

Frank Borack while walking on tail rope line at Jermyn No. 1 colliery, was run over by trip of cars and instantly killed.

Edward Nebraska while sitting on bumper sliding his foot on the rail at Old Forge No. 2, fell under a trip of cars and was instantly killed.

Harry Moses, a driver at the Babylon Colliery, was fatally injured by being squeezed between car and rib on narrow side of gangway.

David H. Williams, a company man at the Archbald mine while driving out on a gangway with a truck car jumped on the side of the car and was squeezed between car and rib, receiving injuries from which he died the same night.

William Deskin, a laborer at the Archbald mine, while running

a car off the gangway into his chamber, after his light had gone out, was squeezed between car and rib and instantly killed.

The non-fatal accidents from this cause during the year numbered thirty, resulting from being squeezed between cars and between cars and ribs. Several employes were injured by falling under cars, others by spragging cars and riding on bumpers of cars. Drivers and runners are the principal sufferers, and in most cases they bring the suffering upon themselves.

### By Cars Outside

There were three fatal and five non-fatal injuries outside the mines by cars during the year.

Winfield Decker, while trying to stop a runaway team of mules, slipped and fell under a truck, receiving injuries from which he died the same day.

John Loyko, a loader at the Pyne mines, was run over by a box car under the breaker, receiving injuries from which he died on the way to the hospital.

Oliver Wilson, carpenter at Austin mines, was squeezed between cars inflicting injuries from which he died seven days later.

The five non-fatal accidents were due to the victims being caught by cars under the breaker, by car on the head of breaker, by spragging cars, and by falling under railroad cars. With an ever-present and prudent care some of these accidents might possibly have been averted.

### Miscellaneous Causes

Under this head there were 3 fatal and 19 non-fatal accidents, in and about the mines of this district. The loss of life and serious injury were almost all purely accidental. Yet, when we examine the casualty tables and take into consideration the large number therein contained that result from carelessness, it is scarcely to be expected that the prudence which should always govern the movements of the miners will be sufficiently exercised to reduce to any great extent this class of accidents.

### Present Condition of Collieries

While the ventilation and drainage at some mines are not perfect, they have been greatly improved at many of them during the past year. However, on the whole they are satisfactorily ventilated and drained, with a few exceptions. There may be some persons working in local places, in every mine making an opening towards getting air one way or another who are suffering for the time being, but eventually the mines will be well ventilated.



The Delaware, Lackawanna and Western Railroad Company's mines are kept well in hand. One or two cannot be rated as first class, but there is never any trouble with the mines of this company, for the men in charge of them have always shown a cheerful readiness to comply with the requirements of law.

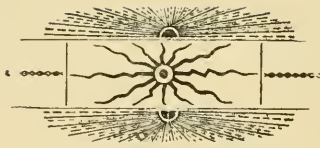
The Delaware and Hudson Company's mines have been greatly improved. They have only three collieries in my district, which are in good condition as far as ventilation and drainage are concerned.

The collieries of the small companies in the district are in good condition as to ventilation and drainage, excepting the following: Austin Tunnel, of the Austin Coal Co., Sibley, of Elliott McClure and Co., No. 4 tunnel, of Wm. Connell and Co., Wm. A., of the Lehigh Valley Coal Co., Jermyn No. 1, of Jermyn and Co. Some of these have been improved during the year.

#### Burning of the Old Forge Breaker of the Pennsylvania Coal Company

On March 25, 1903, the Old Forge breaker of the Pennsylvania Coal Company was completely destroyed by fire. The daily capacity of the old breaker was 1,800 tons. A new modern breaker was erected again on the same site, with a daily capacity of 2,500 tons.

The National washery of the North American Coal Company was abandoned June 27, 1903.



# Fifth Anthracite District

LUZERNE COUNTY

---

Pittston, Pa., February 29, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to submit my annual report as Inspector of Mines for the Fifth Anthracite District for the year ending December 31, 1903.

The report gives the statistical information as required by law, and also a tabulated and brief description of the fatal and non-fatal accidents that occurred during the year, with other useful information.

Respectfully submitted,

H. McDONALD,  
Inspector.

## Fifth Anthracite District, 1903

## SUMMARY OF STATISTICS

Number of mines in district, .....	39
Number of mines in operation, .....	39
Number of tons of coal produced, .....	4,761,133
Number of tons shipped to market, .....	4,406,990
Number of tons sold at mines to local trade, .....	48,177
Number of tons consumed at mines in generating steam and heat, .....	305,966
Number of persons employed inside the mines, .....	8,169
Number of persons employed outside, .....	3,357
Number of fatal accidents inside the mines, .....	37
Number of tons produced for each fatal accident inside, ..	128,679
Number of persons employed per fatal accident inside, ..	221
Number of fatal accidents outside, .....	10
Number of persons employed per fatal accident outside, ..	336
Number of wives made widows by fatal accidents, .....	22
Number of children orphaned by fatal accidents, .....	62
Number of non-fatal accidents inside of mines, .....	88
Number of persons employed per non-fatal accident inside,	93
Number of non-fatal accidents outside, .....	16
Number of persons employed per non-fatal accident out- side, .....	210
Number of steam locomotives used inside, .....	1
Number of compressed air locomotives used inside, .....	5
Number of electric motors used inside, .....	2
Number of fans used for ventilation, .....	46
Number of gaseous mines in operation, .....	26
Number of non-gaseous mines in operation, .....	13

TABLE A.—Fifth Anthracite District, 1903

PRODUCTION OF COAL	
Names of Companies	Tons
Pennsylvania Coal Company, .....	1,845,701
Lehigh Valley Coal Company, .....	1,226,951
Delaware and Hudson Company, .....	520,090
Hudson Coal Company, .....	252,578
Hillside Coal and Iron Company, .....	648,665
Traders' Coal Company, .....	108,713
Avoca Coal Company, Limited, .....	94,289
William Richmond Estate, .....	35,456
Clarence Coal Company, .....	28,690
<b>Total, .....</b>	<b>4,761,133</b>
Production by Counties	
Luzerne, .....	4,761,133

TABLE B.—Fifth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Companies	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per non-fatal accident	Number of fatal accident	Number of non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Pennsylvania Coal Co., .....	19	1	20	31	4	35	97,142	59,529	3,223	880	4,108	170	104	880	220
Lehigh Valley Coal Co., .....	7	5	12	27	6	33	175,276	64,599	1,833	630	2,468	297	76	830	220
Delaware and Hudson Co., .....	5	1	6	5	1	6	104,018	141,018	1,840	503	1,352	176	476	503	133
Hudson Coal Co., .....	1	1	2	16	3	19	282,578	15,786	622	308	920	52	41	308	103
Hillside Coal and Iron Co., .....	1	1	2	6	1	7	648,667	198,111	1,031	440	1,471	1,031	172	440	440
Traders' Coal Co., .....	2	.....	2	1	.....	1	54,356	108,713	262	91	353	131	262	.....	.....
Avoca Coal Co., Limited, .....	.....	1	1	.....	.....	1	.....	94,283	320	123	443	.....	.....	.....	.....
Clarence Coal Co., .....	2	.....	2	1	.....	1	14,345	23,690	118	72	190	59	118	.....	.....
William Richmond Estate, .....	.....	.....	.....	.....	1	1	.....	.....	65	21	86	.....	.....	.....	21
Totals and averages for district, .....	37	10	47	88	16	104	128,679	54,104	8,169	3,337	11,525	221	92	336	210

TABLE C.—Fifth Anthracite District, 1903  
Classification of Fatal Accidents

	Inside of Mines										Outside of Mines					Grand total		
	By Falls of		By Falling Into			By blasts, etc.	Powder and dynamite	Smothered by gas	By explosion of gas	By mine cars	Total inside	By cars	By machinery	By suffocation	By boiler explosions		Miscellaneous causes	Total outside
	Coal	Slate	Roof	Shafts	Slopes													
January, .....	1		1	1													3	
February, .....	1		3														4	
March, .....	1		1														2	
April, .....																	1	
May, .....			1														1	
June, .....			1														1	
July, .....	1		1														2	
August, .....			4														4	
September, .....																	1	
October, .....																	1	
November, .....			1														1	
December, .....			1														1	
Totals, .....	3		11	7	3	1	8	1	3	7	37	6	1	1	1	1	47	





TABLE E.—Fifth Anthracite District, 1903  
Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines

	Inside										Outside							Grand total			
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Book-keepers and clerks	All other employes	Total outside
January				1	1	1			1					1						1	
February				1	4	1														1	
March				1																1	
April										2										1	
May				2	1	1				4										1	
June				3						6					1					1	
July				4	2	1			2	7										1	
August				1		1				1										1	
September				1						1											
October				1	1	2				4										1	
November				1	1	1				3										1	
December				1	2	1				4										1	
Totals				37	9	7	1	1	5	37			1		1	1			7	30	67



TABLE G.—Fifth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Hungarian	Italian	Slavonian	Lithuanian	Austrian	Russian	Swedish	Totals
January, .....	1	.....	.....	2	1	.....	.....	1	2	.....	1	1	.....	3
February, .....	1	.....	.....	1	.....	1	1	.....	.....	.....	.....	.....	.....	4
March, .....	1	.....	.....	1	.....	1	1	.....	.....	.....	.....	.....	.....	4
April, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
May, .....	.....	1	.....	1	.....	.....	1	1	1	.....	.....	.....	.....	3
June, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
July, .....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
August, .....	1	.....	.....	1	2	.....	1	1	.....	1	.....	.....	.....	7
September, .....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
October, .....	.....	.....	.....	1	.....	.....	.....	3	1	.....	.....	.....	.....	5
November, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
December, .....	2	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	4
Totals, .....	9	2	1	7	3	4	3	7	6	1	2	1	1	47

TABLE H.—Fifth Anthracite District

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Scotch	Irish	Polish	Hungarian	Italian	Slavonian	Lithuanian	Austrian	Russian	Swedish	Totals
January, .....	2	.....	.....	.....	2	3	.....	2	.....	.....	.....	5	.....	14
February, .....	4	.....	.....	.....	1	.....	.....	1	.....	2	1	.....	1	10
March, .....	.....	.....	2	1	.....	4	.....	.....	1	1	.....	1	.....	10
April, .....	2	.....	.....	.....	1	.....	.....	2	.....	.....	.....	5	.....	12
May, .....	3	.....	.....	.....	2	1	.....	1	1	1	.....	.....	.....	10
June, .....	.....	.....	.....	.....	4	2	1	1	.....	1	.....	.....	.....	9
July, .....	2	2	.....	.....	.....	.....	.....	3	1	.....	.....	.....	.....	8
August, .....	3	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	2	.....	10
September, .....	1	.....	.....	.....	3	1	.....	2	1	.....	.....	.....	.....	8
October, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	3
November, .....	3	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	6
December, .....	1	1	.....	.....	.....	1	.....	.....	1	1	.....	.....	.....	6
Totals, .....	21	3	2	1	13	18	1	14	7	6	1	16	1	104

TABLE I.—Fifth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employee per minute

Names of Operators and Mines	Kind of opening	Gasous or non-gasous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed	Average number of cubic feet per minute provided for each person
Pennsylvania Coal Co.																
No. 1	Shaft...	Gaseous,	Fan.....	20	6.6	5.3	45	.8	Gubbal...	Steam...	4	84,302	63,270	85,710	204	389
No. 8	Shaft...	Gaseous,	Fan.....	20	6.6	5.3	50	.9	Gubbal...	Steam...	3	82,100	76,658	88,950	155	494
No. 4	Shaft...	Gaseous,	Fan.....	20	6	5	60	1.1	Gubbal...	Steam...	5	74,910	68,640	78,660	186	361
No. 5	Shaft...	Gaseous,	Fan.....	20	6	5	60	1.1	Gubbal...	Steam...	5	89,800	83,560	92,390	200	317
No. 6	Shaft...	Gaseous,	Fan.....	20	6	5	60	1.1	Gubbal...	Steam...	4	78,500	73,900	83,500	179	357
No. 7	Shaft...	Gaseous,	Fan.....	20	6	5	60	1.1	Gubbal...	Steam...	4	75,300	69,330	78,750	141	4.6
No. 9	Shaft...	Gaseous,	Fan.....	20	6	5	61	1.1	Gubbal...	Steam...	3	96,999	75,082	91,875	232	323
No. 10	Shaft...	Gaseous,	Fan.....	20	6	5	61	1.1	Gubbal...	Steam...	3	61,100	50,700	77,350	164	303
No. 11	Shaft...	Gaseous,	Fan.....	20	6	5	58	1.1	Gubbal...	Steam...	7	110,500	95,200	115,500	115	115
No. 12	Shaft...	Gaseous,	Fan.....	20	6	5	70	1.1	Gubbal...	Steam...	7	111,900	98,210	114,900	308	246
No. 14	Tunnel...	Gaseous,	Fan.....	17	5	4	63	.8	Gubbal...	Steam...	8	488,500	87,210	109,800	307	284
Hoyle,	Shaft...	Gaseous,	Fan.....	20	6	5	73	1.2	Gubbal...	Steam...	7	153,920	136,980	160,890	272	543
Lehigh Valley Coal Co.																
Prospect,	Shaft...	Gaseous,	2 Fans...	30	9	8	52	1.7	Gubbal...	Steam...	5	36,000	34,435	37,474	114	302
Oakwood,	Shaft...	Gaseous,	Fan.....	30	9	8	50	1.6	Gubbal...	Steam...	5	19,100	19,000	129,000	207	337
Midvale,	Slope...	Gaseous,	Fan.....	20	6.6	5.3	66	1.2	Gubbal...	Steam...	6	84,830	42,350	54,290	189	346
Hillman,	Slope...	Gaseous,	Fan.....	25	4.6	3.8	89	.9	Gubbal...	Steam...	3	77,960	47,642	91,566	138	345
Wyoming,	Shaft...	Gaseous,	Fan.....	25	6	6	46	1.3	Gubbal...	Steam...	6	12,215	56,620	96,480	147	583
Heidelberg No. 2,	Shaft...	Gaseous,	Fan.....	20	6	5	46	1.3	Gubbal...	Steam...	3	148,146	114,376	133,362	213	337
Heidelberg No. 2,	Shaft...	Non-gas.	Fan.....	20	5.4	4.1	45	1.3	Gubbal...	Steam...	3	74,200	65,500	81,700	117	559
Heidelberg No. 1,	Slope...	Gaseous,	3 Fans...	12	4.2	3	90	.6	Gubbal...	Steam...	3	48,671	30,302	51,589	108	280
				{	4		100	.8								

\*Idle all the year.

Mineral Spring, .....	Slope,...	Gaseous, .....	Fan,.....	12	4	3.1	100	.3	Guibal,...	Steam,...	2	78,070	51,990	83,200	133	391
Coal Brook, .....	Slope,...	Non-gas, .....	Fan,.....	20	6	5.3	40	.5	Guibal,...	Steam,...	2	44,076	30,225	45,200	115	292
Delaware and Hudson Co.																
Baltimore, .....	Tunnel, .....	Non-gas, .....	Fan,.....	19	6	5	65	1.1	Guibal,...	Steam,...	3	92,750	56,214	108,755	191	294
Baltimore No. 2, .....	Shaft, .....	Gaseous, .....	Fan,.....	17.6	5.3	4.8	60	2.3	Guibal,...	Steam,...	3	16,990	90,200	103,070	146	644
Baltimore, .....	Slope, .....	Gaseous, .....	Fan,.....	18	5.6	4.6	80	1.7	Guibal,...	Steam,...	3	169,625	95,370	180,400	183	324
Delaware, .....	Shaft, .....	Gaseous, .....	2 Fans, [	22	6.6	5.6	60	2.2	Guibal,...	Steam,...	3	110,315	81,140	113,963	230	352
Hudson Coal Co.																
Pipe Ridge, .....	Shaft, .....	Gaseous, .....	Fan,.....	17.6	5.3	4.8	90	1.9	Guibal,...	Steam,...	9	211,790	102,900	115,450	310	329
Laurel Run, .....	Slope,...	Gaseous, .....	2 Fans, [	20	6	5.3	80	1.3	Guibal,...	Steam,...	6	145,685	78,223	110,415	116	535
Lafin, .....	Shaft,...	Non-gas, .....	Fan,.....	16	5.4	4	85	.3	Guibal,...	Steam,...	4	53,100	50,075	57,950	140	357
Hillside Coal and Iron Co.																
Consolidated, .....	Slope,...	Non-gas, .....	Fan,.....	14	4	3.1	90	.8	Guibal,...	Steam,...	2	82,575	35,320	90,100	107	337
Butler, .....	Shaft, .....	Non-gas, .....	Fan,.....	12	4	4	75	.8	Guibal,...	Steam,...	4	52,225	47,069	61,476	197	212
Chapman, .....	Tunnel, .....	Non-gas, .....	Fan,.....	14	4	3.3	80	.7	Guibal,...	Steam,...	3	38,580	31,030	47,200	120	258
Fernwood, .....	Shaft, .....	Non-gas, .....	Fan,.....	14	4	3.3	90	.8	Guibal,...	Steam,...	3	35,200	30,530	41,000	130	217
Traders' Coal Co.																
Ridgewood, .....	Slope,...	Non-gas, .....	Fan,.....	16	5.2	4	60	.6	Guibal,...	Steam,...	4	83,715	43,570	103,155	188	231
Avooca Coal Co. Limited, .....	Shaft,...	Non-gas, .....	Fan,.....	12	4	4	60	.8	Guibal,...	Steam,...	5	80,500	54,000	85,500	246	219
William Richmond Estate, .....																
Yatesville, .....	Tunnel, .....	Non-gas, .....	Fan,.....	10	4	3	68	.4	Guibal,...	Steam,...	2	24,933	21,186	31,963	64	331
Clarence Coal Co.																
Clarence, .....	Slope,...	Non-gas, .....	Fan,.....	12	3.4	4	90	.5	Guibal,...	Steam,...	3	47,100	36,200	47,300	118	306

TABLE 1.—Fifth Anthracite District, 1903  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
Pennsylvania Coal Co.,	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Henry F. McMillan,	West Pittston, ....	.....
No. 1 shaft, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Henry F. McMillan,	West Pittston, ....	Erie and Wyoming Valley
No. 8 shaft, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Freemont Stokes, ..	Pittston, .....	Erie and Wyoming Valley
No. 4 shaft, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Freemont Stokes, ..	Pittston, .....	Erie and Wyoming Valley
No. 7 shaft, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Freemont Stokes, ..	Pittston, .....	Erie and Wyoming Valley
Hoyte shaft, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Freemont Stokes, ..	Pittston, .....	Erie and Wyoming Valley
No. 5 shaft, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Freemont Stokes, ..	Pittston, .....	Erie and Wyoming Valley
No. 6 shaft, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Freemont Stokes, ..	Pittston, .....	Erie and Wyoming Valley
No. 11 shaft, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Freemont Stokes, ..	Pittston, .....	Erie and Wyoming Valley
No. 9 shaft, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Henry F. McMillan,	West Pittston, ....	Erie and Wyoming Valley
No. 10 shaft, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Henry F. McMillan,	West Pittston, ....	Erie and Wyoming Valley
No. 10, Jr., shaft, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Henry F. McMillan,	West Pittston, ....	Erie and Wyoming Valley
No. 14 shaft, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Freemont Stokes, ..	Pittston, .....	Erie and Wyoming Valley
No. 14 tunnels, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Freemont Stokes, ..	Pittston, .....	Erie and Wyoming Valley
No. 6 washery, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Freemont Stokes, ..	Pittston, .....	Erie and Wyoming Valley
No. 8 washery, .....	Luzerne, ....	W. A. May, Manager; W. H. Inglis,	Scranton, .....	Henry F. McMillan,	West Pittston, ....	Erie and Wyoming Valley
Lehigh Valley Coal Co.						
Prospect shaft, .....	Luzerne, ....	S. D. Warriner, ...	Wilkes-Barre, .....	F. E. Zerbey, ....	Wilkes-Barre, .....	Lehigh Valley
Oakwood shaft, .....	Luzerne, ....	S. D. Warriner, ...	Wilkes-Barre, .....	F. E. Zerbey, ....	Wilkes-Barre, .....	Lehigh Valley
Midvale slope, .....	Luzerne, ....	S. D. Warriner, ...	Wilkes-Barre, .....	F. E. Zerbey, ....	Wilkes-Barre, .....	Lehigh Valley
Hillman slope, .....	Luzerne, ....	S. D. Warriner, ...	Wilkes-Barre, .....	F. E. Zerbey, ....	Wilkes-Barre, .....	Lehigh Valley
Wyoming shaft, .....	Luzerne, ....	S. D. Warriner, ...	Wilkes-Barre, .....	F. E. Zerbey, ....	Wilkes-Barre, .....	Lehigh Valley
Henry shaft, .....	Luzerne, ....	S. D. Warriner, ...	Wilkes-Barre, .....	F. E. Zerbey, ....	Wilkes-Barre, .....	Lehigh Valley
Henry washery, .....	Luzerne, ....	S. D. Warriner, ...	Wilkes-Barre, .....	F. E. Zerbey, ....	Wilkes-Barre, .....	Lehigh Valley
Heidelberg No. 2 shaft, .....	Luzerne, ....	S. D. Warriner, ...	Wilkes-Barre, .....	F. E. Zerbey, ....	Wilkes-Barre, .....	Lehigh Valley

Heidelberg No. 1 slope,	Luzerne,	S. D. Warriner,	Wilkes-Barre,	F. E. Zerbey,	Wilkes-Barre,	Lehigh Valley
Mineral Spring slope,	Luzerne,	S. D. Warriner,	Wilkes-Barre,	F. E. Zerbey,	Wilkes-Barre,	Lehigh Valley
Coal Brook slope,	Luzerne,	S. D. Warriner,	Wilkes-Barre,	F. E. Zerbey,	Wilkes-Barre,	Lehigh Valley
Delaware and Hudson Co.						
Baltimore tunnel	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettibone,	Scranton,	Delaware and Hudson
Baltimore No. 2 shaft,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettibone,	Scranton,	Delaware and Hudson
Baltimore slope,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettibone,	Scranton,	Delaware and Hudson
Delaware shaft,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettibone,	Scranton,	Delaware and Hudson
Hudson Coal Co.						
Pine Ridge shaft,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettibone,	Scranton,	Delaware and Hudson
Laurel Run slope,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettibone,	Scranton,	Delaware and Hudson
Lafin shaft,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettibone,	Scranton,	Delaware and Hudson
Hillside Coal and Iron Co.						
Consolidated slope,	Luzerne,	W. A. May,	Scranton,	V. L. Petersen,	Scranton,	Erie and Wyoming Valley
Consolidated shaft,	Luzerne,	W. A. May,	Scranton,	V. L. Petersen,	Scranton,	Erie and Wyoming Valley
Bullion tunnel,	Luzerne,	W. A. May,	Scranton,	V. L. Petersen,	Scranton,	Erie and Wyoming Valley
Chauman shaft,	Luzerne,	W. A. May,	Scranton,	V. L. Petersen,	Scranton,	Erie and Wyoming Valley
Fernwood shaft and tunnel,	Luzerne,	W. A. May,	Scranton,	V. L. Petersen,	Scranton,	Erie and Wyoming Valley
Pittston washery,	Luzerne,	W. A. May,	Scranton,	V. L. Petersen,	Scranton,	Erie and Wyoming Valley
Traders' Coal Co.						
Ridgewood slope,	Luzerne,	Solomon Deeble,	Avoca,			N. Y. & W. and C. R. R. of N. J.
Avoca Coal Co. Limited.						
Avoca shaft,	Luzerne,	W. H. Hollister,	Avoca,			L. V. and E. and W. V.
William Richmond Estate						
Yatesville tunnel,	Luzerne,	Alex. Allan,	Avoca,			New York and Erie
Clarence Coal Co.						
Clarence slope,	Luzerne,	C. B. Sturges,	Scranton,	N. A. James,	Scranton,	Erie and Wyoming Valley

TABLE 2.—Fifth Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Pennsylvania, Coal Co.												
No. 1 and 8 shafts, .....	Luzerne, .....	291,823	4,574	60	296,407	218	444	3	2	6,355	934	47
Nos. 4, 7 and Hoyte shafts, .....	Luzerne, .....	345,255	10,987	384	356,576	153	823	4	6	13,839	4,449	80
Nos. 5, 6 and 11 shafts, .....	Luzerne, .....	312,257	8,190	6,042	326,489	208	871	5	13	14,485	19,881	114
Nos. 9, 10 and 10 Jr. shafts, .....	Luzerne, .....	272,304	16,716	6,406	295,426	211	616	1	6	8,777	2,666	81
No. 14 shaft and tunnels, .....	Luzerne, .....	534,870	6,300	1,105	542,375	197	1,245	7	8	15,106	8,139	116
Totals, .....		1,896,619	46,767	13,947	1,737,333	205	4,059	20	35	58,562	36,069	432
Lehigh Valley Coal Co.												
No. 6 washery, .....	Luzerne, .....	14,301	.....	.....	14,301	24	.....	.....	.....	.....	.....	3
No. 8 washery, .....	Luzerne, .....	72,944	1,123	.....	74,067	122	49	.....	.....	.....	.....	1
Totals, .....		87,245	1,123	.....	88,368	73	49	.....	.....	.....	.....	4
Lehigh Valley Coal Co.												
Prospect shaft, .....	Luzerne, .....	406,334	29,795	.....	436,129	235	920	3	23	11,057	41,331	111
Oakwood shaft, .....	Luzerne, .....	376,000	8,340	3,314	387,654	130	558	4	7	6,277	37,009	105
Midvale slope, .....	Luzerne, .....	111,376	15,500	2,354	129,210	166	274	2	.....	3,808	3,084	40
Hillman slope, .....	Luzerne, .....	131,611	6,897	39	138,547	213	314	.....	1	4,506	12,672	60
Wyoming shaft, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Henny washery and shaft, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Heidelberg shaft, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Heidelberg slope, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\*Totals in this column are averages.



	101,111	14,300	115,411	147	4,6	3	2	3,016	11,911	38	
Mineral Spring slope, Luzerne, .....											
Coal Brook slope, Luzerne, .....											
Totals, .....	1,146,412	74,822	1,226,351	178	2,532	12	33	28,054	106,010	354	
Delaware and Hudson Co.											
Baltimore tunnel, Luzerne, .....	241,000	44,926	285,926	216	689	5	4	7,888	2,303	78	
Baltimore No. 2 shaft, Luzerne, .....	50,750	16,917	111,299	172	305	1	.....	2,653	1,081	44	
Baltimore slope, Luzerne, .....	94,480	26,886	122,365	185	389	.....	2	5,349	3,435	42	
Delaware shaft, Luzerne, .....											
Totals, .....	425,730	88,679	590,000	194	1,382	6	6	16,800	6,819	164	
Hudson Coal Co.											
Pine Ridge shaft, Luzerne, .....	106,991	27,388	135,672	168	489	2	8	5,561	6,413	68	
Laurel Run slope, Luzerne, .....	91,588	5,143	61,467	109	237	.....	7	3,869	1,478	40	
Lafin shaft, Luzerne, .....	39,680	14,600	1,508	163	234	.....	4	2,905	15,892	43	
Totals, .....	198,299	47,131	7,238	127	960	2	19	13,035	23,783	151	
Hillside Coal and Iron Co.											
Consolidated slope and shaft, Luzerne, .....	232,342	7,574	1,929	240	587	1	1	8,704	3,644	68	
Butler shaft, Luzerne, .....	130,484	15,283	1,407	181	475	1	2	6,799	9,353	50	
Chauman shaft, Luzerne, .....											
Fernwood tunnel and shaft, Luzerne, .....	116,036	7,200	1,008	183	409	.....	4	6,718	22,482	56	
Totals, .....	478,862	28,057	4,344	201	1,471	2	7	22,221	35,509	174	
Pittston washery, Luzerne, .....											
Totals, .....	131,818	5,554	137,402	132	.....	.....	.....	.....	.....	.....	
Traders' Coal Co.											
Ridgewood slope, Luzerne, .....	610,710	82,611	4,344	.....	1,471	2	7	22,221	35,509	174	
Totals, .....	86,057	7,300	5,276	248	353	2	1	6,794	4,500	36	
Avoca Coal Co., Limited.											
Avoca shaft, Luzerne, .....	83,153	5,475	5,661	192	443	1	1	5,711	3,400	60	
William Richmond Estate											
Yatesville tunnel, Luzerne, .....	31,355	1,028	73	35,456	206	86	.....	1	3,035	14	
Clarence Coal Co.											
Clarence slope and drift, Luzerne, .....	28,500	20	170	28,690	150	190	2	1	1,950	18	
Grand totals, .....	4,406,950	305,966	48,477	4,764,433	*	11,526	47	104	156,852	221,945	1,407

TABLE 2—Recapitulation

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Not including washeries)	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Pennsylvania Coal Co., .....	Luzerne, .....	1,783,864	47,890	13,947	1,845,701	205	4,108	20	25	58,562	36,069	436
Lehigh Valley Coal Co., .....	Luzerne, .....	1,197,432	74,832	5,707	1,222,451	178	2,532	12	33	28,654	106,010	354
Delaware and Hudson Co., .....	Luzerne, .....	435,730	87,719	5,681	520,090	194	1,383	6	6	16,800	6,819	164
Hudson Coal Co., .....	Luzerne, .....	108,209	37,131	7,238	252,378	127	960	2	19	13,035	23,783	151
Hillside Coal and Iron Co., .....	Luzerne, .....	610,710	33,611	4,234	648,555	201	1,471	2	7	22,221	55,500	174
Traders' Coal Co., .....	Luzerne, .....	96,057	7,340	5,354	108,751	50	353	3	1	6,791	4,500	36
Avoca Coal Co., Limited, .....	Luzerne, .....	83,153	5,475	5,663	94,289	162	44	1	1	5,711	3,400	60
William Richmond Estate, .....	Luzerne, .....	31,355	1,028	6,773	35,456	206	180	1	1	3,036	3,036	14
Clarence Coal Co., .....	Luzerne, .....	28,500	1,20	170	28,690	150	100	2	1	1,500	2,800	18
Totals, .....	.....	4,406,990	305,866	48,177	4,761,133	189	11,536	47	104	156,852	221,945	1,407

TABLE 2—Continued

Names of Operators and Collieries	County	Number of Boilers				Total horse power	Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in railons per minute	Quantity delivered to surface per minute—gallons.	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power		Steam	Air	Electric							
Pennsylvania Coal Co.																
Nos. 1 and 3 shafts, .....	Luzerne, .....	.....	.....	4	580	.....	.....	.....	.....	16	832	1	385	298	.....	.....
Nos. 4, 7 and Hoyte shafts, .....	Luzerne, .....	.....	.....	11	1,650	.....	.....	.....	.....	30	1,486	5	3,741	1,634	.....	.....
Nos. 5 and 6 shafts, .....	Luzerne, .....	.....	.....	14	2,100	.....	.....	.....	.....	22	1,577	.....	.....	.....	.....	.....
Nos. 8, 9, 10 and 10 Jr shafts, .....	Luzerne, .....	.....	.....	12	1,800	.....	.....	.....	.....	24	1,264	.....	.....	4,792	.....	.....
Nos. 14 shaft and tunnels, .....	Luzerne, .....	.....	.....	11	1,650	.....	.....	.....	.....	25	1,943	5	2,789	1,416	.....	.....
Totals, .....	.....	18	729	52	7,780	8,500	6	5	.....	117	7,082	15	14,478	8,140	.....	7
Luzerne, .....																
No. 6 washery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	233	.....	.....	.....	.....	.....
No. 8 washery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	483	.....	.....	.....	.....	.....
Totals, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lehigh Valley Coal Co.																
Prospect shaft, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oakwood shaft, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mildvale shaft, .....	Luzerne, .....	.....	.....	8	2,000	2,000	3	.....	.....	26	2,500	5	2,800	2,000	.....	1
Hillman shaft, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming shaft, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Henry washery and shaft, .....	Luzerne, .....	.....	.....	7	1,750	1,750	6	.....	.....	90	2,200	2	1,500	850	.....	.....
Heidelberg shaft, .....	Luzerne, .....	.....	.....	8	2,000	2,000	.....	.....	.....	18	900	5	4,150	2,500	.....	.....
Heidelberg slope, .....	Luzerne, .....	.....	.....	3	450	450	.....	.....	.....	14	400	4	1,250	1,000	.....	.....
Mineral Spring slope, .....	Luzerne, .....	.....	.....	5	1,150	1,150	.....	.....	.....	18	1,200	2	1,350	1,000	.....	.....
Coal Brook slope, .....	Luzerne, .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	1	30	31	6,250	6,280	11	.....	.....	96	7,200	19	11,450	7,400	.....	3
Totals, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE 2—Continued

Names of Operators and Collieries	County	Number of Boilers			Total horse power			Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons.	Number of electric dynamos	Number of air compressors
		Cylindrical	Tubular	Horse power	Steam	Air	Electric	Horse power	Steam	Air							
Delaware and Hudson Co.																	
Baltimore tunnel, .....	Luzerne, ...	27	810	10	2,000	2,810	3	.....	2	51	4,068	2	2,100	1,150	1	.....	.....
Baltimore No. 2 shaft, .....	Luzerne, ...	18	540	.....	540	.....	.....	.....	.....	16	1,233	1	750	400	.....	.....	.....
Baltimore slope, .....	Luzerne, ...	12	300	5	750	1,110	.....	.....	.....	22	1,064	1	3,000	1,800	.....	2	.....
Delaware shaft, .....	Luzerne, ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	Luzerne, ...	57	1,710	15	2,750	4,460	3	.....	2	89	6,365	4	5,850	3,350	1	2	.....
Hudson Coal Co.																	
Pine Ridge shaft, .....	Luzerne, ...	.....	.....	8	1,800	1,800	.....	.....	.....	23	1,250	3	4,200	2,300	.....	2	.....
Laurel Run slope, .....	Luzerne, ...	.....	.....	.....	500	500	.....	.....	.....	9	690	.....	.....	.....	.....	.....	.....
Latin shaft, .....	Luzerne, ...	.....	.....	5	750	750	1	.....	.....	14	810	2	1,500	1,000	.....	1	.....
Totals, .....	Luzerne, ...	.....	.....	15	3,050	3,050	1	.....	.....	46	2,660	5	5,700	3,300	.....	4	.....
Hillside Coal and Iron Co.																	
Consolidated slope and shaft, .....	Luzerne, ...	12	330	3	210	540	2	.....	.....	11	440	.....	.....	.....	.....	.....	.....
Butler tunnel, .....	Luzerne, ...	6	390	14	1,050	1,440	5	.....	.....	20	600	2	408	306	.....	1	.....
Chapman shaft, .....	Luzerne, ...	.....	.....	.....	.....	.....	.....	.....	.....	9	320	4	470	330	.....	1	.....
Fernwood tunnel and shaft, .....	Luzerne, ...	.....	.....	6	750	750	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	Luzerne, ...	18	720	23	2,010	2,730	7	.....	.....	40	1,360	6	878	696	.....	2	.....
Pittston washery,																	
Totals, .....	Luzerne, ...	18	720 <sup>a</sup>	23	2,010	2,730	7	.....	.....	43	1,450	6	878	696	.....	2	.....
Traders' Coal Co.																	
Ridgewood slope, .....	Luzerne, ...	8	160	1	95	255	.....	.....	.....	10	313	2	600	400	.....	.....	.....



TABLE 3.—Fifth Anthracite District, 1903  
Number of Each Class of Employees at Each Colliery

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside							Grand total inside and outside		
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Book-keepers and clerks	All other employes
Pennsylvania, Coal Co. No. 1 and 8 shafts, . . . . . No. 4, 7 and Hoyte shafts, . . . . . No. 5, 6 and 11 shafts, . . . . . No. 9, 10 and 10 Jr., shafts, . . . . . No. 14 shaft and tunnel, . . . . . No. 6 washery, . . . . . No. 8 washery, . . . . .	Luzerne, . . . . .	1	1	2	124	41	8	10	21	332	1	4	9	37	11	3	47	112	444		
		3	3	7	246	83	15	59	2	631	1	13	23	40	26	1	88	192	823		
		3	3	3	233	113	16	1	24	63	631	1	7	18	33	30	1	100	180	871	
		3	1	3	178	174	69	14	5	42	496	1	5	26	16	52	1	70	170	666	
		3	4	4	296	147	15	2	56	174	1,088	1	18	16	12	15	1	104	167	1,255	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, . . . . .		11	2	19	1,173	453	68	10	191	298	6	53	97	138	134	7	446	880	4,108		
Lehigh Valley Coal Co. Prospect shaft, . . . . . Oakwood shaft, . . . . . Midvale slope, . . . . . Hillman slope, . . . . . Wyoming shaft, . . . . . Henry washery and shaft, . . . . . Heidelberg shaft, . . . . . Heidelberg slope, . . . . .	Luzerne, . . . . .	2	3	7	135	90	34	5	154	635	1	1	1	17	37	4	206	285	920		
		1	2	4	129	118	17	3	57	390	1	1	1	9	25	5	125	168	558		
		1	1	1	58	55	2	4	16	163	1	1	1	6	15	44	31	11	111	274	
		1	1	1	65	46	1	2	36	184	1	1	1	3	10	48	5	60	150	314	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

\*Employees included in No. 6 breaker.

Mineral Spring slope, .....	Luzerne,.....]	2	1	63	63	22	8	.....	76	241	1	1	22	25	51	.....	4	120	225	466			
Coal Brook slope, .....	Luzerne,.....]	7	6	14	500	443	228	62	14	.....	339	1,613	3	5	59	33	185	36	16	522	919	2,532	
Totals, .....																							
Delaware and Hudson Co.																							
Baltimore tunnel, .....	Luzerne,.....]	1	.....	3	80	63	35	12	4	12	49	250	.....	.....	19	.....	.....	.....	1	17	37	296	
Baltimore No. 2 shaft, .....	Luzerne,.....]	1	.....	3	60	49	22	3	1	.....	37	176	.....	1	9	20	48	32	2	85	217	393	
Baltimore slope, .....	Luzerne,.....]	1	.....	3	44	32	21	7	.....	34	150	109	.....	1	5	14	24	18	2	44	116	389	
Delaware shaft, .....	Luzerne,.....]	1	.....	3	78	55	25	12	2	32	23	235	.....	1	5	18	59	6	1	41	134	388	
Totals, .....		4	3	12	262	269	103	33	11	58	125	880	.....	3	19	71	133	75	6	199	573	1,383	
Hudson Coal Co.																							
Pine Ridge shaft, .....	Luzerne,.....]	1	1	4	117	95	58	4	4	.....	45	329	.....	1	4	24	61	27	1	42	100	489	
Laurel Run slope, .....	Luzerne,.....]	1	.....	3	49	41	33	4	.....	22	14	167	.....	1	1	8	4	8	1	47	70	237	
Latin shaft, .....	Luzerne,.....]	1	.....	1	76	41	29	1	3	4	.....	156	.....	1	5	9	4	15	1	43	78	234	
Totals, .....		3	1	8	242	177	120	9	7	26	59	652	.....	3	10	41	69	50	3	132	308	990	
Hillside Coal and Iron Co.																							
Consolidated slope and shaft, ..	Luzerne,.....]	2	.....	.....	183	156	70	8	.....	36	.....	455	.....	1	6	13	38	.....	2	72	132	587	
Butler tunnel, .....	Luzerne,.....]	2	.....	1	101	70	29	2	2	.....	84	291	.....	1	1	13	25	10	5	128	184	475	
Chapman shaft, .....	Luzerne,.....]	1	.....	.....	98	68	29	2	5	.....	52	285	.....	1	3	15	58	.....	1	46	124	409	
Pittston tunnel and shaft, .....	Luzerne,.....]	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Pittston washery, .....	Luzerne,.....]	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Totals, .....		5	.....	1	382	324	128	12	7	36	136	1,031	.....	1	3	10	41	121	10	8	246	440	1,471
Traders' Coal Co.																							
Ridgewood slope, .....	Luzerne,.....]	2	.....	1	116	59	49	11	2	29	2	262	.....	1	1	4	8	28	6	3	40	91	353
Avoca Coal Co., Limited																							
Avoca shaft, .....	Luzerne,.....]	1	2	1	129	115	40	11	2	29	8	320	.....	1	1	6	6	39	18	3	40	123	442
William Richmond Estate																							
Yatesville tunnel, .....	Luzerne,.....]	1	.....	.....	26	26	8	2	.....	1	1	65	.....	1	1	2	3	8	.....	1	5	21	86
Clarence Coal Co.																							
Clarence slope and drift, .....	Luzerne,.....]	1	1	.....	56	35	11	2	2	10	.....	118	.....	1	1	4	5	17	4	.....	40	72	190
Grand totals, .....		35	15	56	2,877	2,481	1,140	210	55	372	938	8,429	.....	8	24	166	365	743	334	47	1,070	3,357	11,326

†Employees included in Butler Breaker.

TABLE 3—Recapitulation

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside										
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes	Total outside	Grand total inside and outside
Pennsylvania Coal Co., .....	Luzerne.....	11	6	19	1,173	1,033	453	68	10	191	293	3,298	..	9	52	91	183	184	7	446	880	4,108
Lehigh Valley Coal Co., .....	Luzerne.....	7	13	13	500	443	218	82	14	332	332	1,437	3	3	39	93	185	26	16	592	910	2,592
Delaware and Hudson Co., .....	Luzerne.....	4	3	12	262	269	103	33	11	..	58	122	..	..	19	21	138	75	6	190	502	1,382
Hudson Coal Co., .....	Luzerne.....	3	1	8	242	177	120	9	7	26	159	652	..	..	10	41	69	50	3	132	398	919
Hillside Coal and Iron Co., .....	Luzerne.....	5	..	1	382	324	158	12	7	36	136	1,031	1	3	10	41	121	10	8	246	440	1,471
Traders' Coal Co., .....	Luzerne.....	2	..	1	116	59	49	11	2	20	2	262	1	1	4	8	25	6	3	40	91	353
Avoca Coal Co., Limited, .....	Luzerne.....	1	2	1	120	115	40	11	2	20	8	320	1	1	6	6	39	18	3	49	123	443
William Richmond Estate, .....	Luzerne.....	1	1	..	25	26	8	2	..	1	1	65	1	1	2	2	8	..	5	21	86	
Clarence Coal Co., .....	Luzerne.....	1	1	..	56	35	11	2	2	10	..	118	1	1	4	5	17	4	..	40	72	190
Totals, .....	.....	35	15	56	2,877	2,481	1,140	210	55	362	938	8,169	8	24	166	315	743	334	47	1,670	3,357	11,526



TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Pennsylvania Coal Co.														
No. 1 and 8 shafts, .....	Luzerne,.....	19	15	17	23	21	25	23	25	16	12	12	11	218
No. 4, 7 and Hoyte shafts, .....	Luzerne,.....	17	13	14	19	18	22	21	21	17	11	9	11	193
No. 5, 6 and 11 shafts, .....	Luzerne,.....	19	15	16	20	20	22	22	22	17	12	11	12	208
No. 9, 10 and 10 JF. shafts, .....	Luzerne,.....	18	14	18	20	20	24	23	21	18	11	14	10	211
No. 14 shaft and tunnel, .....	Luzerne,.....	17	13	14	15	19	25	22	23	16	12	11	10	197
Averages, .....		18	14	16	19	20	24	22	22	17	12	11	11	205
Lehigh Valley Coal Co.														
Prospect shaft, .....	Luzerne,.....	21.1	22.3	24.8	21.5	19.3	20.7	21.6	21.2	17.7	13.3	11.9	16.4	225
Oakwood shaft, .....	Luzerne,.....													
Mildate slope, .....	Luzerne,.....													
Wynant shaft, .....	Luzerne,.....													
Wynant shaft, .....	Luzerne,.....													
Henry washery and shaft, .....	Luzerne,.....	26.4	22.3	25	14.7	15	13.6	15.1	12.9	13.6	7	8.3	18.2	130
Heidelberg slope, .....	Luzerne,.....	16.8	15.7	16.8	16	14.1	13.6	15.1	12.9	13.6	7	9.5	14.4	166
Heidelberg shaft, .....	Luzerne,.....	19.8	17.9	20.3	19.1	18.8	20.2	21.7	20.9	16.7	9.2	11.9	18.7	213
Mineral Stirling slope, .....	Luzerne,.....				17.5	18.6	19.6	17.5	20.3	17.8	7.2	10.9	17.5	147
Coal Brook slope, .....	Luzerne,.....													
Averages, .....		21.8	19.5	21.7	17.8	17.2	18.5	18.9	18.8	16.4	9.2	10.5	16.6	178
Delaware and Hudson Co.														
Baltimore tunnel, .....	Luzerne,.....	26.6	22.7	23.3	22.5	21.6	22.8	24.5	23.7	14.8	14.1	6.8	22.3	246
Baltimore No. 2 shaft, .....	Luzerne,.....													
Baltimore shaft, .....	Luzerne,.....	18	15.5	13.8	16.4	15	13.6	13.2	14	13.2	13.3	13.2	13.2	172
Delaware shaft, .....	Luzerne,.....	13.3	12.6	13.6	12.3	12.6	15.8	18.4	17.6	15.7	11.1	9.1	13.2	165
Averages, .....		19.3	16.9	16.9	17	16.4	17.4	18.7	18.4	14.6	12.8	9.7	16.2	184
Hudson Coal Co.														
Pine Ridge shaft, .....	Luzerne,.....	21.6	22.2	21.8	22.3	19.6	2.6	18.1	18.1	2.6	19.6	18	18.1	168

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Laurel Run Slope, .....	Luzerne,.....	12.2	9.1	8.8	8.5	7.5	9.1	8.3	8.7	10.1	8.1	9.1	9.8	109
Lafin shaft, .....	Luzerne,.....	5.5	6.1	6.6	8.1	6.8	6.6	7.8	9.8	9.8	11.1	11.8	12.8	163
Averages, .....		13.8	12.5	12.4	12.9	11.3	7.8	8	9.3	7.5	12.9	13	13.6	127
Hillside Coal and Iron Co.														
Consolidate slope and shaft, .....	Luzerne,.....	23.8	22.4	18.2	20.2	19.3	25.2	23.8	23.6	21	11	15.7	15.8	240
Butler tunnel, .....	Luzerne,.....													
Chapman shaft, .....	Luzerne,.....	17.7	14.7	15.1	14.2	15.2	17.8	18.4	18.7	16.6	9.2	10.8	12.8	181
Fernwood tunnel and shaft, .....	Luzerne,.....	13.6	13.5	17	13.4	17	16.6	13.5	17.4	16.7	7.4	8.8	16.5	183
Averages, .....		19	16.9	16.8	14.3	17.2	19.9	20.2	19.9	18.1	9.2	11.8	15	201
Ridgewood slope, .....	Luzerne,.....	23.4	17.6	20.4	20.4	21.3	21.6	21.3	21.3	20.2	14.5	22.4	23.8	248
Traders' Coal Co.														
Avoca shaft, .....	Luzerne,.....	20.9	16.5	17.8	16.6	15.4	15.9	17.6	15.5	10.4	10.8	15.4	19.4	192
Avoca Coal Co., Limited														
William Richmond Estate														
Yatesville tunnel, .....	Luzerne,.....	20.5	15.2	18.1	18.8	18.2	17.9	19.7	18.5	14.7	11.4	14.7	18.7	206
Clarence slope and drift, .....	Luzerne,.....					24	21	24	16	20	13	17	15	150
Clarence Coal Co.														
Averages, .....		18.9	16	17.1	16.6	17	17.8	18.1	17.7	15	11.4	12.2	15.3	180

TABLE 3—Recapitulation

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals	
		January	February	March	April	May	June	July	August	September	October	November	December		
Pennsylvania Coal Co.,	Luzerne,.....	18	14	16	19	20	24	22	22	17	12	11	11	11	965
Lehigh Valley Coal Co.,	Luzerne,.....	21.8	19.5	21.7	17.8	17.2	18.5	18.9	18.8	16.4	17.4	17.5	17.5	17.6	158
Delaware and Hudson Co.,	Luzerne,.....	19.3	16.9	17	17	17.3	17.3	18.1	18.4	16.8	17.8	17.8	17.7	17.2	144
Hudson Coal Co.,	Luzerne,.....	13.8	12.5	12.3	12.9	11.5	11.3	11.7	11.2	9.2	10.5	10.7	10.6	10.2	137
Hillside Coal and Iron Co.,	Luzerne,.....	23	18.3	18.3	14.3	17.3	19.3	20.2	19.9	18.1	17.5	17.5	17.5	17.6	201
Traders' Coal Co., Limited,	Luzerne,.....	23.4	16.6	20.4	20.4	21.3	21.6	21.3	21.3	20.2	14.5	11.8	11.8	15.6	248
American Coal Co.,	Luzerne,.....	20.9	16.5	17.8	16.6	15.4	15.9	17.5	15.5	10.4	10.8	15.4	15.4	19.4	192
William Richmond,	Luzerne,.....	20.5	15.2	18.1	18.8	18.2	17.9	19.7	18.5	14.7	11.4	14.7	14.7	18.7	206
Clarence Coal Co.,	Luzerne,.....	.....	.....	.....	.....	24	21	24	16	20	13	17	15	150	
Averages, .....	.....	18.9	16	17.1	16.6	17	17.8	18.1	17.7	15	11.4	12.2	12.2	15.3	189

TABLE 4.—Fifth Anthracite District, 1963  
Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 2	William Nelmeyer, . . .	German, . . . .	Carpenter, . . .	55	M.	1	6	Mineral Spring, . . . .	Luzerne, . .	Killed by plank falling on him from top of breaker.
10	Thomas Martin, . . . . .	American, . .	Shaft foot- man, . . . . .	23	S.	.....	.....	No. 6 shaft, . . . . .	Luzerne, . .	Fatally injured by a piece of ice falling down shaft and striking him on the head.
28	Anthony Telershaski, . .	Russian, . . .	Driver, . . . . .	15	S.	.....	.....	No. 5 shaft, . . . . .	Luzerne, . .	Fatally injured by mine car.
7	Samuel Lomenuro, . . . .	Italian, . . .	Laborer, . . . .	27	S.	.....	.....	No. 14 shaft, . . . . .	Luzerne, . .	Killed in face of breast by a piece of rider coal striking him on the head.
12	Andrew Pojadin, . . . . .	Slavonian, . .	Laborer, . . . .	28	S.	.....	.....	Baltimore No. 2, . . . .	Luzerne, . .	Killed by a fall of rock at face of breast.
13	Edward Sheridan, . . . . .	Irish, . . . . .	Track layer, . .	53	M.	1	4	Henry, outside, . . . . .	Luzerne, . .	Fatally injured by trip of empty mine car.
19	Joseph Yesmont, . . . . .	Slavonian, . .	Laborer, . . . .	21	S.	.....	.....	No. 8 shaft, . . . . .	Luzerne, . .	Killed by falling down shaft.
23	Anthony Snegil, . . . . .	Austrian, . .	Laborer, . . . .	50	M.	1	.....	Henry shaft, . . . . .	Luzerne, . .	Killed by a fall of rock in face of breast.
25	John Flannagan, . . . . .	Irish, . . . . .	Miner, . . . . .	50	M.	1	6	No. 1 shaft, . . . . .	Luzerne, . .	Fatally injured by fall of rock at face of breast.
March 2	John Semock, . . . . .	Hungarian, . .	Co. man, . . . .	31	M.	1	.....	Henry washery, . . . .	Luzerne, . .	Killed by railroad car.
11	Edward Loitus, . . . . .	Irish, . . . . .	Miner, . . . . .	40	M.	1	7	Baltimore tunnel, . . . .	Luzerne, . .	Fatally injured by a fall of rock at face of breast.
21	Vetal Krauski, . . . . .	Polish, . . . .	Laborer, . . . .	30	S.	.....	.....	Baltimore tunnel, . . . .	Luzerne, . .	Killed by a fall of coal at face of breast while loading a car.
23	James Conyngham, . . . .	American, . .	Driver, . . . . .	18	S.	.....	.....	Pine Ridge shaft, . . . .	Luzerne, . .	Killed by being caught between car and prop in breast.
April 23	Cartie Monahan, . . . . .	American, . .	Culm loader, . .	15	S.	.....	.....	Even breaker, . . . . .	Luzerne, . .	Killed by falling off front end of culm breaker.
May 1	Anthony Mortius, . . . . .	Hungarian, . .	Laborer, . . . .	20	S.	.....	.....	No. 14 shaft, . . . . .	Luzerne, . .	Fatally injured by fall of rock in breast.
6	Michael Ignatez, . . . . .	Slavonian, . .	Ranner, . . . . .	20	S.	.....	.....	Midvale slope, . . . . .	Luzerne, . .	Killed by collar falling on him.
8	Timothy Ford, . . . . .	Irish, . . . . .	Miner, . . . . .	38	M.	1	7	No. 14 tunnel, . . . . .	Luzerne, . .	Killed by a runaway trip of loaded cars.
21	William Moaks, . . . . .	English, . . .	Miner, . . . . .	40	M.	1	4	No. 14 shaft, . . . . .	Luzerne, . .	Fatally burned by gas.
29	Nicholas Beonka, . . . . .	Italian, . . . .	Piateman, . . . .	37	M.	1	.....	Heidelberg No. 2 breaker, . . . . .	Luzerne, . .	Killed in the roller.
June 11	Joseph Jack, . . . . .	Slavonian, . .	Miner, . . . . .	25	S.	.....	.....	Prospect shaft, . . . . .	Luzerne, . .	Fatally injured by a premature blast.
16	Lewis Sebast, . . . . .	Italian, . . . .	Railroad car loader, . . . . .	38	M.	1	3	Consolidated breaker, . . . .	Luzerne, . .	Killed by falling off front end of railroad car.

July	24	George Langdon, .....	English, .....	Miner, .....	70	M.	1	Baltimore No. 3, .....	Luzerne, .....	Fatally injured by being run over by a loaded car.
	7	John Roth, .....	Swedish, .....	Miner, .....	59	M.	1	No. 9 shaft, .....	Luzerne, .....	Killed while firing a blast.
	10	William Llewellyn, .....	American, ..	Timberman, ..	25	S.	1	Mineral Spring slope, .....	Luzerne, .....	Fatally injured; squeezed between car and mule.
	13	Charles Terelock, .....	Austrian, .....	Miner, .....	26	M.	1	Chapman shaft, .....	Luzerne, .....	Killed by a blast.
	16	Malachi Cavanaugh, .....	Irish, .....	Fireman, .....	22	S.	1	Avoca, .....	Luzerne, .....	Fatally injured by fall of top coal in his breast.
	18	Daniel Davis, .....	Welsh, .....	Miner, .....	49	M.	1	No. 1 shaft, .....	Luzerne, .....	Fatally injured by fall of top coal in his breast.
	21	Joseph Novitskita, .....	Polish, .....	Runner, .....	21	S.	1	No. 14 shaft, .....	Luzerne, .....	Killed by a fall of rock on gangway road.
	27	Ferdinand Thell, .....	American, ..	Co. laborer, ..	18	S.	1	Ridgewood slope, .....	Luzerne, .....	Killed by falling in front of cars.
	27	John C. Mills, .....	American, ..	Co. laborer, ..	69	M.	1	Baltimore No. 5 breaker, .....	Luzerne, .....	Fatally injured by being struck by culm car.
Aug.	4	George Sclirik, .....	Hungarian, ..	Miner, .....	40	S.	1	No. 14 shaft, .....	Luzerne, .....	Fatally burned by gas. Died August 14.
	6	John Lisowski, .....	Lithuanian, ..	Miner, .....	28	M.	1	No. 11 shaft, .....	Luzerne, .....	Fatally injured by fall of rock at face of breast.
	7	Henry Peterman, .....	German, .....	Miner, .....	29	M.	1	Coal Brook slope, .....	Luzerne, .....	Killed by fall of rock at face of his breast.
	14	George Peters, .....	American, .....	Driver, .....	17	S.	1	Baltimore No. 2 shaft, .....	Luzerne, .....	Killed by being caught against side of shaft with empty car.
	20	Martin Walsh, .....	Irish, .....	Laborer, .....	24	S.	1	No. 4 shaft, .....	Luzerne, .....	Killed by fall of rock at face of breast.
	22	John Zeder, .....	German, .....	Miner, .....	35	M.	1	Henry shaft, .....	Luzerne, .....	Killed by a blast.
	24	Joseph Celo, .....	Italian, .....	Laborer, .....	22	S.	1	No. 7 shaft, .....	Luzerne, .....	Killed by fall of rock at face of breast.
Sept.	3	Michael Pechuck, .....	Polish, .....	Miner, .....	50	M.	1	Ridgewood slope, .....	Luzerne, .....	Killed by flying coal from a blast.
	6	Michael McDinty, .....	Irish, .....	Driver, .....	16	S.	1	No. 11 shaft, .....	Luzerne, .....	Killed by a blast.
Nov.	25	Polo Grazie, .....	Italian, .....	Miner, .....	35	M.	1	Clarence slope, .....	Luzerne, .....	Killed by a rock blast.
	25	Joseph Russ, .....	Italian, .....	Laborer, .....	19	S.	1	Clarence slope, .....	Luzerne, .....	Killed by a fall of rock at face of his gangway.
	30	John Shedlovsk, .....	Slavonian, ..	Miner, .....	45	M.	1	Heldberg shaft, .....	Luzerne, .....	Killed by a fall of rock at face of his gangway.
Dec.	30	Anonia Giaspne, .....	Italian, .....	Co. laborer, ..	41	M.	1	Prospect breaker, .....	Luzerne, .....	Killed by railroad car at breaker.
	2	Matthew Itpka, .....	Slavonian, ..	Runner, .....	20	S.	1	Hyte shaft, .....	Luzerne, .....	Fatally injured by falling in front of motor.
	3	Harry Korrilla, .....	Polish, .....	Miner, .....	29	M.	1	No. 6 shaft, .....	Luzerne, .....	Fatally injured by explosion of dynamite.
	3	Robert Walker, .....	American, .....	Driver, .....	16	S.	1	No. 14 shaft, .....	Luzerne, .....	Killed by an explosion of gas.
	4	Matthew Ganridge, .....	American, .....	Slate picker, ..	15	S.	1	Pine Ridge breaker, .....	Luzerne, .....	Smothered in culm pocket.

TABLE 5.—Fifth Anthracite District, 1903  
Non-Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 3	Bryan Burke, .....	Irish, .....	Driver, .....	19	S.	Henry shaft, .....	Luzerne, ..	Face and hands burned by gas, caused by door being left open.
7	John Fackan, .....	Italian, .....	Laborer, .....	30	M.	No. 10 shaft, .....	Luzerne, ..	Finger cut off; caught between coal on car and roof.
10	Toney Slaviski, .....	Polish, .....	Laborer, .....	19	S.	Baltimore tunnel, .....	Luzerne, ..	Back and legs bruised by coal falling from car.
16	John Miller, .....	American, ..	Driver, .....	19	S.	Avoca shaft, .....	Luzerne, ..	Head cut and bruised; kicked by his mule.
21	John Bontempe, .....	Italian, .....	Laborer, .....	22	S.	Ridgewood slope, .....	Luzerne, ..	Arm broken; struck by coal flying from a blast.
23	John Brennan, .....	Irish, .....	Brattice man, ..	43	M.	Fernwood shaft, .....	Luzerne, ..	Hip broken and dislocated; struck by empty mine car.
26	James Flynn, .....	American, ..	Rock miner, .....	29	M.	Pine Ridge shaft, .....	Luzerne, ..	Finger cut off while spragging a loaded car.
26	George Marko, .....	Russian, .....	Laborer, .....	21	S.	Prospect shaft, .....	Luzerne, ..	These five men were more or less burned about the face and hands by an explosion of gas at face of the gangway;
26	Michael Measer, .....	Russian, .....	Laborer, .....	50	S.	Prospect shaft, .....	Luzerne, ..	a door was left open, which cut the air current off. The miners and laborers at the face of the gangway at the time and Kopylo went into gangway and ignited the gas. He died from his burns.
26	Albert Jeck, .....	Russian, .....	Laborer, .....	23	M.	Prospect shaft, .....	Luzerne, ..	Body painfully squeezed between door frame and car.
26	Michael Deleman, .....	Russian, .....	Miner, .....	41	M.	Prospect shaft, .....	Luzerne, ..	Hips bruised; fell off bumper of car on track and was struck by car.
26	Joseph Udickey, .....	Russian, .....	Miner, .....	33	M.	Prospect shaft, .....	Luzerne, ..	(These three men were burned on face and hands by an explosion of gas, caused by a fall of top, which brought down from the roof a small quantity of gas.
28	Stanley Curcumskte, ...	Polish, .....	Driver, .....	17	S.	Delaware shaft, .....	Luzerne, ..	While moving a steam shovel at culm bank and getting it on a truck it fell over on them, injuring them.
28	Anthony Wyooskey, ...	Polish, .....	Driver, .....	16	S.	Pine Ridge shaft, .....	Luzerne, ..	
Feb. 5	Charles Fisher, .....	American, ..	Miner, .....	44	M.	No. 9 shaft, .....	Luzerne, ..	
5	George Omstead, .....	American, ..	Miner, .....	28	S.	No. 9 shaft, .....	Luzerne, ..	
5	Rosario Mustruzze, ...	Italian, .....	Laborer, .....	28	S.	No. 9 shaft, .....	Luzerne, ..	
9	James Harley, .....	Irish, .....	Road master, ...	41	M.	Prospect, outside, .....	Luzerne, ..	
9	William N. Jones, .....	American, ..	Engineer, .....	42	M.	Prospect, outside, .....	Luzerne, ..	



TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
	11 Frank Weltscolames, ..	Russian, ....	Laborer, .....	20	S.	Prospect shaft, .....	Luzerne, .	Face and hands burned by gas; door left open.
	12 John Vedomskite, .....	Slavonian, .	Miner, .....	40	M.	Prospect shaft, .....	Luzerne, .	Leg broken by coal from a blast he was firing.
	13 Paul Lagancha, .....	Italian, .....	Miner, .....	34	S.	Fernwood shaft, .....	Luzerne, .	Arm and face cut by flying coal from a blast he was firing.
	14 James McFarland, .....	American, ..	Carpenter, ..	51	M.	Ladlin, outside, .....	Luzerne, .	Collar bone broken while jumping from a car he was in.
	22 John Vabukas, .....	Lithuanian, ..	Miner, .....	26	S.	No. 5 shaft, .....	Luzerne, .	Face and hands burned by gas after firing a blast.
	23 Harry Krupka, .....	Polish, .....	Miner, .....	22	S.	No. 14 shaft, .....	Luzerne, .	Severely bruised by rock falling on him.
	26 Michael Mitchell, .....	American, ..	Fireman, .....	17	S.	No. 14, outside, .....	Luzerne, .	Foot squeezed between locomotive and car bumpers.
June	1 Joseph Koski, .....	Hungarian, ..	Rockman, .....	38	M.	Henry, New, shaft, ...	Luzerne, .	Skull fractured and body bruised by rock falling down shaft.
	1 William Sullivan, .....	Irish, .....	Rockman, .....	35	S.	Henry, New, shaft, ...	Luzerne, .	Head severely cut and bruised by the above rock.
	1 James McAfee, .....	Irish, .....	Brattice man, ..	41	M.	Laurel Run slope, .....	Luzerne, .	Hip and back bruised by rock falling on him.
	2 John Kennedy, .....	Irish, .....	Miner, .....	45	M.	Consolidated slope, ....	Luzerne, .	Arms and face cut and burned by premature blast.
	5 August Kean, .....	Lithuanian, ..	Miner, .....	29	M.	No. 6 shaft, .....	Luzerne, .	Face and hand slightly burned by gas in face of breast.
	5 Hugh Campbell, .....	Irish, .....	Runner, .....	25	S.	Prospect shaft, .....	Luzerne, .	Hip dislocated; fell in front of car he was running.
	5 Stanley Matusick, .....	Polish, .....	Driver, .....	18	S.	Midvale slope, .....	Luzerne, .	Leg broken while riding in car; had his leg over side of car.
	5 Henry Smith, .....	Polish, .....	Driver, .....	21	S.	Pine Ridge shaft, .....	Luzerne, .	Ribs broken; caught between car and his mine.
	11 Charles Chup, .....	Italian, .....	Miner, .....	30	M.	Fernwood shaft, .....	Luzerne, .	Right leg broken by fall of rock while helping the adjoining miner to bar it down.
	3 John Larines, .....	Slavonian, ..	Laborer, .....	42	M.	Baltimore No. 2 shaft, ..	Luzerne, .	Face and hands burned by gas in a cross cut not through.
	11 Thomas Brogan, .....	American, ..	Door boy, .....	16	S.	Laurel Run slope, .....	Luzerne, .	Cheek bone broken; kicked by a mule he was passing.



13	George Atwell, .....	English, .....	Driver, .....	19	S.	Heidelberg, outside, ..	Luzerne, ..	Collar bone broken; fell off his mule going from the barn to work.
13	Joseph Maste, .....	Italian, .....	Slate picker, ....	15	S.	No. 6 breaker, .....	Luzerne, ..	Arm broken at noon hour; fell from a tree he had climbed.
13	James Catzone, .....	Italian, .....	Miner, .....	26	S.	No. 14 tunnel, .....	Luzerne, ..	Leg broken by fall of rock while standing a prop.
21	Thomas Canavan, .....	American, .....	Runner, .....	19	S.	Laurel Run slope, .....	Luzerne, ..	Chin and nose out; kicked by a mule.
31	James Fretbermich, .....	Italian, .....	Laborer, .....	28	M.	Butler, outside, .....	Luzerne, ..	Both legs broken by truck jumping track he was riding on.
31	Charles Parkens, .....	English, .....	Timberman, .....	38	S.	Laurel Run slope, .....	Luzerne, ..	Thumb cut off; caught between car bumpers.
Aug. 3	John Elektrovskii, .....	Polish, .....	Laborer, .....	23	S.	Chapman shaft, .....	Luzerne, ..	Leg broken by car jumping the track.
4	Charles Didan, .....	Polish, .....	Miner, .....	47	M.	No. 6 shaft, .....	Luzerne, ..	This miner and his laborer were severely burned by gas at 3.30 P. M. at face of breast by an accumulation of gas in a cavity at the face.
4	Edward Gorksky, .....	Polish, .....	Laborer, .....	34	M.	No. 6 shaft, .....	Luzerne, ..	Back broken; fell off building while taking off shingles.
6	John P. Lutz, .....	American, .....	Carpenter, .....	57	M.	Prospect, outside, .....	Luzerne, ..	Severely bruised by fall of rock; his miner killed by coal from a blast he was firing.
7	John Bolinski, .....	Russian, .....	Laborer, .....	22	S.	Coal Brook slope, .....	Luzerne, ..	Face and hand burned by gas; went into blind cross cut.
12	Ignatz Paugris, .....	Russian, .....	Miner, .....	41	M.	Prospect shaft, .....	Luzerne, ..	Severely bruised on chest by fall of rock. Ribs broken; thrown from mule's back and dragged on ground.
11	E. Roy Swezey, .....	American, .....	Surveyor, .....	22	S.	No. 5 shaft, .....	Luzerne, ..	Ankle dislocated; fell while stepping out of way of falling rock.
18	Joseph Gambosky, .....	Polish, .....	Miner, .....	50	M.	No. 14 shaft, .....	Luzerne, ..	Leg cut off; fell under trip of cars locomotive was hauling.
22	Llewellyn Jones, .....	American, .....	Driver, .....	18	S.	Laurel Run breaker, ..	Luzerne, ..	Arms and neck burned by gas; was told to go into breast.
28	Mike P. Sant, .....	Polish, .....	Laborer, .....	33	S.	Fernwood shaft, .....	Luzerne, ..	Head cut; fell in front of car at foot of shaft.
Sept. 4	Anthony Ruckadoma, ..	Italian, .....	Laborer, .....	17	S.	No. 14, outside, .....	Luzerne, ..	Leg broken; riding on bumper of empty car and fell off.
9	William Lennon, .....	American, ..	Miner, .....	36	S.	No. 9 shaft, .....	Luzerne, ..	Squeezed about abdomen by rock sliding on him.
10	William Dingley, .....	Irish, .....	Shaft footman, ..	30	M.	No. 6 shaft, .....	Luzerne, ..	Ribs broken by flying coal from a blast he was firing.
16	James Clune, .....	Irish, .....	Driver, .....	16	S.	Wyoming shaft, .....	Luzerne, ..	Leg broken by jumping on trip of cars at head of breaker.
17	John Ansavege, .....	Polish, .....	Laborer, .....	31	S.	No. 14 shaft, .....	Luzerne, ..	Collar bone broken; struck by chain hoist in fire room.
18	John Howley, .....	Irish, .....	Miner, .....	40	M.	No. 1 shaft, .....	Luzerne, ..	Arm broken; caught between car and falling on him.
28	Lewis Lopic, .....	Italian, .....	Slate picker, ....	14	S.	Yatesville breaker, ....	Luzerne, ..	Skull fractured; struck by a piece of coal against a prop.
29	John Fellic, .....	Slavonian, ..	Fireman, .....	29	S.	Pine Ridge, outside, ..	Luzerne, ..	Fainfully bruised by falling off car against a prop.
Oct. 3	Joseph Morris, .....	Russian, .....	Laborer, .....	22	S.	No. 4 shaft, .....	Luzerne, ..	These two miners were severely injured by a premature blast; while tamping the hole, it exploded on them.
26	Andrew Burrilla, .....	Russian, .....	Laborer, .....	40	M.	Hillman slope, .....	Luzerne, ..	
Nov. 2	James Pisano, .....	Italian, .....	Driver, .....	17	S.	Ladlin shaft, .....	Luzerne, ..	
17	John Tennent, .....	American, ..	Miner, .....	35	S.	No. 7 shaft, .....	Luzerne, ..	
17	David Murphy, .....	American, ..	Miner, .....	22	S.	No. 7 shaft, .....	Luzerne, ..	

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
22	Charles Kresge, .....	American, ..	Asst. track layer,	32	M.	Lafin shaft, .....	Luzerne,	Squeezed while riding up slope on car;
25	Peter Castellina, .....	Italian, .....	Laborer, .....	33	M.	Clarence slope, .....	Luzerne,	caught between car and roof. Severely injured by premature blast in
30	Michael Russell, .....	Polish, .....	Door boy, .....	16	S.	Pine Ridge shaft, .....	Luzerne,	break the miner, graze, and other
1	Joseph Sudnic, .....	Polish, .....	Miner, .....	45	M.	Pine Ridge shaft, .....	Luzerne,	laborer. Rib was killed by this blast.
3	Andrew Eromovitch, ..	Slavonian, ..	Laborer, .....	26	S.	No. 14 shaft, .....	Luzerne,	he was riding on. Ribs broken by a piece of top coal falling
2	James Parker, .....	English, .....	Runner, .....	18	S.	No. 14 shaft, .....	Luzerne,	on him. Face and hands severely burned by gas;
7	Joseph Miller, .....	Lithuanian, ..	Laborer, .....	25	S.	No. 5 shaft, .....	Luzerne,	he ignited the gas. Slightly bruised by the concussion of the
7	John Metzgar, .....	American, ..	Driver, .....	17	S.	Baltimore tunnel, .....	Luzerne,	above explosion. Ankle broken by rock falling from the
								rib and sliding from the gob on him. Leg cut off; fell off trip of loaded cars coming out the tunnel and cars ran over his leg.

## Remarks on Accidents

There were 47 fatal and 104 non-fatal accidents in this district during the year.

By referring to Table C it can be seen that 37, or 78.77 per cent. of the fatal accidents occurred inside the mines, and 10, or 21.23 per cent., on the outside.

Investigation showed that the majority of these accidents could have been avoided if that care which is necessary for the protection of life had been used by the victims themselves. It would be superfluous for me to write about the accidents and their causes in this district, as so much has been written on this subject by the other inspectors who gave their views founded on actual observation and investigation.

The mining of coal is a very hazardous occupation from whatever standpoint it may be taken. It requires skill and practice to become a good miner, one who can guard himself and those who may be working with him, from the many dangers that arise while he is occupied in the mines. A few of these dangers I shall call particular attention to. First, falls of coal and rock, which are the cause of the largest per cent. of accidents in the mines. Two-thirds of such accidents are due to carelessness on the part of the victims.

It may be that a prop is necessary to be placed under a bad piece of rock which has become dangerous from a blast just fired, or a piece of rock is to be pulled down, as the case may be; or a blast is to be fired in the overhanging top coal, which has become unsafe from the constant blasting under it. The above are some of the causes of the accidents. Now for some of the reasons for not attending to the above. I find upon investigating them, in regard to standing props, they would be too close to the face and be blown out by the blasts. The top coal was not undermined sufficiently to get a good blast in it, and the risk is taken to load the car. These are some of the excuses given. Is there any wonder that accidents occur so frequently?

Again, the firing of blasts and handling of dynamite. In firing of blasts I find from investigation that very few of them occur if the miner has any distance to go to a place of safety, which is generally a cross-cut, as the match is not cut and lighted as he takes it from his box, which gives him ample time to get away. But how different when the place of safety is close at hand. The match in my opinion is cut and often so close to the powder that the miner is fortunate to get safely away before the blast goes off. And often the miner is seriously injured or killed before he gets turned around from lighting the match, by the explosion of the blast.

Dynamite, which has become so general in use in mining, is an-

other source of danger to the miner, principally in the way of handling and thawing it, which a number of the miners are in the habit of doing, namely, thawing it with the blaze of their lamp while they hold the stick of dynamite in their hands. There is seldom an escape from instant death when it explodes under such carelessness.

### By Falls of Coal, Slate and Roof

Samuel Lomendro, miner laborer, in No. 14 shaft, Pennsylvania Coal Company, was instantly killed February 7, at the face of breast by being struck on the head by a piece of rider coal while in the act of shoveling back coal from the face to his car.

Andrew Pojdin, miners' laborer, was instantly killed in the Baltimore No. 2 shaft, Delaware and Hudson Company, February 12. In my investigation of this accident I found the rock which fell on him was cut off by slips and could not be seen before the accident.

Anthony Snegil, miners' laborer, was instantly killed in the Henry shaft, Lehigh Valley Coal Co., February 23, by fall of rock at face of breast. His miner, Anthony Witheos, had tried to take this piece down by barring it and had failed to do so. The miner was told by the adjoining miner to put a prop under it, which he also failed to do, and in about one hour afterwards it fell and caught his laborer, with the above result.

John Flannagan, miner, was fatally injured February 26, by fall of rock in No. 1 shaft, Pennsylvania Coal Company. While mining out on top of the bottom bench of coal a large piece of rock became loosened from his mining and fell on him, injuring him so that he died after being taken to his home.

Edward Loftus, Miner, in Baltimore tunnel, Delaware and Hudson Company, was fatally injured March 11, and died same day. Loftus had fired a blast in the mining bench and after returning to the face of his breast and examining the same, a large piece of rock, which become loosened by the blast, fell on him.

Vetal Kranski, miners' laborer, in the Baltimore tunnel, Delaware and Hudson Company, was instantly killed March 21, by a fall of top coal. The miner, Charles Smith, had fired a blast in the top coal, which failed to bring all down. The miner cautioned his laborer not to go under the top coal as he would fire another blast in it and bring it down. While the miner went for his drill the laborer started to shovel coal from under it and was killed.

Anthony Mortitus, miners' laborer, was fatally injured May 1, in No. 14 shaft, Pennsylvania Coal Company, and died same evening at the Pittston hospital. He was laboring for his brother. They were told to take this piece of rock down by the adjoining miner,

John Mildren, but paid no attention to him, thinking it would stay up until they got the coal out from under it.

Daniel Davis, miner, was fatally injured July 18, in No. 1 shaft, Pennsylvania Coal Company, and died same evening, after being taken to his home. While mining out some loose coal under the top bench in his breast a large piece of the top coal fell on him.

Joseph Novitiskie, car runner, was instantly killed by a fall of roof rock July 21, 1903, in No. 14 shaft, Pennsylvania Coal Co. He was running a loaded car out of a breast and when close to the gangway road the car jumped the track, knocking out a prop which was three feet from the track he was running the car on. He then sent the driver into the gangway to bring out a car and he sat down at the prop which was knocked out to wait for the driver. The rock fell on him and came very near falling on the driver.

John Lisowski, miner, was fatally injured August 6 by a fall of rock at the face of his breast and died August 9. The accident occurred in No. 11 shaft, Pennsylvania Coal Company. The rock which fell on him was what is called a bell. A prop had been placed very close to this rock, showing that the miner had failed to have detected the nature of it, as the slips around it could not be seen until it fell.

Henry Peterman, miner, was instantly killed August 7 by a fall of rock at the face of his breast, in Coal Brook slope, Lehigh Valley Coal Company. As John Williams, the mine boss, was making his rounds through the working faces he came to the above miner's breast and found him and his laborer working under a very bad roof. He ordered them both out and told them not to load any more coal in the car until they took the rock down and secured the place. They came out, giving him to understand they would comply with his orders. After the boss had gone they went back to finish loading the car and told the runner, who was standing close by, that the boss must think they were fools to take the rock down, for as soon as the car was loaded they would quit the place. But before the car was loaded the rock fell on them, killing the miner and seriously injuring the laborer.

Martin Walsh, laborer, was instantly killed in No. 4 shaft, Pennsylvania Coal Company, August 20, by a fall of rock at face of his breast. Walsh's miner, Thomas Gerrity, had a hole drilled in the black rock to fire down. Walsh told him he should not do it, as he wanted to finish loading his car first, and while they were finishing the car the rock fell.

Joseph Colo, laborer, was instantly killed in No. 7 shaft, Pennsylvania Coal Company, August 24, by a large piece of rock falling from the roof in the shape of a saddle back. The rock running to a feather edge all around it. Could not be detected until it fell.

John Shedlock, miner, was instantly killed November 30, in the Heidelberg No. 2 shaft, Lehigh Valley Coal Company. Shedlock was driving the gangway and had fired a blast in the face and after returning to examine what it had done a large piece of rock which had been liberated by the blast fell from the roof on him.

#### By Mine Cars

Anthony Telershaski, driver, was fatally injured January 29, in No. 5 shaft, Pennsylvania Coal Company, while driving a trip of loaded cars along the gangway road and going to bump them up against others which were in front of him, his mule turned out on the contrary side to what the driver expected, and he was caught between the car and mule.

James Conyngham, driver, was killed March 23, in Pine Ridge shaft, Hudson Coal Company. This boy went up in a breast to run a loaded car out and told the miner to pull the blocks. The car did not run as freely as was expected so the boy went down the breast to sprag off and in doing so was following the car along the side when he was caught by a prop which stood close to the track.

Timothy Ford, miner was instantly killed May 8, by a runaway trip of cars on the inside slope No. 14 tunnel, Pennsylvania Coal Co. Ford had come out to the foot to go home and was standing on the branch with some other men when they heard the cars coming back. Ford made to cross the slope and was caught by the car as the manway was on the opposite side of slope. He was told not to go by the men.

George Langdon, miner, was fatally injured June 24, by a loaded car being run down his breast by the runner, in the Baltimore No. 3, Delaware and Hudson Company. Langdon had gone to the adjoining breast on some business and returning came through the cross-cut into his own breast and stepped on the track as the car was coming. It struck him, knocking him down, injuring him that he died next day.

Ferdinand Theil, company laborer, was killed July 27, in Ridgewood slope, Traders' Coal Company. Theil went to drive in a boy's place who did not come to work, and while coming out the gangway sitting on the bumper of the car he tried to unhitch the stretcher from the car and fell on the track and was run over by the car.

William Llewellyn, timberman, was fatally injured July 10, in the mineral Spring slope, Lehigh Valley Coal Company, while driving in his brother's place while he went for his pay, and taking an empty trip of cars in the gangway. He was standing on the bumper of the head car when the stretcher caught in a latch, causing the mule to stop suddenly. The car forced him against the rear end of the

mule causing a rupture of some of his intestines. He died next day.

Matthew Ripka, runner, was fatally injured December 2, in the Hoyte shaft, Pennsylvania Coal Company. While waiting for empty cars, he went out along the gangway road and met the motor coming with a trip of empty cars. He tried to get on the front end and fell, the motor squeezing him. He died next day.

#### By Gas

William Moaks, miner, was fatally burned by an explosion of gas in No. 14 shaft, Pennsylvania Coal Company, May 21, and died May 26. He was employed in cleaning up the rock and refuse and taking up the bottom coal in a place driven for a plane. After working for an hour or so he started to explore the old workings with his open light and came in contact with a small amount of gas on top of a fall, which he ignited with his lamp, burning himself so that he died in the hospital. What took him away from his place of work he refused to say.

George Selfrick, miner, was fatally burned by gas in No. 14 shaft, Pennsylvania Coal Company, August 4. He asked the fire boss the condition of his breast and was told there was gas in it, and not to go near it until the brattice men put up a length of brattice for him. He went into the gangway and stopped at the foot of the breast for a short time and then went up above the top cross-cut and ignited the gas.

Robert Walker, driver, was fatally injured by an explosion of gas in No. 14 shaft, Pennsylvania Coal Company, December 3, and died after being taken to his home. The fire boss, the boy's father, had made his examination and found about one foot of gas up in a breast the second from the gangway face, and placed rails across the place and wrote "Danger—Gas—Keep Out" on them. The mine not working that day and having empty cars the gangway was at work. The fire boss had gone for help to put up brattice to remove the gas, when the laborer Andrew Broniovitch crossed over the rails and went up in the breast igniting the gas with his open light. The concussion threw the driver off the car against the rib, killing him.

#### By Powder and Dynamite

Harry Korrilla, miner, killed December 2, in No. 6 shaft, Pennsylvania Coal Company. While at his box going to make up powder to fire a blast, using dynamite, he took his lamp to thaw it and holding the stick of dynamite over the blaze, it exploded, injuring him so badly that he died same evening.

## By Blasts, Etc.

Joseph Jack, miner, was fatally injured June 11, in the Prospect shaft, Lehigh Valley Coal Company, by a blast he was firing in his breast. He had ignited the match and retired to a place of safety, and after waiting the time he thought necessary he went back. When he got close to it the hole exploded. He died same day.

John Roth, miner, killed July 7, in No. 9 shaft, Pennsylvania Coal Company. He had prepared his hole for firing and cut his match too short, not giving himself time to get to a place of safety before it exploded.

Charles Terelock, miner, instantly killed July 13, in Chapman shaft, Hillside Coal and Iron Company. While driving a cross-cut through the pillar he prepared a blast in it and got to a place of safety, and after waiting a sufficient time, as he thought, for it to go off, he returned and as he got to the opening of cross-cut it exploded, killing him.

John Zeder, miner, killed August 22, in the Henry shaft, Lehigh Valley Coal Company, while firing a blast in his breast he cut his match so short that he only got a few feet from the mouth of the hole when it exploded on him.

Michael Pechuck, miner, killed September 3, in the Ridgewood slope, Traders' Coal Company. While firing a blast and before he got to a place of safety, he was struck by the flying coal. Where he was found went to prove that he must have cut his match too short.

Michael McGinty, driver, was instantly killed November 6 by a blast of six holes in the rock tunnel No. 11 shaft, Pennsylvania Coal Company. This driver came down the shaft about 9 P. M. to drive the cars of rock out of the tunnel after the rounds of shots had been fired. The chargeman and his helper were the only persons working in the tunnel, as the holes had been drilled on the morning shift. McGinty had gone in from the foot of shaft and passed the entrance to the tunnel as the chargeman and his helper were making the connections on the wires. They did not see him or know he had come down the shaft and would have to pass them at the firing station, which was on the gangway out from mouth of tunnel about 150 feet. They fired the six holes and in going back into the tunnel, which was over three hundred feet in, they found the boy dead, struck by the flying rock in the tunnel, about two hundred and fifty feet from the opening.

Polo Grazie, miner, and Joseph Russ, laborer, were killed November 25 in the Clarence slope, Clarence Coal Company, by a rock blast while in the act of tamping the same. They had drilled a hole in the top rock and charged it with four sticks of dynamite and had one round of tamping on the powder when it exploded, instantly



killing the miner, Russ living until night. In my investigation of this accident I failed to find any copper tamping bar or a stick, so I am of the opinion they used an iron tamping bar.

#### Falling Down Shafts, Slopes, Etc.

Joseph Yesmont, laborer, was instantly killed February 19, by falling down No. 8 shaft, Pennsylvania Coal Company. This laborer, with two other laborers, came out to the Marcy vein foot to go home. As it was late the engineer was out attending to the fan when they rang the bell to be hoisted, and not getting a cage when they rung for it, Yesmont told the other two he would go to the other shaft and get up. They advised him not to go, as they would get a cage soon, but he went. He must have opened the gates and in reaching for the bell wire fallen into the shaft, as his body was taken out of the sump at the Red Ash vein next morning. The gates were closed as the Marcy vein in this shaft which he fell from is not in use.

#### Miscellaneous Causes, Inside

Thomas Martin, shaft footman, in No. 6 shaft, Pennsylvania Coal Company, was fatally injured January 10 by a piece of ice falling down the shaft and striking him on the head while he was leaning over the shaft opening and calling down to the footman at the Red Ash vein. Martin got off the cage at the Marcy vein, while the other footman continued down to the Red Ash. Martin died the same evening.

Michael Ignatez, runner in Midvale slope, Lehigh Valley Coal Company, was instantly killed May 6 by a set of double timber knocked out of place on the passing branch, and the collar striking him on the head. While running a trip of empty cars which had a few T iron rails on them to the branch on a grade of 2 per cent., one of the rails was jarred over the side of car and caught the timber, knocking it out from under the collar, which fell on him as he was in the act of spragging the cars.

George Peters, driver, in Baltimore No. 2 shaft, Delaware and Hudson Company, was instantly killed August 14, by being caught between an empty mine car and side of shaft by the Engineer hoisting before he got the bell to do so. Peters was in the act of taking the empty car off when he was caught.

#### By Cars, Outside

Edward Sheridan, track layer, was fatally injured February 13, at the Henry colliery, Lehigh Valley Coal Company. While laying

a track on the outside to branch condemned coal from the mines on, the locomotive came with a trip of empty mine cars and was shoving them onto the branch at the head of shaft close to where Sheriden was at work. Seeing the trip coming he went to take his tools off the track and was struck by the cars. He died February 15.

John Semock, company laborer, was killed March 2, at the Henry washery, Lehigh Valley Coal Company. While Semock and two other men were unloading coal from a railroad car into wagons below the washery, Joseph Evans, the car runner, was running a large gondola down on the branch where the men were unloading the car. They saw the car coming and thinking the cars were going to bump very hard began climbing over the side. Semock went over the front end of car and was knocked off when the cars bumped. The car he was unloading ran over him. The men should have stayed in the car as there was no danger to them there.

Cartie Monahan, culm loader, was killed April 23, at the Ewen breaker, Pennsylvania Coal Company. The locomotive engineer, Wm. Smith, had three empty culm cars in the trip, which he pulled up above the chute, as was the custom, and Monaghan got on the front end of the cars to drop them under the chute to load them. In some manner he fell off the car, which passed over his body, instantly killing him.

Lewis Sebast, car loader, was killed June 16, above the Consolidated breaker, Hillside Coal and Iron Company. He and George Smith, the other car loader, went up on the empty branch above the breaker to drop two large gondolas down to load them under the breaker. Sebast took the first car and started it out, when it stopped about twenty feet from the others. Sebast called to Smith to come with his car and give him a bump and start the car out. Smith did so and started the car out. Sebast was on the front end of car attending the brake and was knocked off the car, which ran over him.

John C. Mills, company laborer, was fatally injured July 27, while crossing the culm car track at the Baltimore No. 5 breaker, Delaware and Hudson Company. Just at quitting time in the evening, Mills started from the breaker enginehouse to go home, and to take a short cut went to cross the culm car track, which passes close to engine house. The culm cars run by gravity from the plane to the culm pockets to be loaded, and Mills being dull in hearing, stepped on the track and was struck by the cars. He died after being conveyed to his home.

Anonia Ginsppe, company laborer, was killed by being run over by a gondola railroad car close to breaker, November 30, Prospect breaker, Lehigh Valley Coal Company. Ginsppe was in the act of cleaning out the culm from a trough and track at the lower end of

the breaker and was told to look out for the cars. Stephen Wasko while running a large steel car loaded from under the chutes, and on the rear end of car, failed to see Ginsppe, who was struck by the car and killed. Ginsppe had been employed at this job for ten weeks before the accident.

#### By Machinery

Nicholas Beonka, plateman, killed May 29, in the Heidelberg No. 2 breaker, Lehigh Valley Coal Company. Beonka went down from the plater where he was at work to push the coal off the bars over the merchant rolls which had stuck on them. It was not necessary for him to get close to the rolls, as they were situated three feet below the top of the fence, which was built around them. He had no occasion to get over the fence to start the coal on the bars, but he must have done so to be caught as he was. In my investigation of this accident I found the rolls as safely protected as could possibly be. What caused him to climb over the fence I cannot say or imagine.

#### By Suffocation

Matthew Garridge, slate picker, smothered in culm pocket, December 4, in the Pine Ridge breaker, Hudson Coal Company. How this boy came in the chute is a mystery, as no person saw him go down. About fifteen minutes before his body came through the gate as the loaders were drawing the culm into a car, the boy came down to the loader and told him that the chute was blocked and to draw the culm. There is no occasion for any person to get into the chute, and it is impossible to fall into it, as all the openings to the culm pocket is the chute from the platform, which is 5x10 inches, and a trap door which had not been opened, as it was found shut after the boy was found. How the boy got into the chute or pocket no person appeared to know.

#### By Boiler Explosions

Malichi Cavanaugh, fireman, was killed July 16, at the Avoca colliery, Avoca Coal Company, Limited, by the explosion of one of the eight boilers in the fire room. There were two flue and six cylinder boilers that generated steam for the colliery. Just as the colliery was about to start work the explosion occurred by one of the flue boilers exploding. I immediately went and investigated the cause and found that the explosion was caused by Cavanaugh, the fireman, turning the water into a dry boiler, as the feed valve to this boiler was found open and he was found close to the valve. The explosion was a terrific one as six feet of the front portion of the boiler was driven over six hundred feet away. The other boilers were more or less disturbed on their foundations.

### Miscellaneous Causes, Outside

William Neimeyer, Carpenter, employed by the Lehigh Valley Coal Company, in the erection of their new breaker at the Mineral Spring colliery, was instantly killed January 2 by a plank falling from the top of breaker and striking him on the head while he was at work on the ground. The loftsman were moving the gin or hoisting pole on top of breaker when one of the guy ropes caught under a plank which was lying from one bent to another, causing it to fall.

### Condition of the Collieries

The collieries of this district are comprised of 22 breakers with 39 separate openings. The distance apart of the extreme ones is about twelve miles. They are in fairly good condition, with the exception of two, which were not as they should be at the time of my last visit, but I suppose they are now in better condition, as they have notified me to that effect. Some of the above openings have miles of gangways and breast roads to be traveled. Two-thirds of these openings give off explosive gas, requiring a large volume of fresh air to keep the workings in a healthful condition. There is a constant watch kept on the ventilation current by the fire bosses or assistant mine foremen, whose duty it is to make a careful examination of the working faces in the morning before the workmen enter. The collieries are all well supplied with ventilating fans of the Guibal type, which furnish the necessary air. The roads are in fairly good condition, kept free from standing water and debris, with ample room on one or both sides of the track so that cars can be passed while in motion. The collieries are all supplied with a hospital inside the mines, with a full supply of whatever is necessary to relieve the injured, as the law requires. In my opinion the place for the hospital should be on the surface close to the mine opening, as the injured person wants to be taken out as soon as possible.

### Improvements by the Lehigh Valley Coal Company

The new breaker at Mineral Spring colliery of the Lehigh Valley Coal Company, of which I made mention in my last report, has been completed, and began operations March 16, 1903. A new shaft for hoisting coal and another shaft for second opening was sunk from the surface to Red Ash vein, a distance of 430 feet. The shafts have been connected in the above seam. A Scranton Compound Duplex pump, 32x36x12x36 inch, with a 12-inch column, was installed in the Old Baltimore slope of the above colliery, which will supply wash water to the breaker. A complete installation of 1,000 horse power Babcock and Wolcock boilers was made in a new brick building erected for them. A pair of new engines was

placed at the head of slope to hoist the coal to breaker. Likewise a pair of engines was erected at the head of Coal Brook slope to hoist the coal.

At the Prospect Shaft a brick addition to the boiler house was made enclosing a 250 horse power B. & W. boiler. A new brick engine house has been completed. In the Midvale slope on different levels. Three rock tunnels were driven from the Hillman to Brookley veins, which will be used for the transportation of coal.

In the Hillman slope a rock tunnel was driven from the Hillman to the Bowkley veins.

At the Henry colliery the hoisting shaft was extended from the Baltimore to Skidmore veins. A rock tunnel was driven through an overlap to the five-foot, 220 feet. The second opening tunnel is being driven at present.

The two new shafts begun in 1902, were sunk to Red Ash vein, a distance of 675 feet from the surface. A brick engine house 34x72 feet was erected for the hoisting engines of these shafts.

The Wyoming shaft, the old wood cribbing from the surface to the rock, was replaced by concrete, which makes a good job at this shaft.

At the Heidelberg No. 1 slope a new rock plane, 18 degree pitch, was driven from the lower split to the upper split of Red Ash vein, a distance of 212 feet. The second opening was driven on a 30 degree pitch. A rock slope is being sunk from the Marey to Clark vein, also a second opening shaft for same.

A new 12-foot diameter ventilating fan was erected. A new brick boiler house was built, enclosing a 450 horse power return tubular boiler. Dispensing with the old boiler plant.

#### Improvements by the Delaware and Hudson Company

At the Baltimore tunnel the General Electric Company has installed an electrical haulage which handles all the coal from the Red Ash vein to the mouth of tunnel, doing away with the use of a rope haulage plant and hoisting plant at No. 4 shaft. The Stanton vein slope has been extended 250 feet. A new breaker is in course of erection to prepare the coal which is now taken to No. 5 breaker for preparation.

#### Improvements by the Hudson Coal Company

A new breaker has been completed at Pine Ridge with a new steel head frame erected over the shaft. The foot of the shaft has been remodeled by brick arching and a chain hoist put in for handling the empty cars. To accomplish all of the above work at the foot of

shaft three rock tunnels were driven a total of 357 feet. Likewise a rock tunnel was driven from checker to Ross vein, a distance of 246 feet.

At the Laffin colliery the No. 4 slope was sunk 500 feet. The No. 3 Rock slope was driven from the Marcy to Red Ash vein, a distance of 321 feet. New hoisting engines have been placed in position to hoist the coal from the above slopes.

#### Improvements by the Clarence Coal Company

A new breaker was built with a capacity of 500 tons per day. It went into active operation May 1, 1903.

A new fan of the Guibal pattern, 12 feet in diameter, was erected on the return air shaft to furnish ventilation for the inside workings.

#### Mine Foremen's Examinations

The examination of applicants for certificates of qualification for mine foremen and assistant mine foremen was held in this district on the 9th and 10th of September, 1903, at Pittston, Pa. The board of examiners was H. McDonald, Mine Inspector; J. L. Cake, Supt., and John J. Morahan and David P. Williams, miners.

The following twenty-one applicants for mine foremen were recommended to the Chief of the Department of Mines for certificates:

#### Mine Foremen

John J. Hoban, Michael Gilroy, Michael Healey, Hamlet Corrigan, Peter Parry, Wm. J. Williams, Roland F. Jones and John S. Campbell, of Avoca, Pa., Frank Hanahoe and George Bradley, Michael Maden, Richard Harris and George Rowan, of Pittston, Pa., James Pollard, Henry Northoff and John P. Daley, of Luzerne, Pa., Morgan E. Griffiths, of Taylor, Pa., Thomas Ninnis, of Duryea, Pa., Maurice Finn, Parsons, Pa., Michael S. Martin, Port Griffith, Pa., and James H. Gibbons, Hudson, Pa.

Twenty applicants for assistant mine foremen's certificates were recommended.

#### Assistant Mine Foremen

Gwilym Evans, Caleb Jones, William Coleman, John Noonan, West Pittston, Patrick Walsh, Alfred M. Hefferan, John King, James Weston, Pittston, Charles Cattel, Edward F. Reilley, Avoca, Joseph Chynoweth, John J. Martin, Port Griffith, August Zitterman, Michael J. Brady, Luzerne, Daniel R. Edmunds, Parsons, David J. Thomas, Plains, Thomas Sheehan, Thomas Reidy, Wyoming, Thomas Hooper, Maltby, Thomas McNamara, Miners Mills.

# Sixth Anthracite District

LUZERNE AND SULLIVAN COUNTIES

---

Kingston, Pa., March 1, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my first annual report as Inspector of Mines for the Sixth Anthracite District for the year ending December 31, 1903.

The statistical information regarding production, employes, accidents, etc., is given in detail as required by law, together with a few remarks on the competency of miners, the condition of the mines, and causes of accidents.

Respectfully submitted,

P. M. BOYLE,  
Inspector.

## Sixth Anthracite District, 1903

## SUMMARY OF STATISTICS

Number of mines in district, .....	40
Number of mines in operation, .....	40
Number of tons of coal produced, .....	4,549,970
Number of tons shipped to market, .....	4,136,797
Number of tons sold at mines to local trade, .....	91,947
Number of tons consumed at mines in generating steam and heat, .....	321,226
Number of persons employed inside the mines, .....	7,359
Number of persons employed outside, .....	3,029
Number of fatal accidents inside the mines, .....	42
Number of tons produced for each fatal accident inside, .....	108,333
Number of persons employed per fatal accident inside, ..	175
Number of fatal accidents outside, .....	4
Number of persons employed per fatal accident outside, ..	757
Number of wives made widows by fatal accidents, .....	24
Number of children orphaned by fatal accidents, .....	36
Number of non-fatal accidents inside of mines, .....	69
Number of persons employed per non-fatal accident in- side, .....	107
Number of non-fatal accidents outside, .....	12
Number of persons employed per non-fatal accident outside, .....	252
Number of steam locomotives used inside, .....	1
Number of electric motors used inside, .....	10
Number of fans used for ventilation, .....	38
Number of gaseous mines in operation, .....	26
Number of non-gaseous mines in operation, .....	14
Number of new mines opened, .....	1
Number of old mines abandoned, .....	1

---



TABLE A.—Sixth Anthracite District, 1903

## PRODUCTION OF COAL

Names of Companies	Tons
Lehigh Valley Coal Company, .....	1,109,346
Pennsylvania Coal Company, .....	610,407
Temple Iron Company, .....	600,959
Kingston Coal Company, .....	451,705
Delaware, Lackawanna and Western Railroad Company,	280,124
Clear Spring Coal Company, .....	234,010
Stevens Coal Company, .....	184,653
Raub Coal Company, .....	151,617
People's Bank, Receiver (Black Diamond), .....	141,892
Delaware and Hudson Company, .....	105,651
Robertson and Law, .....	91,890
Wyoming Coal and Land Company, .....	88,667
Connell Anthracite Mining Company, .....	120,475
Northern Anthracite Coal Company, .....	74,790
W. G. Payne and Company, .....	69,397
W. B. Gunton, .....	66,737
Warnke Coal Company, .....	167,650
<b>Total,</b> .....	<b>4,549,970</b>

## Production by Counties

Luzerne, .....	4,287,968
Sullivan, .....	262,002
<b>Total,</b> .....	<b>4,549,970</b>

TABLE B.—Sixth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number of persons employed; number employed per accident

Names of Companies	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Kingston Coal Co.	2	1	3	3	1	4	150,508	536	315	911	238	190	315	315	
Delaware Lackawanna & Western R. R. Co.	1	1	2	10	.....	10	28,312	468	181	659	468	37	315	.....	
W. G. Payne and Co.	1	.....	1	3	.....	3	54,337	224	187	322	184	84	181	.....	
People's Bank, Receiver	.....	.....	.....	.....	2	2	17,997	31	137	137	137	.....	.....	.....	
Temple Iron Co.	11	.....	11	15	1	16	40,064	1,298	431	1,729	118	118	431	69	
Lehigh Valley Coal Co.	19	.....	19	19	3	22	58,887	1,510	609	2,119	79	79	609	251	
Wyoming Coal and Land Co.	1	1	2	2	1	3	88,667	44,333	164	77	241	164	89	77	
Stevens Coal Co.	.....	.....	.....	3	.....	3	64,551	278	128	406	296	93	.....	.....	
Clear Spring Coal Co.	2	.....	2	3	.....	3	117,005	78,003	611	158	769	204	.....	.....	
Delaware and Hudson Co.	.....	.....	.....	1	1	2	105,451	251	127	378	251	.....	.....	.....	
Robertson and Law	.....	.....	.....	1	.....	1	91,890	149	63	212	149	.....	.....	.....	
Pennsylvania Coal Co.	2	.....	2	1	1	2	305,274	610,407	928	278	1,204	463	928	278	
W. B. Coal Co.	1	.....	1	1	1	2	131,617	151,617	303	146	448	302	302	146	
Connell Anthracite Mining Co.	1	1	2	1	.....	1	66,737	66,737	119	45	164	119	119	45	
Northern Anthracite Coal Co.	1	.....	1	2	.....	2	120,415	60,237	238	92	330	238	119	.....	
Totals and averages for district	42	4	46	69	12	81	108,323	7,359	3,029	10,388	175	107	737	252	

TABLE C.—Sixth Anthracite District, 1903  
Classification of Fatal Accidents

	Inside of Mines										Outside of Mines						Grand total						
	By Falls of			By Falling Into				Total inside			Total outside												
	Coal	Slate	Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	Slopes	Manways, breast, etc.	Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes	Total inside	By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside	
January	1		1													1	1					1	1
February				1																			1
March	1		1	1				1	1														1
April	1	1																					1
May	3												1										1
June			1	1	1																		1
July			1																				1
August	1		1	1					1														1
September	1			1																			1
October			1				1																1
November		1		1																			1
December								1	1														1
Totals	7	2	13	6	1		1	4	4				1		3	42	2	2					4
																							46

TABLE D.—Sixth Anthracite District, 1903  
Classification of Non-Fatal Accidents

	Inside of Mines										Outside of Mines					Grand total								
	By Falls of		By Falling Into					Total inside			Total outside													
	Coal	State	Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	Slopes	Manways, breasts, etc.	Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes		Total inside	By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside	
January, .....	1		1	1	1		1	2								1	1					1	4	
February, .....			1																				1	1
March, .....			3	1			2																1	5
April, .....				1																			1	1
May, .....	1			1																			1	2
June, .....	1		2	1	2			1															2	6
July, .....			2	2																			2	4
August, .....			1	1			1																1	2
September, .....			1	1																			1	2
October, .....			1	1																			1	2
November, .....		1	1	6	4			1															1	6
December, .....		1	1	15	19		5	5															13	33
Totals, .....	8	1	11	15	19		5	5									6	2					4	81

TABLE E.—Sixth Anthracite District, 1903.  
Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines

	Inside											Outside							Grand total		
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks		All other employes	Total outside
January, .....				1	1	1	1				1					1			1	1	2
February, .....				2	1	1	1				1								1	1	2
March, .....				1	1	1	1				1								1	1	2
April, .....				1	1	1	1				1								1	1	2
May, .....				1	1	1	1		2		1								1	1	2
June, .....				1	1	1	1				1								1	1	2
July, .....				1	1	1	1				1								1	1	2
August, .....				1	1	1	1				1								1	1	2
September, .....				1	1	1	1				1								1	1	2
October, .....				1	1	1	1		3		1								1	1	2
November, .....				2	1	1	1		1		1								1	1	2
December, .....				1	1	1	1		1		1								1	1	2
Totals, .....				13	17	5	2		5		42								2	4	46

TABLE F.—Sixth Anthracite District, 1902  
Occupations of Persons Injured Inside and Outside the Mines

	Inside											Outside								Grand total	
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes		Total outside
January				6					2			1							1		4
February				1															1		2
March				1					1										1		2
April				1															1		2
May				1			1												2		4
June				1		2										1					4
July				4	3	1			1												10
August				3	3	1										1			1		8
September				2	3	1															6
October				4	1	1			1						1						10
November				5	2	4															13
December				5	2	4			1												13
Totals				34	15	10	1		6	3	69		1	1	1	2			7	12	81

TABLE G.—Sixth Anthracite District 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	English	Irish	Polish	Hungarian	Italian	Slavonian	Lithuanian	Austrian	Russian	Totals
January, .....	1			1							2
February, .....				1					1	1	3
March, .....			1	1		2	1				5
April, .....					1			1			2
May, .....	2	1					1				4
June, .....	1			3				1	2		7
July, .....	1		1	1		1	1				5
August, .....	1		1					1			3
September, .....	1			1			1				3
October, .....	2										2
November, .....	2							1			3
December, .....				1		1	2				4
Totals, .....	11	1	3	11	1	4	6	5	3	1	46

TABLE H.—Sixth Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Hungarian	Italian	Slavonian	Lithuanian	Austrian	Totals
January, .....	2	1	1									4
February, .....	1	1				4		2			1	9
March, .....	2							2	1			6
April, .....	2		1				1					5
May, .....	2					2						4
June, .....	2					2			2			7
July, .....	2					2			1	1		9
August, .....	2	1		1		2				1		8
September, .....	1		1			2				2		6
October, .....	1	1				2						4
November, .....	1		1			1		1	2			6
December, .....	3				1	2		2	2	3		13
Totals, .....	17	5	4	3	1	24	1	7	9	7	3	81

TABLE I.—Sixth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

Names of Operators and Mines	Kind of openings	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
Kingston Coal Co.																
Shaft No. 1, .....	Shaft, ..	Gaseous, ..	Fan, .....	12.4	3.7	3.7	140	1.5	Guibal, ..	Steam, ..	7	130,700	117,100	141,300	210	538
Shaft No. 2, .....	Shaft, ..	Gaseous, ..	Fan, .....	25	5	5	80	2.5	Guibal, ..	Steam, ..						
Shaft No. 3, .....	Shaft, ..	Gaseous, ..	2 Fans, ..	25	8	8	80	2.3	Guibal, ..	Steam, ..	7	81,700	66,100	91,000	217	395
Delaware, Lackawanna and Western R. R. Co.																
Pettebone mine, .....	Shaft, ..	Gaseous, ..	2 Fans, {	22	6.2	6	120	2.7	Dickson, ..	Steam, ..	10	225,775	170,185	270,745	453	372
				35	10.1	9.1	52	2.7	Dickson, ..	Steam, ..						
W. G. Payne and Co.																
East Boston mine, .....	Shaft, ..	Gaseous, ..	Fan, .....	25	8	7%	76	2.8	Guibal, ..	Steam, ..	5	121,280	74,380	128,380	152	489
People's Bank, Receiver.																
Black Diamond, .....	Shaft, ..	Gaseous, ..	Fan, .....	20	6.6	6	90	1.7	Guibal, ..	Steam, ..	5	109,000	78,600	145,000	196	401
Raub Coal Co.																
Louise colliery—Mt. Thomas, .....	Tunnel, ..	Non-gas, ..	Fan, .....	12	3.10	3	110	.8	Guibal, ..	Steam, ..	2	32,000	28,000	33,800	92	311
Klondike, .....	Tunnel, ..	Non-gas, ..	Natural, ..						Guibal, ..	Steam, ..	2	33,500	33,500	35,500	70	478
Bennett slope, .....	Slope, ..	Non-gas, ..	Natural, ..						Guibal, ..	Steam, ..	1	12,500	12,500	13,000	15	884
Waddell's, .....	Shaft, ..	Non-gas, ..	Natural, ..						Guibal, ..	Steam, ..	3	64,000	64,000	67,300	95	672
Temple Iron Co.																
Harry E, .....	Shaft, ..	Gaseous, ..	2 Fans, {	20	6½	5	80	.....	Guibal, ..	Steam, ..	6	124,650	126,330	126,330	364	347
				17	4½	5	80	1.8	Guibal, ..	Steam, ..						
Forty-Fort, .....	Shaft, ..	Gaseous, ..	Fan, .....	20	6½	5	80	1.9	Guibal, ..	Steam, ..	8	142,000	144,000	150,000	218	661
Mt. Lookout, .....	Shaft, ..	Gaseous, ..	2 Fans, {	20	6½	5	80	.....	Guibal, ..	Steam, ..	7	120,000	122,000	122,000	316	324
				17	5	4%	80	2.5	Guibal, ..	Steam, ..						





TABLE 1.—Sixth Anthracite District, 1903  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
Kingston Coal Co.	Luzerne, .....	R. S. Mercour, .....	Kingston, .....	Morgan Rosser, ...	Kingston, .....	D., L. and W.
Kingston No. 1 shaft, .....	Luzerne, .....	R. S. Mercour, .....	Kingston, .....	Morgan Rosser, ...	Kingston, .....	D., L. and W.
Kingston No. 4 shaft, .....	Luzerne, .....	R. S. Mercour, .....	Kingston, .....	Morgan Rosser, ...	Kingston, .....	D., L. and W.
Delaware, Leckavanna and Western F. R. Co.	Luzerne, .....	R. A. Phillips, .....	Scranton, .....	H. G. Davis, .....	Kingston, .....	D., L. and W.
Pettebone No. 1 shaft, .....	Luzerne, .....	R. A. Phillips, .....	Scranton, .....	H. G. Davis, .....	Kingston, .....	D., L. and W.
Pettebone No. 2 shaft, .....	Luzerne, .....	R. A. Phillips, .....	Scranton, .....	H. G. Davis, .....	Kingston, .....	D., L. and W.
W. G. Payne and Co.	Luzerne, .....	W. T. Payne, .....	Kingston, .....	W. O. Williams, ..	Dorrancecton, .....	D., L. and W.
East Boston shaft, .....	Luzerne, .....	W. T. Payne, .....	Kingston, .....	W. O. Williams, ..	Dorrancecton, .....	D., L. and W.
People's Bank, Receiver.	Luzerne, .....	James E. Davis, ..	Plymouth, .....	Patrick Kelly, ....	Dorrancecton, .....	D., L. and W.
Black Diamond shaft, .....	Luzerne, .....	James E. Davis, ..	Plymouth, .....	Patrick Kelly, ....	Dorrancecton, .....	D., L. and W.
Raub Coal Co.	Luzerne, .....	S. J. Tonkins, ....	Luzerne, .....	William Thomas, ..	Luzerne, .....	Lehigh Valley
Louise slope and tunnel, .....	Luzerne, .....	S. J. Tonkins, ....	Luzerne, .....	William Thomas, ..	Luzerne, .....	Lehigh Valley
Temple Iron Co.	Luzerne, .....	F. H. Hemelright, ..	Scranton, .....	George Steel, .....	West Pittston, ....	Lehigh Valley
Harry E shaft, .....	Luzerne, .....	F. H. Hemelright, ..	Scranton, .....	George Steel, .....	West Pittston, ....	Lehigh Valley
Exeter-Pittston shaft, .....	Luzerne, .....	F. H. Hemelright, ..	Scranton, .....	George Steel, .....	West Pittston, ....	Lehigh Valley
Mt. Lookout shaft, .....	Luzerne, .....	F. H. Hemelright, ..	Scranton, .....	George Steel, .....	West Pittston, ....	Lehigh Valley
Lehigh Valley Coal Co.	Luzerne, .....	S. D. Warriner, ....	Wilkes-Barre, ....	F. E. Zerbey, .....	Wilkes-Barre, ....	Lehigh Valley
Maithy shaft and tunnel, .....	Luzerne, .....	S. D. Warriner, ....	Wilkes-Barre, ....	F. E. Zerbey, .....	Wilkes-Barre, ....	Lehigh Valley
Exeter-Pittston shaft, .....	Luzerne, .....	S. D. Warriner, ....	Wilkes-Barre, ....	F. E. Zerbey, .....	Wilkes-Barre, ....	Lehigh Valley
Exeter-Red Ash shaft, .....	Luzerne, .....	S. D. Warriner, ....	Wilkes-Barre, ....	F. E. Zerbey, .....	Wilkes-Barre, ....	Lehigh Valley
Seneca-Coxey shaft, .....	Luzerne, .....	S. D. Warriner, ....	Wilkes-Barre, ....	Thomas Thomas, ...	Pittston, .....	Lehigh Valley
Seneca-Twin shaft, .....	Luzerne, .....	S. D. Warriner, ....	Wilkes-Barre, ....	Thomas Thomas, ...	Pittston, .....	Lehigh Valley
Seneca-Columbia shaft, .....	Luzerne, .....	S. D. Warriner, ....	Wilkes-Barre, ....	Thomas Thomas, ...	Pittston, .....	Lehigh Valley
Wyoming Coal and Land Co.	Luzerne, .....	F. H. Clemons, ...	Scranton, .....	S. B. Williams, ....	Wyoming, .....	Lehigh Valley
Griffith tunnel, .....	Luzerne, .....	F. H. Clemons, ...	Scranton, .....	S. B. Williams, ....	Wyoming, .....	Lehigh Valley
Stevens Coal Co.	Luzerne, .....	H. W. Kingsbury, ..	Scranton, .....	D. W. Evans, ....	Pittston, .....	Lehigh Valley
Stevens shaft and slope, .....	Luzerne, .....	H. W. Kingsbury, ..	Scranton, .....	D. W. Evans, ....	Pittston, .....	Lehigh Valley
Clear Spring Coal Co.	Luzerne, .....	J. L. Cake, .....	Pittston, .....	George O. Thomas, ..	Pittston, .....	D., L. and W.
Clear Spring shaft, .....	Luzerne, .....	J. L. Cake, .....	Pittston, .....	George O. Thomas, ..	Pittston, .....	D., L. and W.

Pennsylvania Coal Co. Barnum No. 1 shaft, .....	Luzerne, .....	W. A. May, .....	Scranton, .....	William W. Inglis, .....	Scranton, .....	Erie and Wyoming Valley
Barnum No. 2 shaft, .....	Luzerne, .....	W. A. May, .....	Scranton, .....	William W. Inglis, .....	Scranton, .....	Erie and Wyoming Valley
Barnum No. 3 shaft, .....	Luzerne, .....	W. A. May, .....	Scranton, .....	William W. Inglis, .....	Scranton, .....	Erie and Wyoming Valley
Central Law shaft, .....	Luzerne, .....	W. A. May, .....	Scranton, .....	William W. Inglis, .....	Scranton, .....	Erie and Wyoming Valley
Delaware and Hudson Co. Langcliff shaft and tunnel, .....	Luzerne, .....	C. C. Rose, .....	Scranton, .....	E. R. Pettebone, .....	Scranton, .....	Delaware and Hudson
Robertson and Law. Katydid slope, .....	Luzerne, .....	J. M. Robertson, ..	Moosic, .....	John Haste, .....	Avoca, .....	Erie and Wyoming Valley
Lykens Colliery drift, .....	Sullivan, ....	W. B. Gunton, ....	Bernice, .....	.....	.....	Lehigh Valley
Connell Anthracite Coal Mining Co. Bernice drift, .....	Sullivan, ....	W. L. Connell, ....	Scranton, .....	.....	.....	Lehigh Valley
Northern Anthracite Coal Co. Murray shaft, .....	Sullivan, ....	M. J. Murray, ....	Dunmore, .....	P. H. Mongan, ...	Lopez, .....	Lehigh Valley
Duryea Coal Co. Warnke washery, .....	Luzerne, ....	Frederick Warnke, ..	Scranton, .....	.....	.....	P., L. and W.

TABLE 2.—Sixth Anthracite District, 1903  
 Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured,  
 number of kegs of powder used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number and used by employees trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Kingston Coal Co.	Luzerne, .....	424,705	27,000	.....	451,705	244	911	3	4	15,242	2,850	97
Shatts Nos. 1 and 4, .....	Luzerne, .....	242,224	22,000	6,559	270,788	188	638	2	10	7,446	4,877	63
Delaware, Lackawanna and Western R. R. Co., Pettebone colliery, .....	Luzerne, .....	7,389	1,460	477	9,836	20	23	.....	.....	.....	.....	.....
Pettebone washery, .....	Luzerne, .....	249,628	23,460	7,086	280,124	.....	659	2	10	7,446	4,877	63
Totals, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
W. G. Payne and Co.	Luzerne, .....	61,708	4,562	3,127	69,397	105	222	1	4	2,048	2,225	80
East Boston, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
People's Bank, Receiver	.....	117,288	22,000	2,604	141,892	161	354	.....	5	2,546	8,000	84
Black Diamond, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Raub Coal Co.	.....	137,386	14,600	9,631	151,617	172	418	1	2	5,482	14,775	46
Louise, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Temple Iron Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harry E., .....	Luzerne, .....	264,046	26,946	3,892	294,884	230	718	3	11	9,960	2,463	86
Forty Fort, .....	Luzerne, .....	42,682	17,534	687	110,874	99	422	4	1	4,020	5,180	33
Mt. Lookout, .....	Luzerne, .....	118,275	40,021	6,835	195,131	187	588	4	4	11,460	33,825	60
Totals, .....	.....	594,974	84,561	11,484	690,959	172	1,729	11	16	25,740	42,658	199

\*Totals in this column are averages.

Lehigh Valley Coal Co.											
Exeter, .....	489,127	18,965	6,659	514,751	242	781	13	3	10,057	146,382	123
Matlyb, .....	394,814	3,979	337,585	28,732	237	734	4	7	10,759	84,518	108
Seneca, .....	233,273	17,507	6,170	257,010	194	655	3	12	15,168	11,300	83
Totals, .....	1,027,214	65,324	16,808	1,109,346	224	2,170	20	22	35,984	242,181	320
Wyoming Coal and Land Co.											
Griffith, .....	75,024	11,200	2,443	88,667	207	241	1	3	4,497	5,025	28
Stevens Coal Co.											
Stevens, .....	166,980	14,000	3,673	184,653	248	406	.....	3	7,861	28,225	66
Clear Spring Coal Co.											
Clear Spring, .....	210,690	10,000	13,320	234,010	235	769	2	3	9,351	8,100	90
Delaware and Hudson Co.											
Langcliffe, .....	96,411	7,844	1,396	105,651	199	378	.....	2	5,714	2,724	58
Robertson and Law											
Katy-did, .....	87,262	3,500	1,128	91,890	220	212	.....	1	2,509	10,984	26
Pennsylvania Coal Co.											
Central colliery, .....	238,628	7,922	2,839	249,419	181	577	.....	.....	7,126	844	64
Barnum colliery, .....	351,225	5,254	9	360,988	201	627	2	2	12,314	1,949	65
Totals, .....	590,353	17,206	2,848	610,407	191	1,204	2	2	19,440	2,798	120
W. B. Gunton											
Lykens drift, .....	61,443	935	1,359	66,737	141	164	2	1	1,478	.....	16
Connell Anthracite Mining Co.											
Bernice, .....	110,840	8,594	1,041	120,475	190	330	1	2	3,929	4,706	42
Northern Anthracite Coal Co.											
Murray mine shaft, .....	69,141	3,500	2,149	74,790	169	154	.....	1	2,500	700	14
Warnke Coal Co.											
Washery, .....	152,760	3,000	11,900	167,650	154	37	.....	.....	.....	.....	.....
Grand totals, .....	4,136,797	321,226	91,947	4,549,970	.....	10,388	46	81	151,488	380,883	1,629

TABLE 2—Recapitulation

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Not including washeries)	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Kingston Coal Co., .....	Luzerne, .....	484,795	97,000	.....	451,795	244	911	3	4	15,243	2,850	97
Delaware, Lackawanna and Western R. Co., .....	Luzerne, .....	324,629	27,460	7,637	290,129	198	650	2	40	7,446	4,877	63
W. G. Payne and Co., .....	Luzerne, .....	281,778	4,562	3,127	280,129	165	922	1	4	2,468	2,255	30
People's Bank, Receiver, .....	Luzerne, .....	137,388	22,000	9,604	141,892	169	354	.....	5	2,546	8,000	24
Bank of Iron Co., .....	Luzerne, .....	137,386	14,600	9,631	151,017	173	438	1	2	5,482	14,775	46
Traylor Iron Co., .....	Luzerne, .....	504,974	84,501	11,484	600,959	172	1,729	11	16	25,740	42,658	159
Lehigh Valley Coal Co., .....	Luzerne, .....	1,027,214	65,324	16,808	1,100,246	224	2,170	20	22	35,984	242,181	220
Wyoming Coal and Land Co., .....	Luzerne, .....	75,024	11,200	2,443	88,067	207	241	1	3	4,487	5,025	28
Stevens Coal Co., .....	Luzerne, .....	166,980	14,000	3,473	184,653	248	406	.....	3	7,861	28,225	56
Clear Spring Coal Co., .....	Luzerne, .....	210,690	10,000	13,320	234,010	235	769	2	3	9,251	8,100	90
Delaware and Hudson Co., .....	Luzerne, .....	86,411	7,844	1,396	116,651	130	378	.....	2	5,714	2,124	58
Robertson and Law, .....	Luzerne, .....	599,333	3,500	1,128	91,899	229	312	.....	1	2,599	10,984	26
Pennsylvania Coal Co., .....	Luzerne, .....	64,433	17,206	2,838	610,407	191	1,204	2	1	19,440	2,733	120
W. B. Guntton, .....	Sullivan, .....	110,840	355	1,359	66,127	141	64	2	2	.....	.....	.....
Connell Anthracite Mining Co., .....	Sullivan, .....	69,541	8,584	1,041	120,760	190	324	1	2	3,939	4,766	49
Northern Anthracite Coal Co., .....	Sullivan, .....	132,756	3,600	1,100	151	161	151	.....	1	2,500	4,760	14
Warnke Coal Co., .....	Luzerne, .....	.....	3,600	11,000	137,650	.....	87	.....	.....	.....	.....	.....
Totals, .....	.....	4,136,797	321,296	91,947	4,548,970	103	10,388	46	81	151,488	380,833	1,219

TABLE 2—Continued

Names of Operators and Collieries	County	Number of Boilers			Total horse power			Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Tubular	Horse power	Steam	Air	Electric	Horse power	Steam	Air							
Kingston Coal Co.	Luzerne, .....	60	1,800	3	1,200	3,000	.....	.....	.....	2	19	2,690	4	2,200	960	1	2
Shafts Nos. 1 and 4	Luzerne, .....																
Delaware, Lackawanna and Western R. R.	Luzerne, .....	18	540	4	500	1,040	.....	.....	.....	.....	19	1,660	2	2,700	1,900	2	.....
Pettebone colliery, .....	Luzerne, .....				250	250	.....	.....	.....	.....	4	155	.....	.....	.....	.....	.....
Pettebone washery, .....	Luzerne, .....	18	540	9	750	1,290	.....	.....	.....	.....	23	1,815	2	2,700	1,900	2	.....
Totals, .....	.....																
W. G. Payne and Co.	Luzerne, .....	.....	.....	7	1,262	1,262	.....	.....	.....	.....	13	1,183	2	4,000	2,800	.....	1
East Boston, .....	Luzerne, .....																
People's Bank, Receiver.	Luzerne, .....	.....	.....	19	2,518	2,518	1	.....	.....	.....	36	1,092	2	3,800	2,500	.....	1
Black Diamond, .....	Luzerne, .....																
Raub Coal Co.	Luzerne, .....	13	405	6	660	1,065	1	.....	.....	.....	16	900	1	500	300	.....	.....
Louise, .....	Luzerne, .....																
Temple Iron Co.	Luzerne, .....	.....	.....	8	2,200	2,200	1	.....	.....	.....	16	1,461	2	4,350	900	.....	2
Harry E., .....	Luzerne, .....				1,355	1,355	.....	.....	.....	.....	11	829	3	3,600	1,400	.....	.....
Forty Fort, .....	Luzerne, .....	9	270	7	1,715	2,045	1	.....	.....	.....	38	1,569	4	6,750	2,720	3	3
Mt. Lookout, .....	Luzerne, .....																
Totals, .....	.....	9	270	20	5,330	5,600	2	.....	.....	.....	65	3,850	9	11,700	4,820	3	5
Lehigh Valley Coal Co.	Luzerne, .....	.....	.....	7	1,070	1,070	2	.....	.....	.....	96	1,050	3	4,500	3,000	.....	.....
Essex, .....	Luzerne, .....																
Maltby, .....	Luzerne, .....	18	720	7	1,075	1,795	.....	.....	.....	.....	13	1,795	4	2,100	1,400	1	.....











TABLE 3—Recapitulation

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside							Grand total inside and outside		
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Book-keepers and clerks	All other employes
Wyoming Coal and Land Co., .....	Luzerne,	1	1	1	72	39	24	4	11	9	164	1	1	5	9	13	24	3	22	77	241
Stevens Coal Co., .....	Luzerne,	1	1	1	104	84	42	9	4	32	278	1	1	10	12	30	12	4	58	128	466
Clear Spring Coal Co., .....	Luzerne,	1	6	1	200	180	78	46	9	89	611	1	1	5	13	46	17	6	69	158	769
Delaware and Hudson Co., .....	Luzerne,	1	1	1	96	75	41	7	2	27	251	1	1	3	12	32	36	2	41	127	378
Robertson and Law, .....	Luzerne,	1	1	1	50	50	18	4	2	4	20	1	1	3	8	24	24	2	24	63	212
Pennsylvania Coal Co., .....	Luzerne,	4	3	1	350	346	124	39	4	47	17	526	3	12	32	42	60	4	126	278	1,204
Connell Anthracite Mining Co., .....	Sullivan,	1	2	1	150	15	30	4	5	31	258	1	4	7	6	13	4	4	60	92	330
Northern Anthracite Coal Co., .....	Sullivan,	1	1	1	38	38	10	2	1	6	98	1	1	2	6	22	6	1	15	56	184
W. B. Gunton, .....	Sullivan,	1	1	1	50	50	8	1	1	2	10	119	1	1	2	56	5	2	16	45	164
Kingston Coal Co., .....	Luzerne,	2	5	231	142	409	23	5	5	85	596	1	1	13	28	108	40	2	37	115	611
Del., Lack. and West. R. R. Co., .....	Luzerne,	1	1	3	126	102	51	20	2	15	313	3	1	1	13	62	7	4	31	88	992
W. G. Payne and Co., .....	Luzerne,	1	3	1	36	28	54	4	1	33	197	1	1	7	21	69	9	2	41	127	354
People's Bank, Receiver, .....	Luzerne,	1	3	1	141	48	52	13	4	20	302	1	1	8	9	48	11	33	62	146	448
Ramb Coal Co., .....	Luzerne,	3	2	9	571	378	141	37	19	123	16	1,238	3	25	50	132	27	7	177	431	1,729
Tyler Coal Co., .....	Luzerne,	6	2	17	532	419	210	29	19	107	49	1,540	1	4	51	63	116	35	10	280	660
Leligh Valley Coal Co., .....	Luzerne,	6	2	17	532	419	210	29	19	107	49	1,540	1	4	51	63	116	35	10	280	660
Warnke Coal Co., .....	Luzerne,	28	21	49	2,894	2,090	885	240	89	593	370	7,359	11	45	179	309	761	824	57	1,363	3,029
Totals, .....		28	21	49	2,894	2,090	885	240	89	593	370	7,359	11	45	179	309	761	824	57	1,363	3,029



TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Delaware, Lackawanna and Western R. R. Co.	Luzerne.....	22.8	17.9	10	18.5	17.8	17.3	18.4	17.5	17.1	11.4	13.2	16.1	.....
Pettebone colliery, .....	Luzerne.....	7.8	6.2	7	5	5.1	9.9	9.2	11	9.6	11.2	11.2	12.1	105
East Boston, .....	Luzerne.....	14.7	11.3	16	13.6	13.6	14.7	14.1	13.5	12.7	13.9	14.9	16.3	169
Black Diamond, .....	Luzerne.....	15.4	12	16.7	15.7	9.8	11.8	18.8	18.6	16.9	11	16.7	14.6	173
Louise colliery, .....	Luzerne.....	24.2	21.4	23.6	21.3	21.1	19.5	29.7	29.4	19.1	11.9	11.4	15.2	280
Harry E. colliery, .....	Luzerne.....	.....	.....	.....	.....	.....	.....	13.1	17.7	14.7	19	14.7	11.7	94
Forty Fort colliery, .....	Luzerne.....	17.9	15.3	13.9	15.9	12.2	14.3	17.7	17.5	17.1	11.4	17.8	16.1	181
Mount Lookout colliery, .....	Luzerne.....	21	18.3	18.7	18.6	16.6	15.6	20	18.5	17	11.1	12.9	14.3	172
Averages, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lehigh Valley Coal Co.	Luzerne.....	24.4	22.4	25.2	21.5	20.9	19.7	23	29.9	19.2	11.2	11.6	16.7	237
Malby, .....	Luzerne.....	26	22.4	24.1	20.7	21.3	22.4	23.1	29.6	19	12.1	13.7	16.3	242
Essex, .....	Luzerne.....	20.7	19.3	20.7	18	15.4	16.4	17.4	15.2	14.8	9.6	12.5	13.7	194
Seneca, .....	Luzerne.....	23.7	21.4	23.3	20.1	19.2	19.5	21.2	18.9	17.7	11	12.6	15.6	224
Averages, .....	.....	29.3	16.6	15.6	15.3	15.2	17.2	17.7	17	15.9	13.5	14.3	15.9	133

TABLE 3—Recapitulation

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Wyoming Coal and Land Co.,	.....	21.6	18.7	17.6	17	16.7	16.5	17.1	16.3	16.6	14.8	16.3	18.4	207
Stevens Coal Co.,	.....	23.9	20.7	24.3	20.9	21.3	22.3	21.1	19.1	21	16.9	17.5	18.9	18
Clear Spring Coal Co.,	.....	24.9	20.3	16.1	21	21.7	21.1	21.4	19.9	10.5	14.3	17.9	16.9	255
Delaware and Hudson Co.,	.....	19.6	18.3	19.4	13.2	17.2	15.6	16.7	15.4	14.3	14	16.6	18.5	194
Robertson and Law,	.....	24.5	20.7	19.8	18.5	21	20.3	19	20	18	11	14	13	220
Pennsylvania Coal Co.,	.....	17.4	13.4	15.9	17.8	18.1	21.5	20.3	19.6	14.6	8.5	11.5	22.1	171
Connell Anthracite Mining Co.,	.....	16.3	16.2	16	5.6	12.8	16.2	19.5	19.5	12.7	18.1	18.1	19.2	196
Southern Anthracite Coal Co.,	.....	21.2	14.8	12	8.5	8.8	20.2	17	19.7	11.8	16	14	15.2	169
W. G. Clayton,	.....	24.2	12.7	3	9	6	10	8.6	3.2	21	15.3	11	16.1	141
Kineston Coal Co.,	.....	23.5	22	24	24	18	22	21.5	22	20	12	16	17	244
Delaware, Lackawanna and Western R. R. Co.,	.....	22.8	17.9	19	18.5	17.8	17.3	18.1	17.5	17.1	11.4	15.2	16.1	183
W. G. Payne and Co.,	.....	14.7	11.5	16	12.6	12.1	14.9	14.2	14.5	9.6	13.2	11.2	12.1	163
People's Bank, Receiver,	.....	15.4	13	16.7	13.6	12.8	14.7	14.7	13.6	13.9	11.7	11.7	16.3	173
Raub Coal Co.,	.....	21	18.3	18.7	18.6	16.6	15.6	20	18.5	16.9	11.1	12.9	14.3	172
Temple Iron Co.,	.....	23.7	21.4	23.2	20.1	19.2	19.5	21.2	18.9	17.7	11	12.6	15.6	224
Lehigh Valley Coal Co.,	.....													
Warnke Coal Co.,	.....													
Averages,	.....	20.3	16.5	15.6	15.5	15.2	17.2	17.7	17	15.9	13.5	14.3	17.9	193

TABLE 4.—Sixth Anthracite District, 1903  
Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 19	Peter Stoddard, .....	Polish, .....	Miner, .....	40	M.	1	7	Exeter, .....	Luzerne,	Killed by a fall of top rock, inside.
27	Frank H. Reese, .....	American, .....	Slate picker, .....	16	S.	.....	.....	Pettebone, .....	Luzerne,	Fatally injured by being caught in breaker elevators, outside.
Feb. 4	George Wasadals, .....	Polish, .....	Laborer, .....	23	S.	.....	.....	Clear Spring, .....	Luzerne,	Killed by a fall of fire clay in gangway, inside.
9	George Ruderick, .....	Russian, .....	Laborer, .....	28	S.	.....	.....	Kingston No. 4, .....	Luzerne,	Killed by falling from a gondola under the breaker.
19	John Kishock, .....	Austrian, .....	Patcher, .....	15	S.	.....	.....	Maltby, .....	Luzerne,	Fatally injured by being run over by cars, inside.
March 6	William J. Nolan, .....	Irish, .....	Miner, .....	43	M.	1	4	Mt. Lookout, .....	Luzerne,	Instantly killed by a premature blast in gangway, inside.
21	Alex. Rimeshock, .....	Polish, .....	Laborer, .....	40	M.	1	.....	Mt. Lookout, .....	Luzerne,	Instantly killed by falling down the shaft.
23	Francesco Corsico, .....	Italian, .....	Laborer, .....	16	S.	.....	.....	Exeter, .....	Luzerne,	Instantly injured by a fall of top coal, inside.
25	Joseph Perrello, .....	Italian, .....	Miner, .....	35	S.	.....	.....	Maltby, .....	Luzerne,	Fatally injured by a fall of rock, inside.
30	Stephen Dugal, .....	Slavonian, .....	Laborer, .....	40	M.	1	.....	Forty Fort, .....	Luzerne,	Killed by a trip of cars, inside.
April 14	Adam Tonella, .....	Lithuanian, .....	Miner, .....	40	M.	1	.....	Kingston No. 4, .....	Luzerne,	Fatally injured by a fall of top coal, inside.
20	John Hornick, .....	Hungarian, .....	Laborer, .....	38	M.	1	2	Griffith, .....	Luzerne,	Fatally injured by a fall of honey coal, inside.
5	Charles Elton, .....	English, .....	Miner, .....	60	M.	1	.....	Louise, .....	Luzerne,	Killed instantly by a fall of top coal, inside.
13	James Gaughn, .....	American, ..	Driver, .....	15	S.	.....	.....	Barnum No. 2, .....	Luzerne,	Fatally injured by being dragged by a mule, inside.
19	Mick Lavick, .....	Slavonian, ..	Laborer, .....	38	S.	.....	.....	Harry E., .....	Luzerne,	Fatally injured by a fall of coal, inside.
29	Charles Cokeman, .....	American, ..	Laborer, .....	27	M.	1	1	Exeter, .....	Luzerne,	Fatally injured by a fall of coal, inside.
June 3	Stanley Wicks, .....	Polish, .....	Miner, .....	27	S.	.....	.....	Seneca, Columbia, ..	Luzerne,	Instantly killed by a premature blast, inside.
5	George Gigorefsky, .....	Lithuanian, ..	Driver, .....	18	S.	.....	.....	Exeter, .....	Luzerne,	Fatally injured by being bumped between cars, inside.
11	John Powell, .....	Austrian, .....	Miner, .....	42	M.	1	.....	Exeter, .....	Luzerne,	Instantly killed by a fall of rock, inside.
20	Jacob Pounmganis, .....	Polish, .....	Miner, .....	34	M.	1	.....	Kingston No. 1, .....	Luzerne,	Killed by a premature blast, inside.



26	Andrew Stash, .....	Austrian, .....	Foot tender, 40	M. 1	3	Maltby, .....	Luzerne, .....	Leg broken by cars, inside. Died July 30, at hospital after operation.
28	Charles Nafus, .....	American, ..	Foot tender, 35	M. 1	.....	Forty Fort, .....	Luzerne, ..	Fatally injured by being caught by haulage rope, inside.
29	Samuel Boreskey, .....	Polish, .....	Laborer, ... 31	S. ....	.....	Clear Spring, .....	Luzerne, ..	Fatally injured by an explosion of gas, inside.
July	11 John Daley, .....	American, ..	Runner, .... 24	S. ....	.....	Barnum No. 2, .....	Luzerne, ..	Fatally injured by a fall of rock, inside.
15	John Payton, .....	Slavonian, ..	Laborer, ... 42	S. ....	.....	Harry E, .....	Luzerne, ..	Instantly killed by falling down the shaft.
22	Stanley Viloskey, .....	Lithuanian, ..	Laborer, ... 26	S. ....	.....	Exeter, .....	Luzerne, ..	Back injured by fall of rock inside. Died August 23, 1903.
27	Anthony Pendergast, ..	Irish, .....	Miner, .... 71	M. 1	.....	Lykens, .....	Sullivan, ..	Killed by a fall of top coal, inside.
28	Anthony Mustia, .....	Italian, .....	Miner, .... 48	M. 1	6	Exeter, .....	Luzerne, ..	Killed by a fall of top coal, inside.
29	Sidnor Smiles, .....	Polish, .....	Laborer, ... 24	S. ....	.....	Harry F, .....	Luzerne, ..	Fatally injured by a fall of rock, inside.
Aug.	10 Patrick Foley, .....	Irish, .....	Miner, .... 60	M. 1	.....	Bernice, .....	Sullivan, ..	Fatally injured by a fall of top coal, inside.
13	Merl Hembury, .....	American, ..	Slate picker, 14	S. ....	.....	Lykens, .....	Sullivan, ..	Fatally injured by being dragged into conveyors in breaker.
Sept.	9 Anthony Gloucksis, ....	Polish, .....	Laborer, ... 22	M. 1	.....	Seneca, Twin, .....	Luzerne, ..	Instantly killed by an explosion of foralite powder, inside.
12	Peter Szezyk, .....	Polish, .....	Laborer, ... 21	S. ....	.....	East Baston, .....	Luzerne, ..	Killed by a fall of rock, inside.
22	Peter Roman, .....	American, ..	Door tender, 16	S. ....	.....	Exeter, .....	Luzerne, ..	Instantly killed by falling off the carriage down the shaft.
Oct.	3 George Taylor, .....	American, ..	Timberman, 37	M. 1	6	Forty Fort, .....	Luzerne, ..	Fatally injured by a fall of top rock, inside.
6	Stanley Genosky, .....	Lithuanian, ..	Timberman, 38	M. 1	2	Exeter, .....	Luzerne, ..	Fatally injured by a fall of top rock, inside.
12	Benjamin Ostlander, ...	American, ..	Timberman, 37	S. ....	.....	Exeter, .....	Luzerne, ..	Fatally injured by a fall of top rock, inside.
16	John Massebra, .....	Slavonian, ..	Laborer, ... 34	S. ....	.....	Exeter, .....	Luzerne, ..	Fatally injured by a fall of top rock, inside.
19	Lally Zisumas, .....	Polish, .....	Laborer, ... 19	S. ....	.....	Pettebone, .....	Luzerne, ..	Fatally injured by a fall of boney coal, inside.
Nov.	16 John Covill, .....	American, ..	Driver, .... 19	S. ....	.....	Forty Fort, .....	Luzerne, ..	Fatally injured by cars, inside.
18	Joseph Smith, .....	Lithuanian, ..	Laborer, ... 23	M. 1	.....	Seneca, Coxy, .....	Luzerne, ..	Killed by fall of top rock, inside.
27	Harry Williams, .....	American, ..	Brakeman, ... 21	M. 1	.....	M. Lookout, .....	Luzerne, ..	Fatally injured by a shock from electric wire, inside.
Dec.	12 Louis Bouchard, .....	Polish, .....	Miner, .... 35	M. 1	2	Mt Lookout, .....	Luzerne, ..	Instantly killed by falling down the shaft.
18	Andrew Dolup, .....	Slavonian, ..	Miner, .... 48	M. 1	1	Maltby, .....	Luzerne, ..	Killed by a premature blast, inside.
22	Mike Mustal, .....	Slavonian, ..	Leader, .... 24	M. 1	.....	Exeter, .....	Luzerne, ..	Fatally injured by cars, outside.
24	Frank Charli, .....	Italian, .....	Laborer, ... 39	M. 1	1	Exeter, .....	Luzerne, ..	Fatally injured by a prop falling on him, inside.

TABLE 5.—Sixth Anthracite District, 1903  
Non-Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 7	George D. Carey, .....	American, ..	Outside foreman, ..	57	M.	Black Diamond, .....	Luzerne, .	Ribs broken by falling into a rock chute in the breaker.
16	Edmund Roberts, .....	Welsh, .....	Timberman, .....	50	M.	Kingston No. 4, .....	Luzerne, .	Burned on the face and hands by an explosion of gas.
16	William Allen, .....	English, .....	Brattice man, ...	35	M.	Kingston No. 4, .....	Luzerne, .	Burned on the face and hands by an explosion of gas.
30	Thomas Gerrity, .....	American, ..	Headman, .....	31	M.	Seneca, Coxe shaft, .	Luzerne, .	Arm broken by being caught between car and timber at top of shaft.
Feb. 3	Rafelo Pizenskie, .....	Italian, .....	Miner, .....	45	M.	Stevens, .....	Luzerne, .	Ribs broken by fall of top rock in his breast.
6	Marin Bradatzkie, .....	Austrian, .....	Miner, .....	39	M.	Maltby, .....	Luzerne, .	Injured by flying pieces from a premature blast in his breast.
7	Thomas Lacoskey, .....	Polish, .....	Miner, .....	36	S.	Bernice, .....	Sullivan, .	Burned about the face and hands by an explosion of cartridges of powder.
12	William Palmer, .....	English, .....	Timberman, .....	32	M.	Pettebone, .....	Luzerne, .	Cut on the leg by an axe slipping while dressing timbers.
14	Anthony Face, .....	Polish, .....	Miner, .....	28	S.	Seneca, Coxe shaft, .	Luzerne, .	Burned about the face and hands by an explosion of gas.
16	William Bahunk, .....	Polish, .....	Miner, .....	30	S.	Bernice, .....	Sullivan, .	Ribs broken by a fall of top coal in his breast.
21	Mick Koskie, .....	Polish, .....	Miner, .....	30	M.	Mt. Lookout, .....	Luzerne, .	Arm broken by a piece of coal flying from a premature blast.
21	James Dodow, .....	Italian, .....	Company laborer, .	48	M.	Langcliff, .....	Luzerne, .	Ribs broken by being bumped by a car on the culm dump.
24	Anthony Condon, .....	American, ..	Footman, .....	33	S.	Harry E, .....	Luzerne, .	Leg broken by a prop rolling on him at the foot of shaft.
March 10	John Moore, .....	American, ..	Mason, inside, ..	29	M.	Seneca, Coxe shaft, .	Luzerne, .	Leg broken by a fall of roof rock in the breast.
13	John Nowalk, .....	Austrian, .....	Miner, .....	44	M.	Black Diamond, .....	Luzerne, .	Leg broken by a fall of rock in his breast.
16	Angelo Boro, .....	Italian, .....	Miner, .....	33	M.	Exeter, .....	Luzerne, .	Both legs broken by a fall of rock in his breast.
27	Frank Peterick, .....	Italian, .....	Laborer, .....	23	S.	Harry E, .....	Luzerne, .	Leg broken by a runaway car in the mine.

27	John Walters, .....	American, ..	Dock boss, .....	48	M.	Barnum, .....	Luzerne, ..	Both legs broken by falling from the brath plane.
28	Andrew Sipus, .....	Slavonian, ..	Laborer, .....	36	M.	East Boston, .....	Luzerne, ..	His breast by falling on a pile of gob in the mine.
April	Isaac Thomas, .....	Welsh, .....	Headman, .....	17	S.	Clear Spring, .....	Luzerne, ..	Squeezed at top of slope between cars and the rib of coal.
7	John Timco, .....	Hungarian, ..	Laborer, .....	25	M.	Harry E., .....	Luzerne, ..	Leg broken by being run over and squeezed by car.
23	Bronew Sterninski, .....	Polish, .....	Miner, .....	24	S.	Mt. Lookout, .....	Luzerne, ..	Burned about face by an explosion of black powder while making a cartridge.
25	Robert Decker, .....	American, ..	Laborer, .....	19	S.	Katy-did, .....	Luzerne, ..	Burned about face by an explosion of black powder while making a cartridge.
28	George Keller, .....	American, ..	Carpenter, .....	50	M.	Black Diamond, .....	Luzerne, ..	Shoulder bone fractured by a gin pole falling on him, outside.
5	Mick Grocoskie, .....	Polish, .....	Miner, .....	48	M.	Mt. Lookout, .....	Luzerne, ..	Leg broken at the ankle by a fall of rock falling on him.
15	Stephen Jeruk, .....	Slavonian, ..	Slate picker, .....	14	S.	Murray, .....	Sullivan, ..	Foot bruised by being caught in shaker screen in the breaker.
21	George Yonko, .....	Slavonian, ..	Door tender, .....	16	S.	Clear Spring, .....	Luzerne, ..	Leg broken by falling from a car in the mine.
26	John Luminski, .....	Polish, .....	Laborer, .....	39	M.	Seneca, Twin, .....	Luzerne, ..	Back bruised by a fall of coal while loading a car in his breast.
June	Daniel Stevens, .....	Austrian, .....	Laborer, .....	14	S.	Kingston, .....	Luzerne, ..	Arm broken by being bumped between car and the side of breaker.
5	Alex. Budzeltek, .....	Polish, .....	Laborer, .....	24	S.	Columbia, Seneca, .....	Luzerne, ..	Bruised about the body, and cut on the head by a premature blast.
12	Patrick Judge, .....	Irish, .....	Runner, .....	24	S.	Seneca, Twin, .....	Luzerne, ..	Burned by an explosion of gas, the door was left open, which caused the gas to accumulate.
12	Walter Riker, .....	Irish, .....	Driver, .....	17	S.	Seneca, Twin, .....	Luzerne, ..	Burned by an explosion of gas, the door was left open, which caused the gas to accumulate.
20	Martin Novetski, .....	Polish, .....	Miner, .....	38	S.	Exeter, .....	Luzerne, ..	Leg broken by cars, he was leaning against the car, when another car bumped him.
22	Stephen Chalowiek, .....	Slavonian, ..	Miner, .....	42	M.	Black Diamond, .....	Luzerne, ..	Bruised about the body and hips by a fall of rider coal.
25	Arthur Balcomb, .....	English, .....	Miner, .....	28	M.	Pettebone, .....	Luzerne, ..	Bruised about the body and hips by a fall of rider coal in breast.
7	Edward Smith, .....	Polish, .....	Laborer, .....	25	S.	Seneca, .....	Luzerne, ..	Arm broken by a prop falling on him in his breast.
7	Joseph Younaticz, .....	Slavonian, ..	Miner, .....	27	M.	Malthy, .....	Luzerne, ..	Burned about face and hands by an ex- plosion of gas, the exploding of dynamite eye injured by being driven over a subway car which he was driving over a subway car.
10	Mike Novis, .....	Polish, .....	Miner, .....	34	M.	Harry E., .....	Luzerne, ..	These of his ribs fractured by a fall of rock in his breast.
11	William Jenkins, .....	American, ..	Laborer, .....	50	S.	Barnum No. 2, .....	Luzerne, ..	Burned by an explosion of gas in his breast; face and hands burned.
13	William Jackens, .....	Polish, .....	Miner, .....	33	S.	Harry E., .....	Luzerne, ..	Burned by an explosion of gas in his breast; face and hands burned.
13	John Gridle, .....	Polish, .....	Laborer, .....	31	S.	Harry E., .....	Luzerne, ..	Burned by an explosion of gas in his breast; face and hands burned.
14	Walter Jones, .....	American, ..	Runner, .....	18	S.	Pettebone, .....	Luzerne, ..	Bruised about the body by a car jumping the track.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
21	Adam Farasavage, . . . . .	Polish, . . . . .	Trackman's helper	23	S.	Clear Spring, . . . . .	Luzerne, . . . . .	Leg broken by being run over on the slope by cars.
Aug.	29 Matthias Granis, . . . . .	Lithuanian, . . . . .	Miner, . . . . .	29	S.	Seneca, Coxe, . . . . .	Luzerne, . . . . .	Leg broken by a fall of rock in his breast.
	1 Edward Kluge, . . . . .	American, . . . . .	Slate picker, . . . . .	14	S.	Maitly, . . . . .	Luzerne, . . . . .	Leg squeezed in conveyors in the breaker.
	3 Anthony Novocofski, . . . . .	Polish, . . . . .	Miner, . . . . .	29	M.	Seneca, Twin, . . . . .	Luzerne, . . . . .	Burned by black powder while in the act of making cartridge.
19	William Burns, . . . . .	English, . . . . .	Miner, . . . . .	35	M.	Louise, . . . . .	Luzerne, . . . . .	Contusion of the back, caused by a fall of top coal.
20	George Elsworth, . . . . .	American, . . . . .	Runner, . . . . .	20	S.	Griffith, . . . . .	Luzerne, . . . . .	Squeezed between prop and car while uncoupling car.
20	Frank Demareo, . . . . .	Slavonian, . . . . .	Miner, . . . . .	26	M.	Forty Fort, . . . . .	Luzerne, . . . . .	Burned about the hands and face by an explosion of gas.
22	John Conahan, . . . . .	Irish, . . . . .	Miner, . . . . .	48	M.	Pettebone, . . . . .	Luzerne, . . . . .	Leg broken by a fall of coal in his breast.
	25 John Demuski, . . . . .	Polish, . . . . .	Laborer, . . . . .	24	S.	Pettebone, . . . . .	Luzerne, . . . . .	Cut on hand and wrist sprained by a fall of coal.
28	Peter Yeavoriet, . . . . .	Polish, . . . . .	Miner, . . . . .	27	S.	Griffith, . . . . .	Luzerne, . . . . .	Leg dislocated by a rush of coal coming down his breast.
Sept.	3 William Bushes, . . . . .	Polish, . . . . .	Miner, . . . . .	40	S.	Harry B, . . . . .	Luzerne, . . . . .	Burned face and hands by an explosion of gas in his breast.
	3 Joseph Dudish, . . . . .	Polish, . . . . .	Laborer, . . . . .	26	S.	Harry B, . . . . .	Luzerne, . . . . .	Head of car crushed by an explosion of gas in his breast.
11	Charles Morgan, . . . . .	American, . . . . .	Driver boss, . . . . .	31	M.	Louise, . . . . .	Luzerne, . . . . .	Squeezed between cars bumping together on turn-out.
18	Joseph Yunoshom, . . . . .	Lithuanian, . . . . .	Laborer, . . . . .	25	S.	Pettebone, . . . . .	Luzerne, . . . . .	Burned on face and hands by an explosion of gas.
18	William Davis, . . . . .	Welsh, . . . . .	Miner, . . . . .	56	M.	Pettebone, . . . . .	Luzerne, . . . . .	Burned on face and hands by an explosion of gas.
Oct.	19 James Salokies, . . . . .	Lithuanian, . . . . .	Laborer, . . . . .	19	S.	Pettebone, . . . . .	Luzerne, . . . . .	Cut on the head by a fall of rock.
	12 Simon Yonski, . . . . .	Polish, . . . . .	Miner, . . . . .	55	M.	Kingston No. 4, . . . . .	Luzerne, . . . . .	Leg broken by a fall of coal while barring out loose coal.
19	George Chisnell, . . . . .	English, . . . . .	Miner, . . . . .	51	M.	Lykens, . . . . .	Sullivan, . . . . .	Leg broken by a prop falling on him in his breast.
24	Simon Leppert, . . . . .	Polish, . . . . .	Road cleaner, . . . . .	67	M.	Seneca, Twin, . . . . .	Luzerne, . . . . .	Foot struck by a motor running over it.
24	Edward Muday, . . . . .	American, . . . . .	Driver, . . . . .	18	S.	Harry B, . . . . .	Luzerne, . . . . .	Bruised about hips and legs by a car running over him.

Nov.	9	Frank Moore, .....	Slavonian, .	Miner, .....	25	M. Maltby, .....	Luzerne, .	Burned by an explosion of gas in his breast, he leaving check door opened.
	11	William J. English, ..	American, ..	Fireman, ..	40	M. Griffith, .....	Luzerne, .	Scalded by escaping steam from feed pump.
	13	Thomas Powell, .....	Welsh, .....	Miner, .....	50	M. Stevens, .....	Luzerne, .	Leg broken by a fall of rock in his breast, Marcy vein.
	16	John Bellas, .....	Polish, .....	Miner, .....	34	S. Harry E, .....	Luzerne, .	Burned by an explosion of gas in his breast, Marcy vein.
	25	Mlek Mattmihon, .....	Slavonian, .	Driver, .....	18	S. East Boston, .....	Luzerne, .	Fingers crushed by being bumped between cars in Ross vein.
	30	Amello Balorme, .....	Italian, .....	Miner, .....	40	M. Stevens, .....	Luzerne, .	Fractured leg by a piece of flying coal from a blast.
Dec.	1	Bernard Monahan, .....	American, ..	Runner, .....	25	S. Harry E, .....	Luzerne, .	Foot squeezed by being bumped between cars.
	1	Joseph Sabol, .....	German, .....	Miner, .....	35	M. Maltby, .....	Luzerne, .	Hands and face burned by gas in his breast.
	1	Charles Zegaro, .....	Slavonian, .	Laborer, .....	26	M. Maltby, .....	Luzerne, .	Hands and face burned by gas in his breast.
	2	William Gernoskie, .....	Lithuanian, .	Miner, .....	40	M. Petitebone, .....	Luzerne, .	Squeezed between car and rib of breast.
	2	George Stuckko, .....	Lithuanian, .	Miner, .....	33	S. Petitebone, .....	Luzerne, .	Burned about face and hands by an explosion of gas.
	7	George Shontle, .....	Polish, .....	Laborer, .....	35	M. Langelliffe, .....	Luzerne, .	Foot of his ribs broken by a fall of top rock.
	7	Mike Norvich, .....	Lithuanian, .	Miner, .....	30	S. Exeter, .....	Luzerne, .	Injured on the back by a fall of top rock in his breast.
	9	John Slepock, .....	Polish, .....	Laborer, .....	28	M. Maltby, .....	Luzerne, .	Burned on the head and back by an explosion of gas in his breast.
	10	Wassel Stefanko, .....	Slavonian, .	Driver, .....	16	S. East Boston, .....	Luzerne, .	Collar bone broken by being squeezed between car and rib.
	11	John Delk, .....	American, ..	Driver, .....	25	M. Black Diamond, .....	Luzerne, .	Hip fractured by a runaway car from a breast.
	12	Joseph Mermlechie, .....	Italian, .....	Miner, .....	34	S. Mt. Lookout, .....	Luzerne, .	One eye injured and two fingers shot off by a premature blast.
	16	James Jenkins, .....	American, ..	Driver, .....	16	S. East Boston, .....	Luzerne, .	Fingers crushed by being squeezed between car and rib.
	19	Joseph Cosmas, .....	Italian, .....	Footman, .....	40	S. Seneca, .....	Luzerne, .	Finger crushed by being caught between car and head block.

## Fatal Accidents by Falls of Coal, Slate and Roof

Of the 42 fatal accidents inside, 22 were caused by falls of roof, coal, slate, or rock, a percentage of 52.38. This is outside of all reason, and I might say that nearly all of the accidents were caused through neglect or ignorance, or both, on the part of the men themselves. We have a certain class who are working in the capacity of miners who are not fit to labor. I very frequently find men working a chamber who cannot tell me their names, yet they are miners because they hold certificates as such. Among the non-English speaking class, just as soon as they get over the first scare and become a little acquainted with the mines, they want certificates as miners, and before the ink is dried on their certificate they will go to the boss for a chamber. Now while the certificates entitle them to mine coal, they certainly do not make them competent miners. The foremen know this as well, and better than anybody else, and while they are not held responsible for the competency and qualification of the men who hold certificates, they should exercise better judgment than to employ them to mine coal. I have spoken to some foremen on this question and they said they could not get good, careful and experienced miners to work in some veins as the coal was too hard. I would suggest that the boards of examiners demand better proof as to the length of time that candidates served in the mines as laborers before issuing certificates to them, because unless there is a very decided improvement made in this line, we will always have accidents through carelessness or incompetency. Now that the examining boards have it in their power we hope to see better results, and be able, when making out the report of 1904, to point with pride to the fact that the qualifications of miners have been raised to a higher standard.

Peter Stoddard, age 40 years, Polish, miner, was killed at the Exeter colliery shaft No. 1, Checker vein, January 10, 1903. He was working in the checker vein driving through the pillars, for a new haulage road. He broke through into an old chamber, and was in the act of working out some loose coal in the bottom, when without any warning a piece of rock fell on him killing him instantly. He was considered a very careful man and the accident was not due to carelessness.

George Wasaelais, age 23 years, Polish, laborer, was instantly killed February 4, 1903, by a fall of fire clay at the Clear Spring colliery. The miner was driving a cross cut between the gangway and the air-way. Wasaelais was loading a car of coal, when a portion of the roof gave way falling on him, causing instant death. The miner who was drilling a hole in the face of the breast at the time, claims that the prop which sustained this loose piece

gave away, because one end of the piece was much heavier than the other, and that was the cause of displacing the prop.

Francisco Corsinco, age 18 years, Italian, laborer, was instantly killed March 23, at the Exeter colliery in the Pittston vein by a fall of rider coal. This man worked for Lombardo Urbosta as a laborer and while loading a car of coal, a piece of the rider coal fell on him killing him instantly. This rider coal is about eight inches thick and should be taken down before going under it so far, which was neglected by the miner.

Joseph Perrello, age 35 years, Italian, miner, was instantly killed at the Matthy colliery on March 25, 1903, by a piece of top rock. Perrello and his laborer were barring down a piece of loose rock when the piece fell on the car they were standing on. Perrello jumped back when another piece fell striking him on the head and crushing his skull.

Adam Tonelia, age 40 years, Lithuanian, miner, was fatally injured April 14, 1903, at Kingston No. 4, by a fall of coal in breast No. 266, on Williams west Ross slope. He told the laborer to stop awhile until he barred down a piece of loose top coal that was hanging. He stood on top of a piece of coal to raise himself higher so that he could better reach it with the drill. He put the point of the drill over to pull it down when his footing gave way, and he fell toward the face of the breast just as the piece was falling. It struck him on the head fracturing his skull, and he died that night at the Wilkes-Barre City Hospital.

John Hornick, age 38 years, Hungarian, laborer, was instantly killed on April 20, 1903, at the Griffith colliery, Wyoming Coal and Land Company, by a fall of rider coal in the six foot vein. He was barring out a piece of loose coal from under the rider, when it fell on him killing him instantly. He went under this piece against the orders of his miner who told him of the danger and warned him to keep away.

Charles Elton, age 60 years, English, miner, was instantly killed May 5, 1903, at the Louise colliery (Raub Coal Company) by a fall of coal. He was employed as a miner robbing pillars in the No. 8 lift of the Ross vein. He was shoveling coal back to help his laborer load the car, when a piece of coal gave way and fell on him without any warning. He was considered one of the most practical and experienced miners in the colliery.

Mick Lavick, age 38 years, Slavish, laborer, was fatally injured May 19, 1903, at the Harry E. colliery (Temple Iron Company). He was shoveling coal from the east side of the breast toward the road when a piece of coal fell on him causing a fracture of the left leg, and a severe contusion of the back. He was con-

veyed to the Wilkes-Barre Hospital where he died from his injuries on May 23, 1903.

Charles Coleman, age 26 years, American, laborer, was instantly killed May 29, 1903, at the Exeter Red Ash (L. V. Coal Co.). This man worked in the gangway for Chas. Babola, miner No. 216, who fired a blast in the face of the gangway and as soon as the blast went off, Coleman went to the face and started to pick out loose coal, when some of the top coal became loosened falling on him with the above results. His miner warned him not to go in, but to wait a few moments for the place to settle. He paid no attention to the warning as he was in a hurry to load the car so he could go home.

John Powell, age 42 years, Austrian, miner, was fatally injured June 11, 1903, at the Exeter colliery (L. V. Coal Co.) by a fall of middle rock. He was preparing to fire a blast in his breast No. 847, when a piece of middle rock fell without any warning on him, breaking his back. He was removed to the Pittston Hospital where he died June 12, 1903. He was considered a very careful miner.

John Daley, age 24 years, American, runner, was instantly killed July 11, 1903, at the Barnum No. 2 shaft (Penna. Coal Co.). He went into Fredericks place on east counter, Marcy vein to run out a loader car. The laborer was not quite through loading the car, so Daley sat down on a rail that the miners used for a platform waiting for the car. The driver, Wm. Collier sat near him looking at the miner drilling a hole, when without any indication the roof fell across the whole width of the gangway, catching Daley before he could get away, killing him instantly.

Stanley Vitoskey, age 26 years, Lithuanian, laborer, was fatally injured July 22, 1903, at the Exeter colliery (L. V. Coal Co.) by a fall of rock. The miner was starting a new chamber in the checker vein and was drilling a hole, when he (Vitoskey) went to pick the corner of the pillar. He gave only a few blows when the piece of rock fell on him injuring him so badly about the back and hips that he died at the Pittston Hospital, August 23, 1903.

Anthony Pendergast, age 71 years, Irish, miner, was fatally injured July 27, 1903, at the Lykens colliery (W. B. Gunton). He was employed robbing pillars. He was firing a blast in the pillar, and was preparing to drill another hole, and went to bar out some loose coal from under the top coal. He stood in front of where the top coal was undermined and began to pick out the loose coal. The top had a crack running through which the old man did not notice, when a portion of it suddenly fell on him. At first it was thought his injuries were only slight but he was hurt internally and died in about five hours after the accident. His advanced age no doubt was against him. Had he stood to one side or the other while barring he would have escaped the fall. This should be a



warning to others. Never stand in a position where the roof is any way dangerous, always make sure that it is safe before commencing to work out loose coal with either a pick or a bar.

Anthony Musta, age 48 years, Italian, miner, was instantly killed July 29, 1903, at the Exeter colliery (L. V. Coal Co.) by a fall of top coal. He was working in the face of his chamber when a slip of top coal fell on him, killing him instantly.

Patrick Foley, age 60 years, Irish, miner, was fatally injured on August 10, 1903, at the Bernice colliery (Connell Auth. Mining Co.) by a fall of rock. He was employed robbing pillars and was undermining the coal when a piece of top rock fell on him, injuring him so badly that he died in four days after the accident.

Peter Szeferzyk, age 21 years, Polish, laborer, was instantly killed September 12, 1903, at the East Boston colliery (W. G. Payne & Co.) in the Ross vein. He was loading a car in the gangway, when a piece of top rock fell on him without any warning, crushing him almost beyond recognition.

Geo. Taylor, age 37 years, American, timberman, was instantly killed October 3, 1903, at the Forty Fort colliery (Temple Iron Co.) by a fall of rock. He was standing timbers under a bad roof at the foot of the eleven foot slope. Two other men were engaged in helping him at this work. They fired a hole in the top so as to make more height before putting up the collar. The shot did not take enough of it down and left the roof in such a dangerous condition that they were afraid to do any barring, so they decided to place a stick of dynamite on top of a loose piece that was opened from the roof. Taylor went to get the dynamite from the box and lost his light, and in coming back he apparently struck the prop that was partly holding this dangerous portion of the roof when it fell on him, killing him instantly.

Stanley Genosky, age 38 years, Russian, timberman, was instantly killed October 6, 1903, at the Exeter colliery (L. V. Coal Co.), while engaged with Enoch Francis and Ben Ostrander, in standing props in the Red Ash vein around a pump house between station No. 862 and No. 750. Genosky and Ostrander were sinking hitches for two props at the same time within about five feet of each other, and were fully aware of the dangerous condition of the place. Francis who was the leader of the gang went back a short distance to pull off his shoe as a nail was hurting his foot. He was just sitting down when a large piece of coal fell on his two helpers, killing Genosky outright, and injuring Ostrander so badly that he died that same evening. The nature of this accident should be a warning to others, not to go under a dangerous roof without protecting themselves, first by standing a few temporary props to secure safely, before standing the permanent props.

Benj. Ostrander, age 37 years, American, mason helper, was fatally injured October 6, 1903, at the Exeter colliery (L. V. Coal Co.) by a fall of rock. He was removed to the Pittston Hospital where he died that same evening from the result of his injuries.

John Massebra, age 37 years, Slavish, laborer, was instantly killed October 12, 1903, at the Exeter colliery (L. V. Coal Co.) by a fall of rock. He went into chamber No. 272 to see and have a chat with the laborer who worked there, and while he was there talking the top rock fell on him, killing him instantly. It is a very bad practice to go around from one chamber to another, because being strange to the place a man does not know anything about the condition of the roof and is very likely to stand under a dangerous spot. The foremen should try to stop this practice whenever they see it done.

Lally Zidsumas, age 19 years, Polish, laborer, was instantly killed October 19, 1903, at the Pettebone colliery (D., L. & W. Coal Co.) by a piece of rider coal. He was loading a car in B airway, Hillman vein, when a piece of rider coal fell on him, killing him instantly.

Joseph Smith, Lithuanian, laborer, age 23 years, was instantly killed November 18, 1903, at the Coxey shaft (L. V. Coal Co.) by a fall of rock. Smith was employed as a laborer in the Marcy vein gangway, and was shoveling coal back from the face when a piece of rock fell on him, killing him instantly.

#### By Cars

John Kishock, age 15 years, Austrian, patcher, was fatally injured by being run over by cars at the Maltby colliery (L. V. Coal Co.) on February 19, 1903. He went to set the switch for a trip of empty cars to run in on the branch. He signalled to the runner to come ahead and then stepped to the side to allow the cars to pass. It was dark and he apparently got bewildered and ran in front of the cars. He was caught, and dragged a distance of fifteen feet, his legs were badly mangled and he was bruised about the body. He died shortly after he was taken home.

Stephen Dugal, age 40 years, Slavish, laborer, was fatally injured March 30, 1903, at the Forty Fort colliery (Temple Iron Co.) by a trip of empty cars. He was traveling down the eleven foot slope on his way to work, and when near the foot of the slope he heard the trip of cars coming. A companion called to him to look out, but as this was his first day to work in the slope, he did not know which side to stay on and stepped in front of the cars. His body was so badly mangled that he died in a short time after.

George Gigorefsky, age 18 years, Lithuanian, driver, was fatally injured June the 5th, 1903, at the Exeter colliery (L. V. Coal Co.) by being squeezed between a trip of cars. He was taking a trip of empty cars from the foot of the shaft to the inside turnout. He was driving three mules and was spragging the cars on the top of grade to keep the cars from running back, when the leading mule turned around and in doing so caught the driver in the traces and threw him between the cars. The mules were still hooked to the trip and kept pulling back. His head was caught between the bumpers, fracturing his skull. He died shortly after.

Andrew Stash, age 40 years, Austrian, footman, was fatally injured June 20, 1903, at the Maltby colliery (L. V. Coal Co.). He was employed cleaning the slope and jumped on a trip of cars which were partly loaded with road coal. He was riding between the first and second car when the first car jumped the track. His leg was caught between the bumpers breaking it below the knee. He was taken to the City Hospital where he died on July 30, 1903 after an operation. When men are engaged at such work as cleaning slopes they should not ride on the cars from one lift to the other, because the cars are seldom uniformly loaded making it much easier for them to jump the track. Foremen should see that such a practice is stopped as it is a direct violation of the law. (Article XII, Rule 16). No person shall ride upon or against any loaded car, cage, or gunboat in any shaft, slope or plane in or about the colliery.

Charles Nafus, age 35 years, American, footman, was fatally injured June 23, 1903, at the Forty Fort colliery (Temple Iron Co.). He was employed as a footman at the south slope, and was riding into his work on the haulage road trip to the south slope. The trip was stopped as usual on reaching the curve near the south slope turnout. The runner said he gave the signal to go ahead, when the cars received a sudden jerk throwing the first car off the track. He gave the signal to stop, but before the engineer succeeded in doing so five cars were pulled off, causing a heavy strain on the guide pulleys and breaking them. The rope swept across the track striking Nafus on the head, fracturing his skull. He died a few hours after at hospital.

Sidnor Smiles, age 24 years, Polish, laborer, was fatally injured July 29, 1903, at the Harry E. (Temple Iron Co.). Smiles was laboring with Daniel Corrigan sinking a slope on the west side Red Ash vein. The engineer started to hoist a trip of two cars and as the grade is very light near the bottom, after the first pull the cars bumped together and uncoupled. Corrigan and the other laborer were near the safety hole, Smiles coming up after them. The uncoupled car jumped the track, pinning him between the car and the

rib. He was so badly injured that he died shortly after he was taken to the Emergency Hospital.

John Covill, age 19 years, American, driver, was instantly killed November 16, 1903, at the Forty Fort colliery (Temple Iron Co.) by falling under a car. He was employed as a driver on road five D, upper six foot vein. He was riding on the front end of the car and jumped off to urge the mule when he slipped on the rail and fell under the car. He was dragged a distance of about twelve feet, causing instant death.

Mike Mustal, age 24 years, Slavonian, loader, was instantly killed December 22, 1903, at the Exeter colliery (L. V. Coal Co.), outside by railroad cars. Mustal was employed as a loader at the breaker. He and another fellow laborer were running a car down the track, when an engine with a train of cars came in and struck the car in charge of these men throwing Mustal under, killing him instantly, the other man escaped uninjured. This accident happened about five o'clock in the afternoon and the crew claimed, that on account of the darkness they did not see the car until they struck it. This is a very poor excuse to offer. They should have sent one of the crew ahead to see that the road was clear.

#### By Premature Blasts

Wm. J. Nolan, age 43 years, Irish, miner, was instantly killed on March 6, 1903, at the Mt. Lookout colliery (Temple Iron Co.) by a premature blast. He had drilled a hole in the bottom rock in his gangway and prepared the blast, and while in the act of lighting the squib the hole went off, killing him instantly.

Stanley Witka, age 27 years, Polish, miner, was fatally injured on June 3, 1903, at the Seneca colliery (L. V. Coal Co.) by a premature blast. He was engaged in tamping a hole when the charge went off, injuring him so badly that he died the same day. His laborer, Alex. Budzelick, was helping him to tamp the hole but was not seriously injured.

Jacob Powganis, age 34 years, Polish, miner, was fatally injured on June 20, 1903, at the Kingston colliery No. 1 (Kingston Coal Co.) by a blast. Powganis was employed as a breast miner in the Bennett vein bottom of No. 3 slope. He had prepared a blast, lit it and run to a place of safety. He thought he heard the hole miss and went back to relight it, when it went off, injuring him so badly that he died that day at the Mercy Hospital. An accident of this character should be a lesson to all miners, not to approach a missed hole too soon.

Andrew Dolup, age 48 years, Slavonian, miner, was fatally

injured on December 18, 1903, at the Maltby colliery (L. V. Coal Co.) by a blast. Dolup was firing a shot and after lighting the squib he went to a place of safety. He thought the shot had missed and went back to see when the shot went off, injuring him so badly that he died in one hour after. This is one of the many cases of too much haste.

### By Explosions of Gas

Samuel Boreskey, age 31 years, Polish, laborer, was burned by an explosion of gas on June 29, 1903, at the Clear Spring colliery. Boreskey had carelessly left the check door open, and as the place was giving off a considerable quantity of gas where the door was closed, it forced the gas down on him when it was ignited by his lamp, burning him about the face and hands. The accident was not considered serious at the time. The deceased objected to go to the hospital, and was being treated by a woman fire doctor. He died from the result of the burns on July 11, 1903. The fire boss made a tour of inspection in that section about two hours before the accident and found everything in good order.

### By Powder

Anthony Gloucksis, age 22 years, Polish, laborer, was instantly killed by an explosion of Forcite powder on September 9 at the Seneca colliery (L. V. Coal Co.) Gloucksis was working with his miner, helping him to clean up a fall of rock at the foot of the west side slope. They were getting short of oil and his miner, Simon Gilinskie, sent him to his gangway for some oil and gave him the key to the box. The distance from where they were working to the gangway, was about fifteen hundred feet. After the deceased was gone about fifteen minutes, the men heard a terrible explosion. They first thought it was an explosion of gas. They went toward the direction it came and they found the deceased in a mangled condition. It is thought that a spark from his lamp fell into a box of explosive caps. There was also about eighteen pounds of Forcite powder in the box at the time of the explosion.

### By Falling Down Shafts

Alex. Rimshock, age 40 years, Polish, laborer, was instantly killed by falling down a shaft on March 21, 1903, at the Mt. Lookout (Temple Iron Co.). Rimshock, the deceased was working

as a laborer in the eleven foot vein and came to the landing after the cage was signaled to hoist and was on its way up the shaft. He made an effort to get on but did not succeed. He clung to the cage until he reached the first bunton, when his head struck it, and he fell to the bottom a distance of about 90 feet. He was dead when picked up.

Jno. Paylon, age 42 years, Slavonian, laborer, was instantly killed July 15, 1903, by falling down the shaft at the Harry E colliery (Temple Iron Co.). He was working in the Ross vein, and was about to start for home after finishing his day's work. The footman, Geo. Cushel, when near the landing at the Ross Vein saw a light coming toward the shaft, and called out "are you coming up?" He received no answer to this call, so he signalled then to the engineer to hoist, when the cage was about three feet above the landing Paylon made a jump to get on, but only got his hands on the floor, when he dropped to the bottom a distance of about 60 feet. Those on the cage at the time warned him not to make any attempt to get on, but he paid no attention to them.

Peter Roman, age 16 years, American, doortender, was instantly killed September 22, 1903, by falling down a shaft at the Exeter colliery (L. V. Coal Co.). He was on the cage coming up the shaft after his work was done. There was several on with him. When the cage was about 50 feet from the bottom he fell off, and dropped to the sump. No person on the cage seemed to know anything about how it happened. They seem to think he got dizzy or weak and fell.

Louis Bouchard, Polish, miner, age 35 years, was instantly killed December 12, 1903, by falling down a shaft at the Mount Lookout Colliery (Temple Iron Co.). Deceased came to his death in a mysterious way. No one knows how he fell down the shaft. He was suspended a few days before for sending out dirty coal, and the foreman did not know he was working. He evidently was working with some other miner until his time of suspension would be up, and in doing so was trying to evade the bosses by going in early in the morning. The accident occurred about six o'clock A. M. The fire boss was at the foot of the shaft when he fell. He was dead when picked up.

#### By Machinery

Frank H. Reese, age 16 years, American, slatepicker, was fatally injured January 27, 1903, by breaker machinery at the Pettebone breaker of the (D., L. & W. R. R. Co.). Deceased was employed as slate picker. The boss sent him to pull down the coal in the Chestnut chute from the elevators, and giving him a scraper, ordered him

to stand outside of the chute and keep it open, but instead of using the scraper as he was ordered he went into the chute and with his feet commenced pushing down the coal. He went too close to the elevators, and his foot was caught, dragging him in. He died about four hours after the accident at his home.

Merl Hembury, age 14 years, American, slatpicker, was fatally injured by breaker machinery, August 13, 1903, at the Lykens breaker (W. B. Gunton). This accident occurred about 11.45 A. M. Deceased was out of his place and disobeyed the rules. He was approaching the oiler for a chew of tobacco when his jacket was caught in the gearing of the conveyors. The oiler gave the alarm immediately to the slate boss who signalled to the engineer to stop the engine which he instantly did. Death was instantaneous.

#### Miscellaneous Fatal Accidents

Geo. Ruderick, age 28 years, Russian, laborer, was fatally injured February 9, 1903, at the Kingston Coal Co.'s breaker No. 4. He was only working at this place a few days when this accident occurred, and no one knew how it happened. It is supposed he fell off a car. When found he was lying along side the track under the pocket, in an unconscious condition, and he died about a half hour later.

Jas. Gaughsin, American, driver, age 15 years, was fatally injured May 13, 1903, at the Barnum colliery No. 2 (Penna. Coal Co.). Deceased was taking his mule to the barn after his day's work was done, and in some manner his foot became fastened in the traces, the mule started to run away, dragging him for a distance of 600 feet to the foot of the shaft. He was hoisted to the surface, and sent home in the company's ambulance, where he died a few minutes later.

Harry Williams, age 21 years, American, breaker man on electric motor, was instantly killed November 27, 1903, at the Mount Lookout colliery (Temple Iron Co.) by a shock from an electric wire while assisting the motorman to make some repairs on the cable wire. He was standing on the rail at the time, and raised his head which came in contact with the trolley. The shock killed him instantly.

Frank Charli, age 39 years, Italian, laborer, was instantly killed December 24, 1903, at the Exeter colliery (L. V. Coal Co.) by a falling prop. Deceased was helping his miner, Mike Pasqual, to stand props. He slipped and one of the props fell on him, crushing his skull, causing instant death.

### Condition of the Mines and Improvements During the Year

The condition of the mines on the whole is very satisfactory. The ventilation is improved, the drainage is much better, and special efforts are being made in regard to propping roof. All these things I rigidly demand. The observance of the law, in reference to the employment of boys is also enforced to the letter. Only one case occurred in the district, where there was any need to resort to law, and was against the Avoca Coal Company. A copy of the whole proceedings in this case was forwarded to the Department.

#### KINGSTON COAL COMPANY

##### No. 4 Colliery

They have put up a fuel conveyor line to boiler house, made some slight changes in the breaker and put down a number of bore holes to prove rock cover over Orchard vein.

#### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

##### Pettebone

A 20 foot ventilating fan, which was partly constructed in 1902, has been reconstructed and is now in working order, showing a very good percentage of efficiency. The erection of a locomotive boiler plant is in progress at this colliery, to be composed of 10 fire box locomotive boiler, which will be completed early during the year 1904. Three rock tunnels were driven through faults or anticlinals in the Hillman vein for development, transportation and ventilation. The Kidney vein has been opened in these shafts and developments will be pushed as rapidly as possible.

Pettebone washery, which has been practically idle during the year, has now resumed operations, and the refuse from the same is being placed in the Cooper vein of this colliery.

#### RAUB COAL COMPANY

##### Louise

Gravity plane at "Mt. Thomas," about 450 feet long, one pair of new 16x20 engines geared 4 to 1, with foundation and house complete for hoisting.

Outside.—Coal from Red Ash and Ross veins, on Eley tract, to foot of Bennett slope. Rope to run through bore hole, from surface to head of inside plane from eleven foot vein to Ross.

Inside.—No. 3 tunnel Klondyke, driven on mountain side from



surface to Ross and Red Ash veins, upper workings—serving as means of better ventilation, also as more convenient and safe entrance and exit to that portion of workings which are located so far from main opening.

#### TEMPLE IRON COMPANY

##### Harry E Colliery

Outside.—On the hoisting shafts they have put in new 10 foot drum on the hoisting engines, clutch gearing, which enables them to hoist from either of the three levels with both cages, which is we think a very decided improvement. The old drum was an 8 foot diameter drum without clutch, with which they could only hoist from lower level with both cages at one time.

Inside.—Slope being driven in 11 foot vein from shaft level down towards basin, with plane going to outcrop on same line as slope, this will be slope and plane combined, with pair of 14x16 engines in place to operate the same.

##### Ross

There has been a tunnel driven from Red Ash to Ross vein, size 12x8 feet on a pitch of 15 degrees. This will be the outlet for coal from new slope and plane which is being constructed in Ross vein.

##### Harry E. Colliery, Ross Vein

Inside.—There is also another tunnel from Red Ash to Ross, 10x6 feet on a pitch of 40 degrees which is return airway for new slope and plane.

The above mentioned improvements are the new work that is being done. Aside from that which would be more under the regular order of work, but which is improvements just the same, is the decided improvement in the ventilation which has been accomplished by the enlarging of the areas of airways both inlet and outlet airways at this colliery the past year.

##### Forty Fort Colliery

Outside.—New breaker capacity 1,000 tons per ten (10) hours. This breaker was put in operation on June 9, with the most modern machinery for the preparation of coal.

Shaft.—Widened out cage ways and retimbered in the new from top to bottom with concrete wall  $2\frac{1}{2}$  feet thick, 20 feet from top down, all around the shaft. One new Sterling boiler 125 H. P.

Inside.—In the 11 foot they are extending the slope towards basin, size of slope 12x7. Ross vein they have reopened and extending slope towards basin, they are also extending plane which is in direct line with the slope. Size 12x7 feet. Have driven new tunnel from 6 foot to 4 foot vein, size of tunnel 12x7 feet. Have built a new traveling way separate and independent from the slope.

Inside.—Have built an additional airway (outlet) from 6 feet to 11 feet, size 10x6, which has made a very decided improvement in the ventilation.

#### Mt. Lookout Colliery

Outside.—Put in breaker, four (4) sets of Reading jigs, and rearranged 6 sets of Christ jigs. Fuel conveyor from breaker to boiler room.

Inside.—Driving new slope from Pittston vein to Marcy (called No. 7 slope). One electric locomotive, 7½ ton, for work in chambers.

#### LEHIGH VALLEY COAL COMPANY

##### Maltby Colliery

A new brick boiler house, 120x5 has been constructed. Six sets, 300 H. P. each, or 1,800 H. P., B. & W. boilers are in course of installation. A number of additions and repairs have been made to the breaker, also betterments to the inside pumping capacity, and changes at the foot of the main hoisting shaft.

##### Exeter Colliery

A brick boiler house is under construction, and 300 H. P., B. & W. water tube boilers are being installed therein.

A new compressed air motor haulage plant is under construction for the Red Ash shaft district. A brick house encloses a Norwalk three stage compressor, size 20x24x14½x11½x5x24. A 15 ton air locomotive is on the ground. A six inch air pipe runs from the surface down the shaft to the inside haulage roads, total length of pipe, 3,700 feet. These roads are laid with 40-pound rails and special care has been given to the alignment and grading; in all, very favorable conditions now exist for a satisfactory haulage plant at this place.

New barns have been built in the Checker and Red Ash districts.

Pittston hoisting shaft and second outlet shaft completed from Pittston vein to Marcy vein.

New Jeanesville compound duplex pump, size 20x38x10x18, with

new column complete, installed in Red ash district. New fire proof pump room built for same.

New safety gates built at Red Ash shaft.

New carpenter-blacksmith shop, 52x56 completed.

### Seneca Colliery

Several other improvements are under way, but as they are not completed you probably will not care for them. They are as follows:

Two tunnels, one 200 the other 300, through fault in property known as "Old Forge 88," in Twin shaft.

Two bore-holes, one 12 inch, the other 14 inch from surface to the Red Ash vein for drainage purposes. It is proposed to pump the water from this vein through these holes and do away with column pipes in shaft.

A shaft has been started to tap the Pittston vein about 500 feet below the Seneca breaker.

### Seneca

Which includes the New or Coxey, the Twin, the Columbia, and the Phoenix shafts.

1st. At the Twin shaft the old wood fan-house was replaced by one of corrugated iron. This insures greater safety from fire, for owing to its proximity to the D., L. & W. R. R. danger from this source was always present with the old structure.

2d. The cribbing in the Twin shaft consisted of a single line of 12x12 hemlock timber. Upon this rested the shaft tower, sixty feet in height. The coal cars landed on fans and run off on a trestle twenty-five (25) feet above the ground. The said trestle extends a sufficient distance east of shaft to allow the passage of empty cars which are hauled from the breaker by a 12½ ton locomotive. The cribbing having been in place between nine and ten years began to crush and bulge into the shaft under the weight of the shaft-tower and trestle. Owing to these conditions it was decided to replace the old cribbing with one of concrete, and if possible, without delaying the operation of the shaft. This was successfully accomplished in the following manner.

The inside dimensions of the cribbing (old) was 12x17x35 in depth. In the line of old buntons several hard wood buntons one on another were placed in good hitches cut in the rock at foot of old cribbing. On these buntons rested a line of posts, six in all, which reached to a point above the top of old cribbing. By means of hydraulic jacks the overhead weight was taken off the old cribbing and placed on 12x16x40 oak timber that was put across the shaft, on top of posts,

and upon end supports. Having thus supported the tower and trestle no trouble was experienced in holding filling back, and taking out old cribbing. The concrete was put in with a thickness of three feet in the bottom and tapering to two feet on top.

#### STEVENS COAL COMPANY

Sunk new shaft, 12x24 to Red Ash vein.

Made opening in shaft into vein underlaying the Marcy vein.

Installing coal hoisting plant at new shaft.

Started up coal washery which is contained in one wing of the breaker.

Put in new 150 H. P. boiler at steam plant.

Made new opening from Red Ash slope workings through by roll to old workings on Slocum property, for ventilating purposes.

#### CONNELL ANTHRACITE COAL MINING COMPANY

##### Bernice Colliery

The following are the improvements made at the Bernice colliery. They have erected a modern anthracite breaker on their property, containing about a million feet of lumber, equipped with the latest modern machinery, shakers, etc. They have erected a plant of one thousand (1,000) horse power National water tube boilers, a machine shop, and have equipped the colliery in every respect to prepare the coal up to the regular anthracite standard. They have added a thirteen (13) ton electric locomotive to their inside haulage, regraded the gangways, and are now sinking a shaft upon the property 12x22 to be used as a second opening and an air shaft, and erecting a sixteen (16) foot fan thereon.

#### DELAWARE AND HUDSON COMPANY

##### Langeliffe Colliery

No. 1 slope in the No. 2 Checker drift has been extended 500 feet.

New road driven at the head of No. 1 plane in Red Ash vein for a distance of 650 through caved area of Avoca Coal Company.

New 10 foot fan erected to ventilate No. 2 Checker drift.

# Seventh Anthracite District

LUZERNE COUNTY

---

Wilkes-Barre, Pa., February 20, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith the report of the Seventh Anthracite District for the year ending December 31, 1903.

Mr. E. E. Reynolds, my predecessor in office, resigned at the close of the year to become general manager of the International Coal and Coke Company of British Columbia. I was appointed to succeed him and assumed the duties of the office on January 4, 1904. It has therefore fallen to my lot to compile this report. The report contains the tables, statistics, etc., as required by law.

Respectfully submitted,

JAMES MARTIN,

Inspector.

## Seventh Anthracite District, 1903

## SUMMARY OF STATISTICS

Number of mines in district, .....	36
Number of mines operation, .....	36
Number of tons of coal produced, .....	4,926,474
Number of tons shipped to market, .....	4,385,681
Number of tons sold at mines to local trade, .....	224,174
Number of tons consumed at mines in generating steam and heat, .....	316,619
Number of persons employed inside the mines, .....	8,451
Number of persons employed outside, .....	3,619
Number of fatal accidents inside the mines, .....	34
Number of tons produced for each fatal accident inside, .....	144,896
Number of persons employed per fatal accident inside, .....	249
Number of fatal accidents outside, .....	5
Number of persons employed per fatal accident outside, .....	724
Number of wives made widows by fatal accidents, .....	25
Number of children orphaned by fatal accidents, .....	41
Number of non-fatal accidents inside of mines, .....	104
Number of persons employed per non-fatal accident in side, .....	81
Number of non-fatal accidents outside, .....	20
Number of persons employed per non-fatal accident out- side, .....	181
Number of steam locomotives used inside, .....	2
Number of compressed air locomotives used inside, .....	2
Number of electric motors used inside, .....	4
Number of fans used for ventilation, .....	53
Number of gaseous mines in operation, .....	31
Number of non-gaseous mines in operation, .....	5
Number of new mines opened, .....	2

TABLE A.—Seventh Anthracite District, 1903

PRODUCTION OF COAL	
Names of Companies	Tons
Lehigh and Wilkes-Barre Coal Company, .....	1,700,273
Susquehanna Coal Company, .....	1,277,402
Delaware, Lackawanna and Western Railroad Company, .....	496,625
Lehigh Valley Coal Company, .....	592,841
Delaware and Hudson Company, .....	182,036
Alden Coal Company, .....	289,265
Warrior Run Coal Company, .....	201,215
Red Ash Coal Company, .....	152,777
Pittston Coal and Mining Company, .....	34,040
	<hr/>
Total, .....	4,926,474
	<hr/> <hr/>
Production by Counties	
Luzerne, .....	4,926,474
	<hr/> <hr/>

TABLE B.—Seventh Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Companies	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh and Wilkes-Barre Coal Co., .....	11	.....	11	33	5	38	51,523	154,570	2,447	487	3,434	222	74	.....	197
Susquehanna Coal Co., .....	8	2	10	27	9	36	47,211	159,675	2,506	1,159	3,755	324	96	579	128
Delaware, Lackawanna and Western F. R. Co., .....	4	.....	4	16	3	19	31,039	124,156	390	326	1,256	332	58	.....	109
Lehigh Valley Coal Co., .....	4	1	5	14	.....	14	42,346	148,210	382	382	1,340	245	70	358	.....
Delaware and Hudson Co., .....	.....	.....	.....	3	.....	3	90,619	.....	477	181	658	.....	90	.....	.....
Alden Coal Co., .....	.....	.....	.....	5	1	6	57,853	.....	330	143	473	55	82	.....	181
Warrior Run Coal Co., .....	6	.....	6	2	.....	2	33,558	.....	270	256	526	270	135	.....	256
Red Ash Coal Co., .....	1	1	2	2	.....	2	76,388	152,777	132	87	219	.....	.....	87	87
Pittston Coal and Mining Co., .....	.....	1	1	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals and averages for district, .....	34	5	39	104	20	124	47,370	144,896	8,451	2,619	12,070	249	81	724	181





TABLE D.—Seventh Anthracite District, 1903  
Classification of Non-Fatal Accidents

	Inside of Mines										Outside of Mines						Grand total	
	By Falls of		Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	By Falling Into			Total inside	By machinery	By suffocation	By boiler explosions	Miscellaneous causes		Total outside
	Coal	State							Shatts	Slopes	Manways, breasts, etc.							
January, .....	2	1	3	2	5	1	1	1	1	1	1	1	1	1	1	1	15	
February, .....	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	17	
March, .....	1	2	5	4	1	1	1	1	1	1	1	1	1	1	1	1	18	
April, .....	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	18	
May, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	
June, .....	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	10	
July, .....	1	1	1	4	2	1	1	1	1	1	1	1	1	1	1	1	10	
August, .....	1	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	11	
September, .....	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	10	
October, .....	3	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	
November, .....	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	9	
December, .....	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	11	
Totals, .....	16	6	17	23	16	3	12	1	1	16	104	8	2	10	20	124		



TABLE F.—Seventh Anthracite District, 1903  
Occupations of Persons Injured Inside and Outside the Mines

	Inside											Outside										Grand total
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes	Total outside		
January, .....				4	4	2	2				8										8	
February, .....				6	4	1	1		1		10										15	
March, .....				6	1	1	1		1		10										15	
April, .....				2	2	1	1				6										12	
May, .....				2	1	1	1				5										10	
June, .....				6	1	1	1				9										14	
July, .....				5	2	1	1				10										14	
August, .....				5	2	1	1		1		11										14	
September, .....				5	2	1	1				10										14	
October, .....				4	1	1	1				7										10	
November, .....			1	4	1	1	1				8										12	
December, .....				2	1	1	1		2		8										12	
Totals, .....			1	51	23	12	10		5	2	104			4	1	3			12	20	124	

TABLE G.—Seventh Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Slavonian	Lithuanian	Austrian	Russian	Swedish	Tyrolian	Totals
January, .....			1		2	1			1		1		6
February, .....	1												1
March, .....	1			1		1						1	4
April, .....						1							1
May, .....		1			1			1					3
June, .....	2		1	1		4	1			1			10
July, .....		1	1	1		2		1					6
August, .....			1	1		1							3
September, .....					1	2							3
October, .....													1
November, .....			1										1
December, .....													1
Totals, .....	5	2	5	4	4	12	1	2	1	1	1	1	39

TABLE H.—Seventh Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Italian	Slavonian	Lithuanian	Swedish	Danish	Totals
January, .....	1	1	2		1	5	1		3	1		15
February, .....	1					6			1			8
March, .....	1	2	1		2	5		1	1			15
April, .....	2		2	1		4		1	1			12
May, .....	2	2		1		2		1	1			10
June, .....	1	1	2	1	1	6						10
July, .....	2	1				6						11
August, .....	4					6		1				10
September, .....	1					7			1		1	10
October, .....	3		1			2		1				7
November, .....	1		1	1	3	3						9
December, .....	1		1			4		1				7
Totals, .....	25	7	10	5	7	53	1	6	8	1	1	124

TABLE I.—Seventh Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
Lehigh and Wilkes-Barre																
Hollenback No. 2, No. 1 fan.	Slope and shaft.	Gaseous.	Fan.....	35	11-6	8-9	48	1½	Guibal.....	Steam..	9	271,810	240,700	289,120	330	617
Hollenback No. 2, No. 2 fan.	Slope and shaft.	Gaseous.	Fan.....	24	7-11	6	65	.8	Guibal.....	Steam..						
Hollenback No. 2, No. 3 fan.	Slope and shaft.	Gaseous.	Fan.....	25	11-9	8-9	45	.8	Guibal.....	Steam..						
Hollenback No. 2, No. 4 fan.	Slope and shaft.	Gaseous.	Fan.....	23	11-9	8-9	48	1¼	Guibal.....	Steam..						
South Wilkes-Barre, No. 5, No. 1, fan.	Slope and shaft.	Gaseous.	Fan.....	33	11-9	8-9	45	2	Guibal.....	Steam..						
South Wilkes-Barre, No. 5, No. 2 fan.	Shaft.....	Gaseous.	Fan.....	35	11-9	8-9	45	2	Guibal.....	Steam..	24	392,390	252,890	401,840	625	374
South Wilkes-Barre, No. 5, No. 3 fan.	Shaft.....	Gaseous.	Fan.....	35	11-9	8-9	45	2	Guibal.....	Steam..						
South Wilkes-Barre, No. 5, No. 4 fan.	Shaft.....	Gaseous.	Fan.....	35	11-9	8-9	45	2	Guibal.....	Steam..						
Stanton, No. 7, No. 2 fan, Empire.	Slope and shaft.	Gaseous.	Fan.....	24	8	6	65	2	Guibal.....	Steam..						
Stanton, No. 7, No. 2 fan, Stanton.	Slope and shaft.	Gaseous.	Fan.....	35	11-7	8-9	45	2	Guibal.....	Steam..	26	332,650	294,628	385,920	518	569
Stanton, No. 7, No. 4 fan, Stanton.	Slope and shaft.	Gaseous.	Fan.....	34	11-9	8-4½	45	2	Guibal.....	Steam..						

Sugar Notch No. 9, No. 1 fan.	Gaseous,	Fan.....	20	6-8	5	72	1.2	Guibal.....	Steam..	11	347,000	284,700	385,600	298	715
Sugar Notch No. 9, No. 2 fan.	Gaseous,	Fan.....	24	8	6	60	1.2	Guibal.....	Steam..	12	363,100	327,500	380,400	516	635
Maxwell No. 20, No. 1 fan.	Gaseous,	Fan.....	25	8-2	6-3	86	1 1/2	Guibal.....	Steam..	10	154,900	122,100	180,900	460	364
Maxwell No. 20, No. 2 fan.	Gaseous,	Fan.....	24	8	6	80	1 1/2	Guibal.....	Steam..	9	130,100	152,600	204,000	522	292
Maxwell No. 20, No. 3 fan.	Gaseous,	Fan.....	35	11-9	8-9	40	1 1/2	Guibal.....	Steam..	5	116,000	85,500	122,500	303	282
Maxwell No. 20, No. 4 fan.	Gaseous,	Fan.....	35	11-9	8-9	40	1 1/2	Guibal.....	Steam..	3	49,000	31,000	51,000	153	255
Susquehanna Coal Co.										4	78,000	52,000	85,000	78	163
No. 1 North shaft.	Gaseous,	Fan.....	25	8	6	60	1.5	Guibal.....	Steam..	4	40,314	16,218	45,411	91	178
No. 1 South shaft.	Gaseous,	Fan.....	25	8	6	60	1.5	Guibal.....	Steam..	4	100,700	48,100	116,400	221	310
No. 2 shaft.	Gaseous,	Fan.....	20	6	6	60	1.5	Guibal.....	Steam..	4	112,000	99,000	114,000	349	171
No. 4 shaft.	Gaseous,	Fan.....	20	6	6	60	1.2	Guibal.....	Steam..	4	112,000	99,000	114,000	349	171
No. 5 shaft.	Gaseous,	Fan.....	20	6	6	60	1.2	Guibal.....	Steam..	4	112,000	99,000	114,000	349	171
No. 6 South shaft.	Gaseous,	Fan.....	20	6	6	60	1.2	Guibal.....	Steam..	4	112,000	99,000	114,000	349	171
No. 6 North shaft.	Gaseous,	Fan.....	25	8	8	66	1.5	Guibal.....	Steam..	4	112,000	99,000	114,000	349	171
No. 4 slope.	Gaseous,	Fan.....	16	4	6	75	1.5	Guibal.....	Steam..	4	112,000	99,000	114,000	349	171
No. 6 slope.	Gaseous,	Fan.....	20	6	6	60	1.2	Guibal.....	Steam..	4	112,000	99,000	114,000	349	171
No. 6 slope.	Gaseous,	Fan.....	20	6	6	60	1.2	Guibal.....	Steam..	4	112,000	99,000	114,000	349	171
No. 6 slope.	Gaseous,	Fan.....	20	6	6	60	1.2	Guibal.....	Steam..	4	112,000	99,000	114,000	349	171
No. 6 tunnel.	Gaseous,	Fan.....	20	6	6	60	1.2	Guibal.....	Steam..	4	112,000	99,000	114,000	349	171
Pelaware, Lackawanna and Western R. R. Co.										15	200,000	211,050	211,050	638	331
Bliss.	Gaseous,	Fan and artificial.	24	4-3	10	76	1.8	Guibal.....	Steam..	15	200,000	211,050	211,050	638	331
Bliss.	Gaseous,	Fan and artificial.	35	9-2	9-10	40	1.8	Guibal.....	Steam..	9	155,300	175,300	160,000	292	502
Bliss.	Gaseous,	Fan and artificial.	12	3-5	3	130	2	Guibal.....	Steam..	19	225,500	239,800	327,000	568	472
Bliss.	Gaseous,	Fan and artificial.	10	3	2-7 1/2	120	1 1/2	Guibal.....	Steam..	10	138,300	72,500	158,000	174	250
Northness Nos. 1 and 2 shaft.	Gaseous,	Fan.....	35	4-6	9	34	.8	Guibal.....	Steam..	5	36,000	21,000	41,000	174	250
Lehigh Valley Coal Co.										3	87,170	81,320	89,170	116	577
Porrance.	Gaseous,	Fan.....	30	10	8	52	1.9	Guibal.....	Steam..	4	154,900	140,000	160,100	141	697
Franklin.	Gaseous,	Fan.....	35	12	10-2	72	1.9	Guibal.....	Steam..	3	87,170	81,320	89,170	116	577
Franklin.	Gaseous,	Fan.....	18	6	5-9	40	1.9	Guibal.....	Steam..	3	87,170	81,320	89,170	116	577
Franklin.	Gaseous,	Fan.....	14	6	4	85	.8	Guibal.....	Steam..	3	87,170	81,320	89,170	116	577
Franklin.	Gaseous,	Fan.....	15	6	3-9	85	.8	Guibal.....	Steam..	3	87,170	81,320	89,170	116	577
Franklin.	Gaseous,	Fan.....	15	4-6	4-6	32	.....	Guibal.....	Steam..	3	87,170	81,320	89,170	116	577
Franklin.	Gaseous,	Fan.....	15	4-6	4-6	32	.....	Guibal.....	Steam..	3	87,170	81,320	89,170	116	577
Pelaware and Hudson Co.										3	87,170	81,320	89,170	116	577
Conyngham.	Gaseous,	Fan.....	20	5	5	70	1.8	Guibal.....	Steam..	3	87,170	81,320	89,170	116	577
Conyngham.	Gaseous,	Fan.....	17	8	8	90	1.8	Guibal.....	Steam..	3	87,170	81,320	89,170	116	577





TABLE I.—Seventh Anthracite District, 1903  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
Lehigh & Wilkes-Barre Coal Co.	Luzerne,	C. F. Huber,	Wilkes-Barre,	M. K. Morgans, inside	Wilkes-Barre,	C. R. R. of N. J.
Hollenback No. 2,	Luzerne,	C. F. Huber,	Wilkes-Barre,	supt. H. H. Herrin,	Wilkes-Barre,	C. R. R. of N. J.
South Wilkes-Barre No. 5,	Luzerne,	C. F. Huber,	Wilkes-Barre,	outside supt.	Wilkes-Barre,	C. R. R. of N. J.
Stanton No. 7,	Luzerne,	C. F. Huber,	Wilkes-Barre,		Wilkes-Barre,	C. R. R. of N. J.
Magalloway No. 9,	Luzerne,	C. F. Huber,	Wilkes-Barre,		Wilkes-Barre,	C. R. R. of N. J.
Magalloway No. 20,	Luzerne,	C. F. Huber,	Wilkes-Barre,		Wilkes-Barre,	C. R. R. of N. J.
Jersey Washery No. 8,	Luzerne,	C. F. Huber,	Wilkes-Barre,		Wilkes-Barre,	C. R. R. of N. J.
Susquehanna Coal Co.	Luzerne,	Robert A. Quin,	Wilkes-Barre,	Francis H. Kohlbraker,	Nanticoke,	Pennsylvania
Colliery No. 5,	Luzerne,	Robert A. Quin,	Wilkes-Barre,	Francis H. Kohlbraker,	Nanticoke,	Pennsylvania
Colliery No. 6,	Luzerne,	Robert A. Quin,	Wilkes-Barre,	Francis H. Kohlbraker,	Nanticoke,	Pennsylvania
Colliery No. 7,	Luzerne,	Robert A. Quin,	Wilkes-Barre,	Francis H. Kohlbraker,	Nanticoke,	Pennsylvania
Delaware, Lackawanna and Western R. R. Co.	Luzerne,	R. A. Phillips,	Scranton,	H. G. Davis,	Kingston,	D, L. and W.
Auchincloss,	Luzerne,	R. A. Phillips,	Scranton,	H. G. Davis,	Kingston,	D, L. and W.
Dills,	Luzerne,	R. A. Phillips,	Scranton,	H. G. Davis,	Kingston,	D, L. and W.
Lehigh Valley Coal Co.	Luzerne,	S. D. Warriner,	Wilkes-Barre,	F. E. Zerbey,	Wilkes-Barre,	Lehigh Valley
Derringer,	Luzerne,	S. D. Warriner,	Wilkes-Barre,	F. E. Zerbey,	Wilkes-Barre,	Lehigh Valley
Franklin,	Luzerne,	S. D. Warriner,	Wilkes-Barre,	F. E. Zerbey,	Wilkes-Barre,	Lehigh Valley
Delaware and Hudson Co.	Luzerne,	C. C. Ross,	Scranton,	E. R. Pettebone,	Scranton,	Delaware and Hudson
Conyngnam,	Luzerne,	C. C. Ross,	Scranton,	E. R. Pettebone,	Scranton,	Delaware and Hudson
Alten Coal Co.	Luzerne,	K. M. Smith,	Alden Station,	James Turner,	Alden,	C. R. R. of N. J.
Warrior Run Coal Co.	Luzerne,	Thomas R. Jones,	Wilkes-Barre,	Thomas R. Jones,	Pooley,	Lehigh Valley
Warrior Run,	Luzerne,	Thomas R. Jones,	Wilkes-Barre,	Thomas R. Jones,	Pooley,	Lehigh Valley
Red Ash Coal Co.	Luzerne,	Edward Smith,	Wilkes-Barre,	Edward Smith,	Wilkes-Barre,	C. R. R. of N. J.
Red Ash,	Luzerne,	Edward Smith,	Wilkes-Barre,	Edward Smith,	Wilkes-Barre,	C. R. R. of N. J.
Pittsburg Coal and Mining Co.	Luzerne,	O'Boyle and Foy,	Pittston,	Charles Walker,	Sugar Notch,	C. R. R. of N. J.
Huddleigh,	Luzerne,	O'Boyle and Foy,	Pittston,	Charles Walker,	Sugar Notch,	C. R. R. of N. J.

TABLE 2.—Seventh Anthracite District, 1963  
 Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of tons of coal shipped by rail or otherwise, and number of kegs of powder used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lehigh and Wilkes-Barre Coal Co.												
Hollenback, .....	Luzerne, .....	263,221	.....	33,456	306,677	*	560	3	4	7,584	17,400	76
South Wilkes-Barre, .....	Luzerne, .....	3,143	.....	60,574	441,377	237	811	12	12	9,894	77,300	119
Stanton, .....	Luzerne, .....	151,178	.....	4,951	156,129	140	740	2	8	4,756	10,597	90
Sugar Notch, .....	Luzerne, .....	385,620	.....	8,088	393,707	242	541	2	2	9,453	16,113	68
Maxwell, .....	Luzerne, .....	413,874	.....	.....	421,962	241	733	3	12	11,619	43,375	78
Totals, .....	Luzerne, .....	1,516,295	.....	119,656	1,137,362	219	3,397	11	33	43,318	157,785	431
Jersey washery, .....												
Totals, .....	Luzerne, .....	64,321	.....	.....	64,321	213	37	.....	.....	.....	.....	1
Susquehanna Coal Co.												
Shaft No. 2, Colliery No. 5, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shaft No. 4, Colliery No. 5, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shaft No. 5, Colliery No. 5, .....	Luzerne, .....	349,166	73,769	18,868	441,733	222	1,331	.....	15	13,835	62,334	148
Slope No. 4, Colliery No. 5, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tunnel No. 4, Colliery No. 5, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shaft No. 6, Colliery No. 6, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Slope No. 6, Colliery No. 6, .....	Luzerne, .....	354,046	40,986	2,999	398,031	224	1,115	5	5	13,038	8,200	101
Tunnel No. 6, Colliery No. 6, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South shaft No. 1, Colliery No. 7, .....	Luzerne, .....	372,107	63,983	1,508	437,598	230	1,306	5	16	7,317	76,186	182
North shaft No. 1, Colliery No. 7, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	Luzerne, .....	1,075,319	178,678	23,375	1,277,402	232	3,755	16	36	34,190	148,720	431

\*Totals in this column are averages.

Delaware, Laekawanna and Western R. Co.	30,332	1,798	401,142	290	867	3	13	9,554	9,686	59
Bliss, .....	309,413									
Espy tunnel, .....		3,065	95,482	265	389	1	6	2,300	41,375	19
Auchincloss shaft No. 1, .....	83,630									
Auchincloss shaft No. 2, .....										
Totals, .....	452,643	4,893	496,625	263	1,256	4	19	11,854	51,061	78
Lehigh Valley Coal Co.										
Derrance, .....	270,145	59,589	311,797	222	693	3	4	7,107	82,000	89
Franklin, .....	225,515	20,794	231,044	236	647	2	10	8,831	16,226	165
Totals, .....	495,660	80,383	542,841	229	1,340	5	14	15,938	98,226	194
Delaware and Hudson Co.										
Conyngnam shaft No. 1, .....	151,291	4,821	182,036	202	409	.....	3	4,136	2,250	49
Conyngnam shaft No. 2, .....										
Alden Coal Co.										
Alden shaft No. 1, .....	270,334	3,931	289,265	198	658	.....	6	8,725	14,550	31
Alden shaft No. 2, .....										
Warrior Run Coal Co.										
Warrior Run, .....	184,040	1,615	291,215	203	473	6	4	6,788	2,509	29
Red Ash Coal Co.										
Red Ash No. 1, .....	141,300	*	152,777	131	336	2	3	1,705	1,250	19
Red Ash No. 2, .....									525	34
Totals, .....	141,300	9,962	152,777	129	526	2	3	2,989	1,775	53
Pittston Coal and Mining Co.										
Hadleigh, .....	31,487	53	34,040	96	219	1	1	1,304	2,000	18
Grand totals, .....	4,387,681	221,174	4,926,474	.....	12,070	39	124	129,222	476,867	1,355

TABLE 2—Recapitulation

Delaware, Laekawanna and Western R. Co.	30,332	1,798	401,142	290	867	3	13	9,554	9,686	59
Bliss, .....	309,413									
Espy tunnel, .....	83,630	3,065	95,482	265	389	1	6	2,300	41,375	19
Auchincloss shaft No. 1, .....										
Auchincloss shaft No. 2, .....										
Totals, .....	452,643	4,893	496,625	263	1,256	4	19	11,854	51,061	78
Lehigh Valley Coal Co.										
Derrance, .....	270,145	59,589	311,797	222	693	3	4	7,107	82,000	89
Franklin, .....	225,515	20,794	231,044	236	647	2	10	8,831	16,226	165
Totals, .....	495,660	80,383	542,841	229	1,340	5	14	15,938	98,226	194
Delaware and Hudson Co.										
Conyngnam shaft No. 1, .....	151,291	4,821	182,036	202	409	.....	3	4,136	2,250	49
Conyngnam shaft No. 2, .....										
Alden Coal Co.										
Alden shaft No. 1, .....	270,334	3,931	289,265	198	658	.....	6	8,725	14,550	31
Alden shaft No. 2, .....										
Warrior Run Coal Co.										
Warrior Run, .....	184,040	1,615	291,215	203	473	6	4	6,788	2,509	29
Red Ash Coal Co.										
Red Ash No. 1, .....	141,300	*	152,777	131	336	2	3	1,705	1,250	19
Red Ash No. 2, .....									525	34
Totals, .....	141,300	9,962	152,777	129	526	2	3	2,989	1,775	53
Pittston Coal and Mining Co.										
Hadleigh, .....	31,487	53	34,040	96	219	1	1	1,304	2,000	18
Grand totals, .....	4,387,681	221,174	4,926,474	.....	12,070	39	124	129,222	476,867	1,355

\*Included in Red Ash No. 2.

†Totals in this column are averages.

Lehigh and Wilkes-Barre Coal Co.	1,580,617	119,656	1,700,273	219	3,454	11	38	43,318	157,785	422
Susquehanna Coal Co., .....	1,075,349	23,375	1,277,402	232	3,755	10	36	34,194	136,720	451
Delaware, Laekawanna and Western R. Co.	39,089	4,838	496,625	293	1,256	4	19	11,854	51,061	78
Lehigh Valley Coal Co., .....	495,660	64,335	562,841	229	1,340	5	14	15,938	98,226	194
Delaware and Hudson Co., .....	151,291	4,821	182,036	202	409	.....	3	4,136	2,250	49
Alden Coal Co., .....	270,334	3,931	289,265	198	658	.....	6	8,725	14,550	31
Warrior Run Coal Co., .....	184,040	1,615	291,215	203	473	6	4	6,788	2,509	29
Pittston Coal and Mining Co., .....	141,300	9,962	152,777	129	526	2	3	2,989	1,775	53
Totals, .....	31,487	2,500	34,040	96	219	1	1	1,304	2,000	18
Grand totals, .....	4,387,681	221,174	4,926,474	.....	12,070	39	124	129,222	476,867	1,355

\*Not including washeries.

TABLE 2—Continued

Names of Operators and Collieries.	County	Number of Boilers			Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power		Steam	Air	Electric							
			Tubular	Horse power										
Lehigh and Wilkes-Barre Coal Co.														
Hollenback, .....	Luzerne, .....	.....	8	2,000	2,000	.....	.....	2,542	1	800	800	.....	.....	.....
South Wilkes-Barre, .....	Luzerne, .....	4	10	1,500	1,640	1	.....	2,787	1	648	450	.....	.....	1
Sugar Notch, .....	Luzerne, .....	36	6	1,250	2,870	1	.....	4,808	2	2,370	1,600	.....	.....	2
Maxwell, .....	Luzerne, .....	15	6	1,500	1,500	1	.....	17,621	3	1,848	500	.....	.....	.....
	Luzerne, .....	.....	12	1,969	2,669	1	.....	4,311	4	3,672	2,200	.....	.....	.....
	Luzerne, .....	55	2,450	42	8,219	10,669	4	1	172	17,069	11	3,338	5,550	.....
Jersey washery, .....	Luzerne, .....	3	129	2	60	180	1	.....	5	329	.....	.....	.....	.....
Totals, .....		58	2,570	44	8,279	10,849	5	1	177	17,401	11	9,338	5,550	.....
Susquehanna Coal Co.														
Shaft No. 2, Colliery No. 5, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shaft No. 4, Colliery No. 5, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shaft No. 5, Colliery No. 5, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tunnel No. 4, Colliery No. 5, .....	Luzerne, .....	16	500	18	4,484	5,044	7	.....	.....	.....	.....	.....	.....	3
Shaft No. 6, Colliery No. 6, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shaft No. 6, Colliery No. 6, .....	Luzerne, .....	6	212	10	2,500	2,712	4	.....	.....	.....	.....	.....	.....	.....
Tunnel No. 6, Colliery No. 6, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South shaft No. 1, Colliery No. 7, .....	Luzerne, .....	15	525	16	3,780	4,305	4	.....	.....	.....	.....	.....	.....	.....
North shaft No. 1, Colliery No. 7, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....		37	1,297	44	10,764	12,061	15	3	67	11,000	15	13,900	4,575	.....
Delaware, Lackawanna and Western R. R. Co.														
Bliss, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Espy tunnel, .....	Luzerne, .....	.....	11	1,500	1,500	1	.....	4	20	2,896	1	633	423	.....

Auchincloss shaft No. 1, Luzerne, ...																				
Auchincloss shaft No. 2, Luzerne, ...																				
Totals, Luzerne, ...	18	2,375	2,375	1	4	26	4,840	1	634	423										
Lehigh Valley Coal Co. Luzerne, ...	9	1,450	1,450	2		27	1,450			400										
Dorrance, Luzerne, ...	10	1,500	1,500	3		20	1,500	4		800										
Franklin, Luzerne, ...										2,650										
Totals, Luzerne, ...	19	2,950	2,950	5		47	2,950	4		3,450										
Delaware and Hudson Co. Luzerne, ...	5	750	750			27	2,059	2		2,000										
Conyngham shaft No. 1, Luzerne, ...										500										
Conyngham shaft No. 2, Luzerne, ...										1,000										
Alden Coal Co. Luzerne, ...	18	720	720	1		9	1,375	2		1,800										
Alden shaft No. 1, Luzerne, ...										1,000										
Alden shaft No. 2, Luzerne, ...										1,000										
Warrior Run Coal Co. Luzerne, ...	11	240	900	1,140		6	1,130			3,000										
Warrior Run, Luzerne, ...																				
Red Ash No. 1, Luzerne, ...	9	405	405	1		3	351	2		834										
Red Ash No. 2, Luzerne, ...	14	630	630	1		8	570			824										
Totals, Luzerne, ...	23	1,035	1,035	2		11	921	2		824										
Pittston Coal and Mining Co. Luzerne, ...	6	180	310	490		10	300	1		300										
Hadleigh, Luzerne, ...																				
Grand totals, Luzerne, ...	153	6,042	27,081	33,123	29	4	380	41,976	38	35,216	16,132	4	18							

TABLE 2—Recapitulation

Lehigh and Wilkes-Barre Coal Co., Luzerne, ...	58	2,570	8,279	10,849	5	1	177	17,401	11	9,338	5,550									
Susquehanna Coal Co., Luzerne, ...	37	1,297	10,764	12,061	15	3	67	11,000	15	13,900	4,575									
Delaware, Lackawanna and Western R. Co., Luzerne, ...																				
Lehigh Valley Coal Co., Luzerne, ...																				
Delaware and Hudson Co., Luzerne, ...	19	2,375	2,375	1		4	4,840	1		634	423									
Alden Coal Co., Luzerne, ...	5	750	750			27	2,059	2		2,000	2,000									
Warrior Run Coal Co., Luzerne, ...	18	720	720	1		9	1,375	2		1,800	1,000									
Red Ash Coal Co., Luzerne, ...	11	240	900	1,140		6	1,130			3,000										
Red Ash Coal and Mining Co., Luzerne, ...	23	1,035	1,035	2		11	921	2		824	824									
Pittston Coal and Mining Co., Luzerne, ...	6	180	310	490		10	300	1		300	200									
Totals, Luzerne, ...	153	6,042	27,081	33,123	29	4	380	41,976	38	35,216	16,132	4	18							

TABLE 3.—Seventh Anthracite District, 1903  
Number of Each Class of Employes at Each Colliery

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside										
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes	Total outside	(Grand total, inside and outside)
Lehigh and Wilkes-Barre Coal Co.	Luzerne,	1	1	6	140	106	51	24	2	54	5	330	.....	1	5	18	35	35	74	170	560	
Hollenback, .....	Luzerne,	1	2	10	188	165	66	71	1	421	.....	625	.....	1	7	27	76	11	64	189	814	
South Wilkes-Barre, .....	Luzerne,	2	1	7	172	118	61	20	2	54	62	518	.....	1	6	35	56	31	91	222	740	
Stanton, .....	Luzerne,	1	1	5	133	85	48	17	4	84	.....	308	.....	1	2	14	54	15	55	146	544	
Sugar Notch, .....	Luzerne,	1	1	6	298	120	30	40	4	90	15	516	.....	1	2	34	73	21	85	223	739	
Maxwell, .....	Luzerne,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	29	128	204	117	369	950	3,397	
Jersey washery, .....	Luzerne,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	5	4	3	22	37	31	
Totals, .....	.....	6	7	34	861	594	256	101	13	403	82	2,447	.....	6	31	133	298	116	12	391	987	3,434
Susquehanna Coal Co.	Luzerne,	2	2	19	267	314	103	34	8	50	115	905	1	1	35	55	98	21	6	212	429	1,334
Colliery No. 5, .....	Luzerne,	2	.....	5	258	235	108	1	4	38	93	745	.....	1	30	32	94	5	6	292	370	1,115
Colliery No. 6, .....	Luzerne,	2	.....	11	274	316	101	55	9	56	129	846	.....	1	32	45	67	19	6	190	360	1,206
Colliery No. 7, .....	Luzerne,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	7	4	26	799	865	312	90	21	141	328	2,586	1	3	37	132	259	45	18	604	1,159	3,755
Delaware, Lackawanna and West-	Luzerne,	1	1	5	162	218	62	30	2	32	95	638	.....	1	8	9	89	15	2	104	229	867
Bliss, .....	Luzerne,	1	.....	2	90	47	15	5	.....	132	.....	292	.....	1	4	11	27	.....	1	53	97	389
Auchincloss, .....	Luzerne,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	2	1	7	282	265	77	35	2	161	95	930	.....	2	12	20	116	15	4	157	326	1,256

Lehigh Valley Coal Co.																					
Borrance,	2	5	140	95	59	26	2	89	70	508	1	13	11	30	13	4	113	185	693		
Franklin,	1	4	141	107	74	20	7	27	92	474	.....	1	22	16	21	5	104	173	647		
Totals,	3	1	9	202	153	46	9	116	162	982	.....	2	35	27	51	19	7	217	358	1,340	
Delaware and Hudson Co.																					
Conyngham,	1	1	4	84	38	16	3	58	8	287	.....	1	6	15	26	35	1	38	122	409	
Alden Coal Co.																					
Alden,	1	1	5	184	145	37	2	51	.....	477	1	11	24	23	36	7	78	181	658		
Warrior Run Coal Co.																					
Warrior Run,	1	1	2	110	22	29	4	13	38	330	1	1	4	18	22	26	4	67	143	473	
Red Ash Coal Co.																					
Red Ash No. 1,	1	.....	38	41	17	3	3	24	.....	127	.....	.....	5	.....	.....	.....	.....	58	63	190	
Red Ash No. 2,	1	1	.....	43	47	20	4	.....	27	143	1	1	9	9	33	42	2	96	103	336	
Totals,	2	1	.....	81	88	37	7	3	51	.....	270	1	1	14	33	42	2	154	256	526	
Pittston Coal and Mining Co.																					
Haddleigh,	1	.....	1	60	40	12	4	2	12	.....	132	1	1	4	10	22	4	.....	45	87	219
Grand totals,	21	17	88	2,742	2,383	958	59	1,012	713	8,451	5	18	299	393	850	338	55	1,751	3,619	12,070	

TABLE 3—Recapitulation

Lehigh and Wilkes-Barre Coal Co.																					
Susquehanna,	6	7	34	861	594	256	191	13	403	82	2,447	6	31	133	298	116	12	331	587	3,454	
Delaware, Lackawanna and Western R. Co.,	7	4	26	799	865	312	90	21	144	328	2,596	1	3	132	259	45	18	604	1,133	3,735	
Lehigh Valley Coal Co.,	3	1	7	282	295	77	35	2	161	95	930	.....	2	20	116	15	4	157	336	1,276	
Delaware and Hudson Co.,	1	1	4	84	74	38	16	3	58	8	682	2	35	27	11	39	1	217	358	1,240	
Alden Coal Co.,	1	1	5	184	145	51	37	2	51	.....	477	1	6	25	23	36	7	78	181	658	
Warrior Run Coal Co.,	1	1	2	110	22	29	4	2	51	.....	330	1	1	4	18	22	26	4	67	143	473
Red Ash Coal and Mining Co.,	2	1	.....	81	88	37	4	2	12	.....	132	1	1	10	32	42	2	151	256	526	
Totals,	21	17	88	2,742	2,383	958	455	59	1,012	713	8,451	5	18	299	393	850	55	1,771	3,619	12,070	

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Lehigh and Wilkes-Barre Coal Co.	Luzerne, .....	22.7	19.4	21.8	19.3	19.7	20.5	21.5	18.9	20.7	20.4	15.9	16.6	237
Hollenback .....	Luzerne, .....	24.5	23.0	23.1	17.4	17.3	19.5	19.1	18.5	20.4	20.4	15.8	17.0	236
South Wilkes-Barre, .....	Luzerne, .....	.....	4.0	5.8	.....	11.6	20.2	18.3	18.4	19.7	12.0	14.8	14.5	149
Stanton, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	212
Sugar Notch, .....	Luzerne, .....	24.6	20.5	23.3	20.4	20.3	22.1	21.9	20.1	21.2	15.5	14.7	16.9	242
Maxwell, .....	Luzerne, .....	23.0	20.4	21.5	21.2	18.8	20.4	21.6	20.6	21.0	19.9	15.9	17.0	241
Averages, .....	.....	23.7	17.5	19.1	15.8	17.5	20.5	20.5	19.3	20.6	17.6	15.4	16.4	219
Susquehanna Coal Co.	Luzerne, .....	23.1	20.7	22.0	21.7	19.6	18.5	21.0	20.6	16.5	16.7	18.1	13.8	232
Colliery No. 3, .....	Luzerne, .....	20.7	17.3	20.1	22.8	19.6	17.9	19.8	21.9	17.9	13.7	18.0	14.3	224
Colliery No. 2, .....	Luzerne, .....	22.9	22.1	22.6	24.0	20.5	19.0	22.4	21.9	17.0	14.5	17.7	14.7	239
Colliery No. 4, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Averages, .....	.....	22.2	20	21.6	22.8	19.9	18.5	21.1	21.5	17.1	15	17.9	14.3	232
Delaware, Lackawanna and Western R. R. Co.	Luzerne, .....	22.2	18.9	1.6	12.4	20.5	21.1	21.1	19.8	19.0	12.8	14.4	16.3	200
Bliss, .....	Luzerne, .....	12.6	18.6	20.6	20.0	20.2	19.8	19.1	20.2	15.1	9.1	13.7	15.6	205
Auchincloss, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Averages, .....	.....	17.4	18.8	11.1	16.2	20.4	20.5	20.1	20	17.1	11	14.1	16	203
Lehigh Valley Coal Co.	Luzerne, .....	21.9	17.8	21.3	18.5	17.5	23.3	20.0	18.8	14.6	13.5	13.2	15.6	222
Dorrance, .....	Luzerne, .....	24.6	22.2	21.3	21.4	19.3	20.2	22.3	21.1	18.6	11.2	14.0	16.6	236
Franklin, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Averages, .....	.....	23.3	20	22.8	20	18.4	24.8	21.2	20	16.6	12.4	13.6	16.1	229
Delaware and Hudson Co.	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Conyngnam, .....	Luzerne, .....	20	16.6	18.5	16.2	15.8	18.2	19.1	18.4	16.5	10.7	14.9	17.3	202



Alden, Alden Coal Co.	21.4	19	17.6	13.4	16.6	16.7	17.7	16.8	13.1	13.6	17.9	13.9	198
Warrior Run, Warrior Run Coal Co.	18	16.3	13.9	18	16.2	15.3	18	16.2	17.1	14.4	15.3	18.9	203
Red Ash No. 1, Red Ash Coal Co.	22.6	19.6	18.8	18.2	16.2	18.4	13.2						127
Red Ash No. 2, Red Ash Coal Co.	22.6	19.6	21.4	18.7	16.2	18.4	13.8						131
Averages, Pittston Coal and Mining Co.	22.6	19.6	20.1	18.5	16.2	18.4	13.5						129
Hadleigh, Pittston Coal and Mining Co.	5.5	6	2			4.5	11.3	14.4	14.8	9.5	14.4	13.5	96
Averages, .....	19.3	17.1	16.9	17.6	17.6	17.5	18	18.3	16.6	13	15.4	15.8	190

TABLE 3—Recapitulation

Lehigh and Wilkes-Barre Coal Co., Luzerne, .....	23.7	17.5	19.1	15.8	17.5	20.5	20.5	19.3	30.6	17.6	15.4	16.4	219
Susquehanna Coal Co., Luzerne, .....	22.2	20	21.6	22.8	19.9	18.5	21.1	21.5	17.1	15	17.9	14.3	232
Delaware, Lackawanna and Western R. R. Co., Luzerne, .....	17.4	18.8	11.1	16.2	20.4	20.5	20.1	20	17.1	11	14.1	16.1	303
Lehigh Valley Coal Co., Luzerne, .....	23.3	20	22.8	20	18.4	24.8	21.2	20	16.6	12.4	13.6	16.1	399
Delaware and Hudson Co., Luzerne, .....	20	16.6	18.5	16.2	15.8	18.2	19.1	18.4	16.5	10.7	11.9	17.3	292
Alden Coal Co., Luzerne, .....	21.4	19	17.6	13.4	16.6	16.7	17.7	16.8	13.1	13.6	17.9	13.9	148
Warrior Run Coal Co., Luzerne, .....	18	16.3	18.9	18	16.2	15.3	18	16.2	17.1	14.4	15.3	18.9	203
Red Ash Coal Co., Luzerne, .....	22.6	19.6	20.1	18.5	16.2	18.4	13.5						129
Pittston Coal and Mining Co., Luzerne, .....	5.5	6	2			4.5	11.3	14.4	14.8	9.5	14.4	13.5	96
Averages, .....	19.3	17.1	16.9	17.6	17.6	17.5	18	18.3	16.6	13	15.4	15.8	190

TABLE 4.—Seventh Anthracite District, 1903  
Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age			Name of Colliery	County	Nature and Cause of Accident in Brief
				Married or single	Number of widows	Number of orphans			
Jan.	2 John Brown, .....	German, .....	Doorman, .....	M. 56	1	1	Maxwell, .....	Luzerne,	Run over by loaded trip.
	3 Joseph Grassberger, .....	German, .....	Miner, .....	M. 64	1	1	Slope No. 6, .....	Luzerne,	Fatally injured by premature blast.
	10 Adam Vishinsky, .....	Polish, .....	Miner, .....	M. 41	1	2	Warrior Run, .....	Luzerne,	Fatally injured by fall of top coal.
Feb.	13 Thomas L. James, .....	Welsh, .....	Miner, .....	M. 40	1	1	Bliss, .....	Luzerne,	Fatally burned by gas.
	13 Joseph Petlock, .....	Austrian, .....	Footman, .....	M. 38	1	3	Franklin, .....	Luzerne,	Empire card machine on breaker plane, lamp, and killed him.
	14 Christian Christensen, .....	Swedish, .....	Miner, .....	S. 28	S.	.....	Sugar Notch, .....	Luzerne,	Instantly killed by a fall of rock.
March	12 Theodore Tucker, .....	American, .....	Slate picker, .....	S. 46	S.	.....	Red Ash No. 2, .....	Luzerne,	Instantly killed by falling into the elevators.
	3 Patrick Kealey, .....	Irish, .....	Miner, .....	M. 39	M. 1	.....	Achnacross, .....	Luzerne,	Instantly killed by exploding cartridge.
	14 Frank Minich, .....	American, .....	Miner, .....	S. 36	S.	.....	Warrior Run, .....	Luzerne,	Fatally burned by explosion of gas.
April	23 Michael Slater, .....	Polish, .....	Miner, .....	M. 45	M. 1	.....	Maxwell, .....	Luzerne,	Instantly killed by a premature blast.
	39 Joseph Titus, .....	Tyrollan, .....	Laborer, .....	M. 39	M. 1	3	Franklin, .....	Luzerne,	Instantly killed by a fall of roof.
	Jacob Siskle, .....	Polish, .....	Laborer, .....	M. 59	W.	.....	Dorrance, .....	Luzerne,	Instantly killed by a fall of coal from the rib.
May	5 Anthony Bruges, .....	Lithuanian, .....	Laborer, .....	S. 27	S.	.....	Warrior Run, .....	Luzerne,	Fatally burned by explosion of a keg of powder.
	29 William Wright, .....	English, .....	Footman, .....	S. 21	S.	.....	Slope No 6, .....	Luzerne,	Instantly killed by falling down slope.
June	Isaac Transue, .....	German, .....	Trackman, .....	M. 32	M. 1	.....	Bliss, .....	Luzerne,	Fatally burned and bruised by an explosion of gas.
	3 Andrew Petronick, .....	Russian, .....	Laborer, .....	M. 30	M. 1	1	Bliss, .....	Luzerne,	Chain on new slope broke and empty car ran away and caught him.
	4 William D. Williams, .....	Welsh, .....	Fire boss, .....	M. 42	M. 1	.....	No 1 shaft, .....	Luzerne,	Killed by gas, which he lit while trying to light his lamp.
July	4 Joseph Kootz, .....	Polish, .....	Miner, .....	M. 34	M. 1	1	No 1 shaft, .....	Luzerne,	Instantly killed by a fall of bone.
	17 John Hayes, .....	American, .....	Runner, .....	M. 21	W.	.....	Dorrance, .....	Luzerne,	Squeezed between car and rib by car jumping track.
August	17 Samuel Figulla, .....	Slovakian, .....	Laborer, .....	M. 63	M. 1	5	Breaker No. 6, .....	Luzerne,	Run over by mine car.
	17 Edward Morrissey, .....	Irish, .....	Miner, .....	M. 31	M. 1	2	Warrior Run, .....	Luzerne,	Burned by an explosion of gas, while they were repairing brattice that had fallen.
	17 Nelson Taylor, .....	American, .....	Miner, .....	M. 40	M. 1	4	Warrior Run, .....	Luzerne,	Burned by an explosion of gas as he was shoveling coal at the face.
22 Frank Baker, .....	Polish, .....	Laborer, .....	S. 35	S.	.....	Warrior Run, .....	Luzerne,		

June	22	John B. Oosky, .....	Polish, .....	Laborer, .....	27	S. ....	Shaft No. 6, .....	Luzerne, .....	Instantly killed by a fall of rock.
	30	Martin Goyack, .....	Polish, .....	Co. laborer, .....	36	M. ....	Maxwell, .....	Luzerne, .....	Instantly killed by a fall of roof.
July	1	Frank Yanozefski, .....	Polish, .....	Lab. ror, .....	49	S. ....	So. shaft No. 1, .....	Luzerne, .....	Instantly killed by a fall of roof.
	2	Thomas McDonald, .....	Irish, .....	Co. laborer, .....	57	M. ....	Haulteigh, .....	Luzerne, .....	While shoveling culm, he was caught by a rush and jumped into the conveyer line.
	3	Anthony Baltrichus, .....	Lithuanian, .....	Driver, .....	17	S. ....	Hollenback, .....	Luzerne, .....	Instantly killed; caught between loaded car and rib.
	3	William Kitchen, .....	English, .....	Co. miner, .....	41	M. ....	Stanton, .....	Luzerne, .....	Fatally injured by a fall of rock while standing props in the sump.
	21	William L. Jones, .....	Welsh, .....	Miner, .....	50	M. ....	Red Ash No. 2, ..	Luzerne, ..	Instantly killed by a fall of top rock.
	30	Kadzhmus Oehram, .....	Polish, .....	Laborer, .....	33	M. ....	Dorraine, .....	Luzerne, ..	Fell down shaft from the Hillman landing to the bathmore.
Aug.	8	David J. Lewis, .....	Welsh, .....	Miner, .....	38	M. ....	Hollenback, .....	Luzerne, ..	Instantly killed by a fall of top rock.
	18	Patrick Conroy, .....	Irish, .....	Miner, .....	40	M. ....	Sugar Notch, .....	Luzerne, ..	Fatally injured by a premature blast.
	29	Anthony Kozlowski, .....	Irish, .....	Co. laborer, .....	37	S. ....	Breaker No. 7, .....	Luzerne, ..	Instantly killed by a railroad car running over him.
Sept.	23	William Dawis, .....	Polish, .....	Miner, .....	28	M. ....	So. shaft No. 1, .....	Luzerne, ..	Instantly killed by a fall of roof rock.
	23	Adam Yedite, .....	German, .....	Miner, .....	49	S. ....	No. shaft No. 6, ..	Luzerne, ..	Instantly killed by a fall of roof rock.
	28	Anthony Berski, .....	Polish, .....	Miner, .....	22	S. ....	So. Wilkes-Barre,	Luzerne, ..	Fatally injured by an explosion of gas.
Oct.	6	Henry Law, .....	American, .....	Miner, .....	43	M. ....	So. Wilkes-Barre,	Luzerne, ..	Fatally injured by an explosion of gas.
Nov.	28	Evan D. Roberts, .....	Welsh, .....	Co. miner, .....	49	M. ....	Stanton, .....	Luzerne, ..	Instantly killed by an explosion of gas.

TABLE 5.—Seventh Anthracite District, 1903  
Non-Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 7	Ellis Williams, .....	Welsh, .....	Miner, .....	54	M.	South Wilkes-Barre, ..	Luzerne,	Burned by gas, which he ignited while harring down coal.
7	James Davis, .....	Welsh, .....	Laborer, .....	38	S.	South Wilkes-Barre, ..	Luzerne,	Injured by gas, which Williams ignited.
8	John Bolla, .....	Polish, .....	Laborer, .....	21	S.	Corryham, .....	Luzerne,	Injured by a piece of middle rock falling upon him.
16	Harry Hansen, .....	Swedish, .....	Miner, .....	48	M.	Alden shaft, No. 2, .....	Luzerne,	Burned on face and hands by gas.
17	Frank Kucufski, .....	Polish, .....	Laborer, .....	28	M.	Maxwell, .....	Luzerne,	Both legs broken by a fall of rock.
17	Thome Kucufski, .....	American, .....	Laborer, .....	43	S.	Maxwell, .....	Luzerne,	Leg broken by a fall of rock.
22	Peter Krcosiek, .....	Polish, .....	Laborer, .....	24	S.	Shaft No. 1, .....	Luzerne,	Leg broken by a fall of roof rock.
24	Thomas Peines, .....	German, .....	Timberman, .....	58	M.	Stant n, .....	Luzerne,	Finger cut off by mule jumping upon it.
24	Martin Baliek, .....	Polish, .....	Laborer, .....	29	M.	Derrance, .....	Luzerne,	Two ribs broken by a piece of coal falling upon him.
26	Matthew Backelonis, ..	Lithuanian, ..	Miner, .....	30	M.	Maxwell, .....	Luzerne,	Caught by coal bursting a cross heading and cut about body.
27	Lewis L'ardi, .....	Italian, .....	Miner, .....	38	M.	No. 6, Glen Lyon, .....	Luzerne,	Fell from top of chute and broke a rib.
27	Thomas Chamberlain, ..	English, .....	Laborer, .....	29	M.	Bliss, .....	Luzerne,	Cut on face and hands by explosion of coal.
28	Dominick Comniff, .....	Lithuanian, ..	Miner, .....	39	S.	Sugar Notch, .....	Luzerne,	Burned by gas.
28	Michael Taylor, .....	Lithuanian, ..	Laborer, .....	28	S.	Sugar Notch, .....	Luzerne,	Burned by gas.
29	John Ocosta, .....	Polish, .....	Laborer, .....	57	M.	Breaker No. 6, .....	Luzerne,	Foot smashed by a slate chute gate falling upon it.
Feb. 3	Stanley Marcowski, .....	Polish, .....	Miner, .....	52	M.	North shaft, .....	Luzerne,	Side bruised and head cut by flying coal from blast.
9	Joseph Ratchefski, .....	Polish, .....	Miner, .....	31	M.	South shaft, .....	Luzerne,	Back and legs bruised by fall of top rock.
9	Joseph Shusda, .....	Lithuanian, ..	Miner, .....	28	M.	Maxwell, .....	Luzerne,	Burned on hands and face by gas.
14	Louis Ford, .....	American, .....	Door boy, .....	18	S.	Slope No. 4, .....	Luzerne,	Collar bone broken; caught between car and collar.
18	Ludwig Kishel, .....	Polish, .....	Miner, .....	33	M.	North shaft, No. 1, .....	Luzerne,	Hip fractured by fall of roof.
26	John Kubotchski, .....	Polish, .....	Laborer, .....	40	M.	Slope No. 6, .....	Luzerne,	Ankle broken; caught between two props.
27	John Gumierski, .....	Polish, .....	Laborer, .....	35	S.	Bliss, .....	Luzerne,	Right leg broken by coal in chute.
28	Martin Blockus, .....	Polish, .....	Door boy, .....	16	S.	South shaft No. 1, .....	Luzerne,	Head and shoulder between car and rib; ear broken by falling coal.
March 2	Andrew Yuskewicz, .....	Polish, .....	Laborer, .....	53	M.	Shaft No. 2, .....	Luzerne,	Hand smashed by car falling upon it.
3	Joe Kellar, .....	Lithuanian, ..	Miner, .....	46	M.	Bliss, .....	Luzerne,	Ankle dislocated by fall of top coal.

Month	No.	Name	Nationality	Occupation	Age	Location	Description of Accident
March	3	Binis Vinea, .....	Polish, .....	Laborer, .....	33	M. Auchincloss, .....	Luzerne, .....
	9	John Klincsove, .....	German, .....	Carpenter, .....	47	M. Bliss, .....	Luzerne, .....
	10	Michael Kopychak, .....	Slovakian, .....	Laborer, .....	34	M. Bliss, No. 4, Nanticoke, .....	Luzerne, .....
	13	C. N. Rice, .....	American, .....	Carpenter, .....	54	M. Bliss, .....	Luzerne, .....
	14	Michael Curlin, .....	American, .....	Footman, .....	29	M. Maxwell, .....	Luzerne, .....
	16	Paul Gruskey, .....	German, .....	Door boy, .....	16	S. Maxwell, .....	Luzerne, .....
	20	Anthony Grozavage, .....	Polish, .....	Laborer, .....	18	S. Franklin, .....	Luzerne, .....
	20	Fred. Davis, .....	American, .....	Company laborer, .....	21	S. Shaft No. 2, .....	Luzerne, .....
	24	Joseph Weiss, .....	Polish, .....	Miner, .....	25	S. Franklin, .....	Luzerne, .....
	24	David Layshon, .....	Welsh, .....	Company miner, .....	33	W. Franklin, .....	Luzerne, .....
	24	Edwin Richards, .....	English, .....	Miner, .....	28	M. Auchincloss No. 1, .....	Luzerne, .....
	28	Edgar Clark, .....	English, .....	Door boy, .....	15	S. Shaft No. 1, Nanticoke, .....	Luzerne, .....
	31	Anthony Steffories, .....	Polish, .....	Miner, .....	28	M. Wilkes-Barre, .....	Luzerne, .....
	April	11	Ronald Griffiths, .....	Welsh, .....	Company laborer, .....	56	M. Red Ash No. 2, .....
14		August Granitzki, Sr., .....	Polish, .....	Laborer, .....	25	S. Breaker No. 7, Nanticoke, .....	Luzerne, .....
14		John W. Richards, .....	Welsh, .....	Miner, .....	54	M. Auchincloss, .....	Luzerne, .....
21		Anthony Kelly, .....	American, .....	Engineer, .....	24	S. Stanton, .....	Luzerne, .....
23		Albatt Bowman, .....	American, .....	Miner, .....	40	M. South Wilkes-Barre, .....	Luzerne, .....
23		John Smith, .....	Polish, .....	Miner, .....	38	M. South Wilkes-Barre, .....	Luzerne, .....
27		Mike Stevinski, .....	Polish, .....	Runner, .....	21	S. No. 1 shaft, Nanticoke, .....	Luzerne, .....
27		Fred. Dugan, .....	Irish, .....	Door boy, .....	16	S. Conyngham, .....	Luzerne, .....
28		Valentine Vinkofski, .....	Polish, .....	Miner, .....	30	M. No. 1 shaft, Nanticoke, .....	Luzerne, .....
29		Joe D. Mearis, .....	American, .....	Door boy, .....	16	S. Warrrior 1th, .....	Luzerne, .....
May	30	Andrew Galinski, .....	Lithuanian, .....	Miner, .....	27	S. Bliss, .....	Luzerne, .....
	5	William Poslanski, .....	Lithuanian, .....	Miner, .....	40	M. Warrrior Run, .....	Luzerne, .....
	8	Patrick Zublan, .....	Polish, .....	Door boy, .....	16	S. Franklin, .....	Luzerne, .....
	9	Thomas Parfitt, .....	English, .....	Company miner, .....	43	M. No. 4 slope, Nanticoke, .....	Luzerne, .....
	12	Harry Keller, .....	American, .....	Runner, .....	19	S. No. 6 breaker, Glen Lyon, .....	Luzerne, .....
	18	Reese Phillips, .....	American, .....	Helper, .....	17	S. Hollenback, .....	Luzerne, .....
	19	Sam Daniels, .....	American, .....	Carpenter, .....	24	M. South Wilkes-Barre, .....	Luzerne, .....
	19	Edwin Dayless, .....	English, .....	Miner, .....	45	M. Bliss, .....	Luzerne, .....
	19	John Hammaniski, .....	Slovakian, .....	Sprager, .....	19	S. Maxwell, .....	Luzerne, .....
	20	Frank Stozak, .....	Polish, .....	Laborer, .....	25	S. Breaker No. 6, Glen Lyon, .....	Luzerne, .....
	29	James Lynch, .....	Irish, .....	Trackman, .....	40	M. Bliss, .....	Luzerne, .....
	June	5	Mike Marra, .....	Polish, .....	Miner, .....	28	M. Slope No. 6, Glen Lyon, .....
6		Henry Muncetfski, .....	German, .....	Runner, .....	15	S. Breaker No. 7, Nanticoke, .....	Luzerne, .....

TABLE 5—Continued.

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
9	Andrew Herring, .....	English, .....	Laborer, .....	27	M.	Bliss, .....	Luzerne, .....	Struck by flying coal from premature blast.
17	Charles Bartleson, .....	American, ..	Driver, .....	34	M	Bliss, .....	Luzerne, .....	Pelvis fractured by force from gas explosion.
20	Frank Savickie, .....	Polish, .....	Miner, .....	35	M.	South Wilkes-Barre, .....	Luzerne, .....	Arm broken by car jumping track.
20	D. L. Evans, .....	Welsh, .....	Miner, .....	38	M.	Auchincloss, .....	Luzerne, .....	Collar bone broken by fall of rock.
22	William Laming, .....	American, ..	Slate picker, .....	45	S.	Red Ash No. 2, .....	Luzerne, .....	Arm cut off by a truck running over it.
24	Patrick O'Donnell, .....	Irish, .....	Miner, .....	29	M.	South Wilkes-Barre, .....	Luzerne, .....	Leg broken by a fall of coal.
25	Thomas Thomas, .....	Welsh, .....	Miner, .....	37	M.	Auchincloss, .....	Luzerne, .....	Back injured and legs broken by fall of coal.
30	John Malcoski, .....	Polish, .....	Company miner, .....	39	S.	Maxwell, .....	Luzerne, .....	Leg broken by fall of top rock.
July	Jacob Rodzinski, .....	Polish, .....	Miner, .....	32	M.	Shaft No. 2, Nanticoke, .....	Luzerne, .....	Leg broken by falling rock caught between car and top rock.
10	Walter Maynard, .....	American, ..	Company laborer, .....	21	S.	Breaker No. 5, Nanticoke, .....	Luzerne, .....	Two fingers broken; caught between locomotive and cars.
13	Felix Grazinski, .....	Polish, .....	Miner, .....	29	S.	Warrior Run, .....	Luzerne, .....	Arm broken by flying coal from blast.
18	Joe Uystachick, .....	Polish, .....	Plane footman, .....	21	S.	Breaker No. 7, Nanticoke, .....	Luzerne, .....	Foot broken; caught by loaded car.
23	Patrick Lenahan, .....	American, ..	Helper, .....	17	S.	Maxwell, .....	Luzerne, .....	Pelvis fractured; squeezed between cars.
23	Fred. Smith, .....	English, .....	Company laborer, .....	25	M.	Alden shaft No. 2, .....	Luzerne, .....	Leg broken by collar falling upon him.
23	Mike Simon, .....	Polish, .....	Laborer, .....	40	M.	Red Ash No. 2, .....	Luzerne, .....	Ankle broken by prop falling upon him.
28	John C. Kenyon, .....	American, ..	Teamster, .....	45	M.	Alden, .....	Luzerne, .....	Leg broken by prop falling upon him.
28	Frank Paramski, .....	Polish, .....	Laborer, .....	25	S.	No. Shaft, Nanticoke, .....	Luzerne, .....	Ankle broken; struck by a piece of coal from a blast.
30	Edward McManus, .....	American, ..	Driver, .....	27	M.	Franklin, .....	Luzerne, .....	Injured about body, arms and legs by runaway car.
31	John Bubrich, .....	Polish, .....	Door boy, .....	17	S.	Maxwell, .....	Luzerne, .....	Finger fell off trip.
Aug.	Stanley Podzalik, .....	Polish, .....	Miner, .....	30	M.	Warrior Run, .....	Luzerne, .....	Leg broken by a fall of coal.
5	Joseph Preuner, .....	Polish, .....	Miner, .....	38	M.	Franklin, .....	Luzerne, .....	Leg broken by a fall of rock.
7	Patrick McCue, .....	Irish, .....	Miner, .....	61	M.	Stanton, .....	Luzerne, .....	Arm broken by flying coal from premature blast.
13	Patrick Devaney, .....	American, ..	Runner, .....	22	S.	Franklin, .....	Luzerne, .....	Left hand smashed by explosion of dynamite cap.
13	Hugh Giniy, .....	American, ..	Runner, .....	28	M.	Franklin, .....	Luzerne, .....	Thumb caught between sprag and car wheel and cut off.
13	Andrew Cottolic, .....	Polish, .....	Laborer, .....	28	S.	Maxwell, .....	Luzerne, .....	Leg and arm broken by fall of roof.
13	John Weisgnble, .....	Polish, .....	Miner, .....	29	S.	Slope No. 4, .....	Luzerne, .....	Leg and arm broken by fall of roof.
13	John Strachinski, .....	Polish, .....	Miner, .....	35	M.	Slope No. 4, .....	Luzerne, .....	Burned by explosion of gas.

19	Peter Sheedock, .....	Slavonian, .....	Slate picker, ....	14	S. Bliss, .....	Luzerne, .....	Arm caught between belt and belt wheel and broken.
20	Adam Demiskey, .....	Polish, .....	Laborer, .....	29	S. Hollenback, .....	Luzerne, .....	Skull fractured by fall of rock.
3	Andrew Moroski, .....	Polish, .....	Miner, .....	27	M. Franklin, .....	Luzerne, .....	Bruised by flying coal from premature blast.
4	John Frinkivage, .....	Polish, .....	Miner, .....	23	S. Darrance, .....	Luzerne, .....	Arm broken by flying coal from premature blast.
9	Jacob Kipstus, .....	Polish, .....	Miner, .....	26	M. Stanton, .....	Luzerne, .....	Hip dislocated by fall of bone.
9	Henry Hergert, .....	American, .....	Driver, .....	32	M. Worrain, .....	Luzerne, .....	Leg broken by falling from trip of cars.
10	John Estvank, .....	Polish, .....	Runner, .....	35	M. Bracker No. 5, Nanticoke	Luzerne, .....	Block and fingers broken.
11	Joe Georski, .....	Polish, .....	Driver, .....	17	S. Bliss, .....	Luzerne, .....	Leg broken; caught between mule's stretcher and car.
14	Charles Stahl, .....	Polish, .....	Miner, .....	36	S. Alden No. 1, .....	Luzerne, .....	Leg broken by fall of coal.
15	Joseph Dobbins, .....	Lithuanian, .....	Miner, .....	38	S. Hollenback, .....	Luzerne, .....	Face and chest injured by premature blast.
16	Joseph Stowe, .....	Polish, .....	Laborer, .....	27	S. Shaft No. 1, Nanticoke,	Luzerne, .....	Finger cut off between a piece of rock and a prop.
23	Joseph Reutka, .....	Polish, .....	Laborer, .....	26	S. Shaft No. 1, Nanticoke,	Luzerne, .....	Finger cut off; a prop rolled on it.
5	Martin Oshkimas, .....	Polish, .....	Miner, .....	44	M. Hollenback, .....	Luzerne, .....	Collar bone broken; caught between an empty car and practice.
6	Eugene Caffroy, .....	American, .....	Oiler, .....	17	S. Heleleth, .....	Luzerne, .....	Fractured by falling light between cars.
10	John Moxatus, .....	American, .....	Driver, .....	19	S. South Wilkes-Barre, .....	Luzerne, .....	Shoulder and leg bruised by fall of bone.
12	Vladimir Koszowski, .....	Polish, .....	Miner, .....	24	M. Stanton, .....	Luzerne, .....	Rib fractured by fall of coal from roof.
13	Henry Kozicki, .....	Polish, .....	Miner, .....	33	M. South Wilkes-Barre, .....	Luzerne, .....	Arm cut off by loaded car.
19	Thomas McTigue, .....	American, .....	Runner, .....	19	S. Franklin, .....	Luzerne, .....	Thumb and two fingers blown off by dynamite cap.
19	John Leako, .....	Slavonian, .....	Miner, .....	33	M. Conyngham, .....	Luzerne, .....	Fell under the chain hoist trestle and broke his leg.
2	John Brown, .....	German, .....	Carpenter, .....	57	M. South Wilkes-Barre, .....	Luzerne, .....	Left hand amputated; injured by a premature blast.
4	Martin Piercoskie, .....	Polish, .....	Miner, .....	35	M. S. Shaft No. 1, Nanticoke,	Luzerne, .....	Leg smashed, necessitating amputation, by a fall of top rock.
11	John Shanley, .....	Polish, .....	Miner, .....	38	S. Alden shaft No. 2, ....	Luzerne, .....	Soverelyly burned and bruised by a premature blast.
16	John Kullek, .....	German, .....	Miner, .....	49	M. Alden shaft No. 2, ....	Luzerne, .....	Skull fractured by coal from a premature blast.
13	August Bozner, .....	German, .....	Miner, .....	42	M. Auchincloss, .....	Luzerne, .....	Arm fractured; struck by rope on plane.
23	Thomas Goff, .....	Irish, .....	Fire boss, .....	48	M. Shaft No. 5, .....	Luzerne, .....	Leg fractured; caught by a car jumping track.
28	Edward Speary, .....	American, .....	Driver, .....	20	S. Shaft No. 2, .....	Luzerne, .....	Arm broken by a flying missile from a gas explosion.
28	Thomas Bevan, .....	Welsh, .....	Runner, .....	30	S. Stanton, .....	Luzerne, .....	Burned severely by gas.
28	John Stump, .....	Polish, .....	Laborer, .....	21	S. Stanton, .....	Luzerne, .....	Thumb cut off while repairing a pump.
31	Griffith J. Hugson, .....	Welsh, .....	Shaftman, .....	36	S. Stanton, .....	Luzerne, .....	Collar bone broken; squeezed between cars.
17	Lewis Koneczorki, .....	Polish, .....	Footman, .....	20	S. Shaft No. 2, .....	Luzerne, .....	Collar bone broken; squeezed between car and door frame.
17	Alex. Boshinski, .....	Polish, .....	Mason, .....	26	S. Dorrance, .....	Luzerne, .....	Collar bone broken; squeezed between car and door frame.
19	Joseph Pigoski, .....	Polish, .....	Deer boy, .....	17	S. Maxwell, .....	Luzerne, .....	Finger amputated by a fall of rock.
21	Charles Cieski, .....	American, .....	Miner, .....	53	M. South Wilkes-Barre, .....	Luzerne, .....	Leg fractured; squeezed between cars.
21	Walter Kossinski, .....	Polish, .....	Laborer, .....	20	M. No. 5 shaft, .....	Luzerne, .....	Leg broken by timbers falling upon him.
30	Michael Hermanoski, .....	Slavonian, .....	Miner, .....	38	M. No. 1 shaft, .....	Luzerne, .....	

Sept.

Nov.

Dec.

Oct.

## Fatal Accidents—Inside

## By Falls of Coal, Slate and Roof

Adam Vishinsky, miner, at the Warrior Run colliery, was working a breast in C vein No. 2 lift, a road breast. Between 4.30 and 5 o'clock he was drilling a hole in the middle bench with a piece of top bench hanging over and it appears that he was through drilling this hole and had the bar loose when a large piece of the top bench fell and struck him. He was able to sit up when first found. He was carried home and a doctor summoned, who found that he had a broken foot, but he was otherwise not considered very seriously hurt. He died suddenly, however, the following day, probably from shock.

Christian Christiansen, miner, in the Sugar Notch colliery, was cutting a hitch in the bottom rock to stand a prop to secure the roof, when a small piece of rock fell upon him killing him instantly.

Joseph Titus, rockman's laborer, was killed at the Franklin colliery in the new tunnel that is being driven in the long slope from the sump seam to the Abbot. The chargeman and Titus were trying the roof after firing a round of holes, when a piece of rock fell and instantly killed Titus.

Jacob Siskie, miner's laborer, at the Dorrance, was in his breast in tunnel lift, Baltimore vein, loading coal alongside of the car, when a piece of coal fell from the rib and caught him against the car, instantly killing him.

Joseph Kootz, miner in No. 1 S. shaft of the Susquehanna Coal Company, was driving a heading in a pitching breast in the Ross seam. He had fired a blast in the face, which left the top bone up. This top bone was about eight inches thick. He went back and began to throw the coal from the face, when the bone fell upon him, killing him instantly.

John B. Osocky, laborer, in the North shaft, No. 6, Susquehanna Coal Company, was in the act of loading a car when a piece of top rock fell upon him, killing him instantly. This man's miner had been warned of the top rock by the fire boss, who had ordered him to take it down or to stand props under it. He put one prop under it and began loading coal, when the accident occurred.

Martin Covack, mucker, at the Maxwell, was working in No. 10 tunnel, West Ross vein. He was on the night shift. While loading a car of rock about eighteen feet from the face, a piece of top rock fell, instantly killing him, and fracturing the leg of John Malcoski, the chargeman.

Frank Yanosefski, laborer, at the South shaft, No. 7, Susquehanna Coal Company, was putting up a set of timbers in the face of the chamber when a piece of top rock fell upon him, fatally injuring him. The place where the accident occurred, to all appear-



ance, was in a safe condition, but there was a "slip" in the roof, close to the face of the coal, which was not discovered before the rock fell. Yanosefski was taken to the hospital where he died at 9.05 P. M. on the day of the accident.

William Kitchen, company miner, at the Stanton, was propping the rib in the new sump of the Baltimore vein, when a piece of rock fell from the roof and struck him on the back and hip injuring him internally. He was injured on the 3d of July, and died on the following day.

William L. Jones, miner, at Red Ash No. 2, was robbing pillars in No. 2 tunnel, Red Ash vein. He came out to the blacksmith shop at noon to eat his dinner. After dinner he rode in on a trip of cars with the driver. The driver stopped at Mike Stuler's place to leave a car and Jones got out of the car and Stuler and he walked into Jones's place. They stopped several feet away from the face of the workings and Jones went up on top of the gob to roll down a piece of coal, and as soon as he reached the piece of coal, a large piece of top rock fell upon him and killed him instantly.

David J. Lewis, miner, at the Hollenback, was working in a breast in No. 2 plane west. He went back from the face about one hundred forty feet to bar down a piece of top coal. While in the act of barring the coal down it fell upon him, killing him instantly.

William Bowris, miner, in South shaft, No. 1, Susquehanna Coal Company, was in company with Peter Wasolefski, in the act of cutting a pair of timbers on the main road, for the purpose of putting in a set of timbers, when a large piece of top rock fell, killing Bowris instantly and slightly injuring Wasolefski about the feet. From all appearances they had cut the collar nearly through with an axe, and the miner went on the upper side to bar the timber down with a drill, when the said piece of top gave way from a slip in the strata which was not previously discovered. The accident occurred in the Ross vein.

Adam Yodlite, miner, in the North Shaft, No. 6, Susquehanna Coal Company, was on his knees drilling a hole in the bottom bench, when a piece of clod from the top fell on the back of his head. He died in fifteen minutes from the time the accident occurred.

Anthony Berski, miner, in the South Wilkes-Barre, while working in the No. 3 tunnel, East Kidney vein, was injured about his head and back so badly by a fall of top rock that he died on his way to the hospital.

#### By Explosions of Gas

Thomas L. James, mason, in the Ross vein shaft of the Bliss colliery was building a wall in chamber No. 29 on No. 2, East lift off No. 3 slope. He was making his way from the chamber to No. 5

slope through old chambers, which he should not have done. While in chamber No. 34 near station 654, he ignited a small quantity of gas with his naked lamp and was burned about the face and hands. He had a safety lamp at the time which he might have used.

Frank Minich, miner, at the Warrior Run colliery, was working in D vein, No. 5 lift, No. 23 breast about 60 feet from the gangway, when an accumulation of gas was set off in some unknown way, either from the breast inside of his working place or from his own. When questioned he said he was preparing to fire a hole and had examined for gas and had found his place clear, when he discovered that the gas had been fired from the breast beyond him and was coming through the heading to him. The bratticemen, J. W. Roberts and Jas. Brislin, corroborated his story by saying that his place was clear, when they were putting in brattice for him, but some gas was in the other breast. Minich was so seriously burned about the hands, face and body that he died about 8 o'clock in the evening, after being taken to the hospital. The accident occurred at 11 P. M.

Isaac Transue, trackman, at the Bliss colliery, with a number of other workmen was burned by an explosion of gas in West Side Ross, No. 2 plane. Doors being left open on the lift was the cause of the accident. He was not thought to be seriously burned but he died on June 6, at the Moses Taylor Hospital at Scranton.

William D. Williams, fireboss, in the North shaft No. 1, colliery No. 7 of the Susquehanna Coal Company, was making his examination in the west side of Cooper seam in No. 3 West gangway. He came from No. 163 place to No. 153 place, and encountered some gas a little distance from the face. He walked down to the second heading leading to No. 144 place and encountered some gas here, which put his light out. He then went down the breast until he thought he was on the gangway in a fresh current of air. Here he struck a match to light his lamp. This caused an explosion and he was burned about the head, face, neck, arms and thigh. The accident was due to his own neglect as he should not have struck a match. The other firebosses seeing that he was not out in time were inside looking for him. He came out alone in the dark and was met on the empty track of the turnout at the foot of the shaft by William X. Jones at 6.45 A. M. The accident occurred about 5.40 A. M.

Edward Morrissey and Nelson Taylor, miners, at the Warrior Run colliery, were fatally burned and Adam Yachula, laborer, was severely burned by an explosion of gas and Chas. Bartleson, driver, had his pelvis bone fractured by being thrown down by the force of the explosion. The explosion occurred in the second opening in C No. 6, West gangway, and was above the gangway road about 120 feet. Morrissey was driving a heading from his place to Taylor's which was

about 15 feet higher than his own, and burst through, knocking some props and brattice down, and while assisting Taylor in repairing the damage, the gas started to fill up in Taylor's place. They were working with a safety lamp but Morrissey's safety lamp was found in the middle of his heading and the two naked lamps at the mouth of the heading near where Adam was drilling a hole. It appears that they were brushing the gas and brought it into contact with the naked lamps in heading. Taylor died on the 25th of June, eight days after the accident, from erysipelas setting in where he was injured on his leg, and Morrissey died on the 29th of June.

Frank Baker, laborer, was fatally burned and Frank Ostrofski, miner, was seriously burned by an explosion of gas at the Warrior Run colliery. The explosion occurred in Ostrofski's breast, C vein, No. 5 gangway about noon. The miner was driving a heading from his place to the next place inside and was in about two yards when he struck a strong feeder of gas. The miner went down the gangway for powder and was returning with a cartridge of powder in one hand and his naked lamp in the other, and while some distance from the face the explosion occurred, burning both men quite severely about the hands, face and body. After the explosion the laborer's cap and safety lamp were found in the heading, his shovel and naked lamp were hanging on the canvas near heading and within two feet of the level of the gas at the heading. They were taken to Mercy Hospital, where Baker died on June 30, eight days after the accident.

Henry Law, miner, at the South Wilkes-Barre shaft, while repairing a set of timbers after firing a shot in his chamber in No. 4 slope, Fourth East Top split, Baltimore vein, ignited a body of gas which had accumulated in the face, burning him seriously on his hands, face and back. He died at his home on October 7, the day after the accident.

Evan D. Roberts, company miner, at the Stanton colliery, went to the old workings to an abandoned breast without a safety lamp, to remove some sheet iron, and ignited a body of gas.

#### By Explosions of Powder

Anthony Bruges, laborer, was fatally burned and Wm. Poslanskie, miner, was severely burned by the explosion of a keg of powder at the Warrior Run colliery. Bruges's miner not being out on the day of the accident, he went along with Poslanskie. He took a keg of powder with him which they supposed to be damp. When they reached the heading where Poslanskie had his powder, he asked Bruges to empty some of the powder into his (Poslanskie's) hand. This Bruges did and in some way it became ignited and Poslanskie threw the powder down on the keg, when an explosion occurred

which set off another keg of powder belonging to Poslanskie, with the above result. They were taken to the City Hospital where Bruges died.

#### By Cars

John Brown, doorman, in the Maxwell colliery, was working in Southwest Red Ash gangway. He was run over by a trip of cars, which the runner was running, and had both legs crushed. He died at the Mercy Hospital.

Andrew Petronick, laborer, in the Bliss colliery, was killed by being struck by a runaway car on the New slope in the Baltimore vein. Patronick was sent into the crosscut, which was near the face, to stay there while his miner with his other laborer went up the slope to get an empty car. While they were pushing the car over the knuckle, the chain broke permitting the car to travel at a tremendous rate to the bottom of the slope, and unfortunately it struck Patronick. The car got off the track about 5 feet above the crosscut, in which he had been told to stay. Had he obeyed the orders given to him by the miner, to stay in the crosscut, this accident would not have happened. His body was found along the slope about 20 feet from the crosscut.

John Hayes, runner, at the Dorrance colliery, was killed on the slant slope by a runaway car jumping the track and catching him against the rib. The runaway was caused by the breaking of a coupling between the first and second cars of a trip of four loaded and one empty car.

Anthony Baltrichus, driver, at the Hollenback colliery, was bringing out a trip of loaded cars from No. 2 slope, first west. His patcher, Reese Phillips, told him to ride out on the cars, but in some unknown way he was caught between the rib and the car and was killed.

#### By Premature Blasts

Joseph Grassberger, miner, in No. 6 slope, Susquehanna Coal Company, was preparing to light a squib to fire a blast but the blast was fired prematurely and injured him so severely that he died within two hours.

Patrick Kealey, miner, was fatally injured and Binio Vinea, laborer, had his chest bone broken at the Auchincloss colliery by the explosion of a cartridge. They were working night shift and had fired a shot in the coal but it did not do its work. So he prepared to charge it again with about 29 inches of black powder, and the supposition is that the charge would not go into the hole and that they were forcing it in either with the coal drill or the scraper, which somehow caused a spark and set the powder off. The miner received nearly the whole charge and died about nine hours after the accident.

Michael Slater, miner, at the Maxwell colliery, worked in a chamber in No. 7 tunnel, West Ross vein. His laborer said that he had tamped a hole and put a squib into it and was going to tamp another near by, and it is supposed that his lamp came in contact with the squib setting off the blast, killing him instantly.

Patrick Cooney, miner, at the Sugar Notch colliery, after preparing a hole to fire, lit the squib and went back to the cross-heading to wait for the blast to go off, which it failed to do, after giving what he thought was sufficient time. He then went back to examine it, when the blast went off. The coal struck him mostly on the head and neck. He was taken to Mercy Hospital where he died the day of the accident about 10.40 P. M.

#### By Falling Down Slope

William Wright, bellman, at No. 6 slope, Susquehanna Coal Company, undertook to walk up the slope and while so doing was overtaken by the cage, and was either knocked down by the cage or fell away in trying to avoid it. This accident was due to violation of the rules which forbade all traveling on the slope.

#### By Falling Down Shaft

Kadzimus Ochram, laborer, at the Dorrance colliery, fell down the shaft from the Hillman landing to the Baltimore vein, about 300 feet and was instantly killed. He came running to get on the carriage after the bell was rung and the carriage was in motion. He was warned by the men on the carriage but persisted in his efforts to get on the carriage, with the result stated.

#### By Cars

Joseph Petlock, plane footman, at the Franklin colliery, was struck by an empty car which became uncoupled while two empty cars were being lowered from the dump. The car jumped the track at the foot and struck Petlock, injuring him so seriously that he died about 6 P. M. of the same day.

Samuel Figulia was employed in No. 6 breaker of the Susquehanna Coal Company unloading condemned coal. He had finished unloading the car and the teamster was ordered to pull back the car. He had already pulled back two cars and while pulling the third car back, Figulia stood alongside of the track and in some manner slipped and had one leg caught under the wheel severing that member entirely. He was taken to the hospital and died on arriving there.

Antonie Kozlofski, car loader at No. 7 breaker of the Susquehanna Coal Company, was instantly killed by being run over by a Pennsylvania Railroad car. The car, which was half-loaded had run past the loading chute. The deceased stepped behind the car in order

to bar it back to the loading chute. At the same time the car runner was running three more cars on the same track. The rails were wet and muddy and he could not bring the cars to a stop before they slightly bumped the half-loaded car, causing it to start and run over the victim. The car runner called loudly to the victim to look out but he evidently did not hear him.

#### By Machinery

Theodore Tucker, slatepicker, at the Red Ash No. 2, was sent by the screen boss to start the coal running in the chute leading from the elevator to the rolls. There is a hole in the side of the chute to allow a person to go into the chute to start the coal running when it blocks. The hole is 25 feet from the elevator. He was next seen on the floor of the screen room at the foot of the elevator, the supposition being that he had come through the elevator. He was injured about 4 P. M. and died at 11 P. M. at the Wilkes-Barre City Hospital.

Thomas McDonald, laborer, at the Hadleigh colliery, outside, was shoveling coal into the scrapper line along with six other men when a rush of the bank started. He became confused and instead of standing still, he ran into the conveyor line. The other men who were much nearer the line than he was, when the rush occurred, stood still and escaped injury.

### IMPROVEMENTS DURING THE YEAR LEHIGH AND WILKES-BARRE COAL COMPANY

#### Hollenback No. 2 Colliery

Outside.—Five hundred horse power battery B. & W. boilers completing plant of 2,000 horse power.

Inside.—No. 11 tunnel, bottom split Red Ash to top split Red Ash, 50 yards.

No. 12 tunnel, bottom split Red Ash to top split Red Ash, 50 yards.

#### Empire No. 4 Colliery

Outside.—Machine, smith and car shops to replace shops destroyed by fire April 18, 1903.

Inside.—No. 24 tunnel, extended from top split Red Ash to Ross, 70 yards. Hoisting shaft enlarged to standard size.

#### South Wilkes-Barre No. 5 Colliery

Outside.—Duplicate 35 foot Guibal fan, No. 1 air shaft. Barn and carriage house. Inside and outside foreman's office.

Inside.—No. 8 tunnel, Kidney to Abbot, 160 yards. No. 10 tunnel, top split Baltimore to top split Baltimore, 140 yards. No. 11 tunnel, Kidney to Abbot, 90 yards. Tunnel airway, across basin

for No. 10 tunnel return, 124 yards. Rock plane airway, Kidney to Abbot for No. 9 tunnel return, 70 yards. Rock plane airway, 3d West Hillman to No. 9 tunnel Abbot, 90 yards. Three inch drainage bore hole, No. 5 slope Hillman sump to Baltimore.

#### Stanton No. 7 Colliery

Outside.—Duplex air compressor, simple steam, compound air. Five hundred H. P. battery, B. & W. boilers. Colliery shop.

Inside.—Triple-expansion, condensing, duplex pump, brick arch pump room, and sump tunnel to shaft sump. No. 4 Rock slope, from surface to Abbot, 100 yards.

#### Jersey No. 8 Washery

Conveyor, railroad and steam shovel equipment to work Hartford No. 6 culm bank.

#### Sugar Notch No. 9 Colliery

Outside.—Five hundred H. P. battery, B. & W. boilers.

Inside.—Compound duplex pump and brick and structural steel pump room, located on 3rd West Ross. Rock plane airway, Red Ash to Baltimore, 100 yards. No. 15 tunnel, Baltimore to Stanton vein, 195 yards.

#### Maxwell No. 20 Colliery

Outside.—Five hundred H. P. battery, B. & W. boilers. Duplex air compressor, simple steam, compound air. Brick engine house for compressor and electric lighting plant.

Inside.—No. 10 tunnel, extended from Ross to Baltimore, 312 yards. No. 16 tunnel, Hillman to Hillman across basin, 37 yards. Compound condensing duplex pump, pump rock in rock, and tunnel Baltimore to Twin for sump, Baltimore shaft to level. Sanitary barn to accommodate thirty (30) mules, Red Ash shaft level.

### LEHIGH VALLEY COAL COMPANY.

#### Dorrance Colliery

Hillman vein slope extended 654 feet into the basin north of cemetery anticlinal. Tunnel finished from Abbot to Snake Island—Middle plane level. Tunnel commenced on Upper level to same vein. Tunnel is being driven from Hillman to Five Foot vein, 232 feet. New slope started from lower Bennett gangway to reach the basin below slant slope. New inside slope started to work river warrant—Hillman vein. Preparations are being made and work started to sink main hoist shaft from Baltimore to Red Ash, also second opening rock slope for same. A new stable is being made, and improvement to pump houses. Fire emergency water lines extended during the year. A series of test holes were put down from surface

to determine safe working rock cover on the flats near the river. New concrete cribs have replaced the old wooden ones in both hoist and ventilating shafts. New and improved safety gates and stop blocks put on Baltimore shaft. New brick electric light house. New brick and concrete safety lamp house. New concrete pump house on river bank.

#### Franklin Colliery

No. 8 slope extended 320 feet to Brown pillar line. No. 8 tunnel extended 190 feet to Ross vein. No. 15 tunnel is being driven from Red Ash rock slope to Ross, 480 feet to date. Tunnel extended 150 feet in Baltimore slope district to Abbot vein. New tunnel from top to bottom split of Red Ash completed. A new slope started in Ross vein. A new inside slope begun in top split of Red Ash. The old Brown slope reopened. Work is progressing on installation of 300 additional H. P. return tubular boilers. New fan, blowing engine installed. New 14x20 engine set in place at Red Ash second outlet shaft. New corrugated iron powder house. New dam and corrugated iron pump house. Washery completed and working. Number of repairs and alterations made in breaker. Baltimore fan house rebuilt.

#### SUSQUEHANNA COAL COMPANY

##### Colliery No. 5

Outside.—Jig house completed. New steel bridge over breaker tracks. New compressor house, and 2-20 $\frac{1}{4}$  and 36x20x36 Ingersoll-Sergeant duplex two stage compressors. One hundred new steel mine cars.

Inside.—Rock plane, Mills to George, unfinished.

##### Stearns

Inside.—No. 4 shaft tunnels and returns completed, rock turnout for empty cars unfinished. New plane in Ross unfinished.

##### Colliery No. 7

Outside.—New lamp house completed. New timber yard completed. Remodelling No. 7 breaker, unfinished.

Inside.—New plane in Cooper seam unfinished. Slope No. 14, Ross seam.

##### Colliery No. 6

Outside.—Two thousand five hundred H. P. B. & W. boiler plant completed, and old cylinder boilers at No. 6 shaft and No. 6 slope abandoned. New rolls and screens in breaker. New railroad from No. 7 shaft to breaker, about 1 $\frac{1}{2}$  miles, completed.

Inside.—New tunnel slope No. 6 to N. shaft No. 6, unfinished.



New slope in Ross tunnel No. 6 unfinished. New tunnel slope No. 6, Ross to Ross, unfinished. Shaft No. 7 sunk 40 feet, concreting to rock and permanent engine and head frame foundations completed.

DELAWARE AND HUDSON COMPANY

Conyngham

No. 4 tunnel driven from the Abbot to Snake Island vein, 325 feet.

No. 5 tunnel driven from the Abbot to Snake Island vein, 100 feet.

No. 6 tunnel driven from the Abbot to Snake Island vein, 150 feet. The Abbot vein slope No. 4 was sunk a distance of 900 feet. Hillman shaft recribbed from rock to surface, and new head frame and house built.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Auchincloss No. 2 Shaft

A tunnel 7x12 has been driven from the Baltimore vein for the purpose of the development of the Hillman vein. Auchincloss No. 2 shaft.—The Baltimore vein has also been connected by a short tunnel to the Hillman vein for ventilating purposes.

Bliss Mines

The southwesterly side of this breaker was entirely reconstructed and improved upon by the installation of new shakers, belt conveyors and spiral slate pickers. A tunnel 7x12, 396 feet long, was driven from the Red Ash vein to the Ross vein for ventilation and haulage. One 10 ton electric locomotive was installed in the Ross slope, Espy tunnel, doing away with mules on this lift. A small 10 foot fan was located on the Forge vein for ventilation.

Truesdale

This is a new opening or operation. They are putting down at this location two shafts to be known as No. 1 and No. 2 Truesdale shafts. No. 1 will be a four compartment shaft, one pump way, two hoist ways and one airway, 45 feet 2 inches by 14 feet in the clear. No. 2 shaft will have two hoist ways and one air and will be 37 feet 2 inches by 14 feet in the clear. Operations have also been started to sink a slope to the Mills vein, a distance of 1,500 feet to the basin. They have also opened an old tunnel, known on geological survey maps as the Holland tunnel, and already gangways are being driven east and west to what is known as the Forge vein in this locality. The outside appearances of the collieries have been improved by the use of mineral paint and whitewash.

RED ASH COAL COMPANY.

Colliery No. 1

One 12 and 18x8x18 compound noncondensing duplex plunger Jeanesville pump.

### Washery No. 3 Breaker

Fitted and alterations made and equipped with shakers, jigs, etc., for washing the coal from culm banks. One 24x48 frame boiler house, stone foundation, gravel roof, built for the washery. Six cylindrical boilers 30 diameter by 30 feet long, formerly used at No. 1 breaker, placed in new boiler house at washery.

### Mine Foremen's Examinations

The examinations of candidates for mine foremen and assistant mine foremen certificates resulted in the following named persons being granted certificates:

#### Mine Foremen

John S. Thompson, Pittston; Andrew Guard, Wilkes-Barre; Alfred King, Wilkes-Barre; William J. Powell, Wilkes-Barre; Thomas D. Evans, Wilkes-Barre; John S. Jones, Wilkes-Barre; Edward Leonard, Wilkes-Barre; David T. Richards, Wilkes-Barre; William D. Jones, Wilkes-Barre; Thomas Martin, Edwardsdale; John H. Edwards, Edwardsdale; Daniel Jones, Edwardsdale; James F. Gilda, Ashley; John P. Boase, Aavoca; Thomas Vinton, Plains; John E. Richards, Plymouth; William Arthur, Plymouth; David D. Davis, Plymouth; David M. Evans, Kingston; Joseph E. Evans, Kingston; Matthew Nash, Nanticoke; Charles E. Morgan, Wanamie; Morgan Phillips, Christopher; David J. Davis, Christopher; Thomas J. Morgans, Christopher; Richard D. Evans, Christopher; William J. Jones, Pittston; David Lewis, Sugar Notch; Alexander Hair, Wyoming.

#### Assistant Mine Foremen

John S. Davies, Dorranceton; Edward Foulkes, Wilkes-Barre; Morgan D. Jones, Wilkes-Barre; Luke F. Halley, Wilkes-Barre; Llewellyn Lloyd, Wilkes-Barre; John Feldman, Wilkes-Barre; David Simmons, Wilkes-Barre; Benjamin Turner, Wilkes-Barre; John R. Davis, Wilkes-Barre; William H. Owen, Wilkes-Barre; Clifton Williams, Wilkes-Barre; William J. Nickolas, Edwardsdale; Morris Hughes, Edwardsdale; Patrick A. Grady, Ashley; Elwood Gross, Plymouth; George A. Spare, Plymouth; David T. Richards, Plymouth; David Jenkin, Plymouth; John E. Jones, Plymouth; George A. Bound, Kingston; Henry Coates, Yates; William J. Walters, Nanticoke; William S. Davis, Nanticoke; William Davis, Nanticoke; John M. Wilde, Nanticoke; John Bryant, Nanticoke; George H. Dyer, Nanticoke; William Summers, Alden Station; Walter L. Morgan, Wanamie; William X. Jones, Nanticoke; Bernard F. McGrane, Sugar Notch; L. S. Reese, Westmoor; Hugh E. Hughes, Peeley; John C. Parry, Wilkes-Barre.

# Eighth Anthracite District

LUZERNE COUNTY

---

Plymouth, Pa., February 15, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of herewith transmitting to you my first report as Inspector of Mines for the Eighth Anthracite District, for the year ending December 31, 1903.

The year was one of unusual activity. The production amounted to 6,334,962 tons, an increase of 1,438,901 tons over the production from the same number of mines in 1901, when the total was 4,896,061 tons. The number of tons mined for each fatal accident in 1901 was 148,335. In 1903 the number of tons mined for each fatal accident inside was 189,999; for each non-fatal accident 60,333. The total number of fatal accidents was 37. The report contains the usual tables of statistics and a brief description of the condition of the mines.

Respectfully submitted,

D. T. DAVIS,  
Inspector.

## Eighth Anthracite District, 1903

## SUMMARY OF STATISTICS

Number of mines in district, .....	37
Number of mines in operation, .....	37
Number of tons of coal produced, .....	6,334,962
Number of tons shipped to market, .....	5,783,353
Number of tons sold at mines to local trade, .....	92,248
Number of tons consumed at mines in generating steam and heat, .....	459,361
Number of persons employed inside the mines, .....	8,246
Number of persons employed outside, .....	3,187
Number of fatal accidents inside the mines, .....	35
Number of tons produced for each fatal accident inside, .....	180,999
Number of persons employed per fatal accident inside, .....	236
Number of fatal accidents outside, .....	2
Number of persons employed per fatal accident outside, .....	1,593
Number of wives made widows by fatal accidents, .....	21
Number of children orphaned by fatal accidents, .....	33
Number of non-fatal accidents inside the mines, .....	104
Number of persons employed per non-fatal accident in- side, .....	79
Number of non-fatal accidents outside, .....	15
Number of persons employed per non-fatal accident out- side, .....	212
Number of steam locomotives used inside, .....	5
Number of electric motors used inside, .....	6
Number of fans used for ventilation, .....	37
Number of gaseous mines in operation, .....	36
Number of non-gaseous mines in operation, .....	1
Number of new mines opened, .....	1

---

TABLE A.—Eighth Anthracite District, 1903.

PRODUCTION OF COAL	
Names of Companies	Tons
Lehigh and Wilkes-Barre Coal Company, .....	1,684,893
Delaware and Hudson Company, .....	1,258,591
Delaware, Lackawanna and Western Railroad Company, .....	808,157
Parish Coal Company, .....	808,771
Kingston Coal Company, .....	620,679
West End Coal Company, .....	483,967
Plymouth Coal Company, .....	226,492
George F. Lee Coal Company, .....	63,851
North American Coal Company, .....	316,778
Old Plymouth Coal Company, .....	59,511
West Nanticoke Coal Company, .....	3,272
	<hr/>
Total, .....	6,334,962
	<hr/> <hr/>
Production by Counties	
Luzerne, .....	6,334,962
	<hr/> <hr/>

TABLE B.—Eighth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number of persons employed; number employed per accident

Names of Companies	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Delaware and Hudson Co., .....	12	1	13	26	2	28	104,883	48,407	1,871	722	2,593	156	72	361	361
Lehigh and Wilkes-Barre Coal Co., .....	9	.....	9	34	4	38	137,210	49,556	1,905	671	2,576	212	56	168	168
Delaware, Lackawanna and Western R. R. Co., .....	3	1	4	16	2	18	269,356	50,510	1,454	380	1,834	485	91	380	190
Parrish Coal Co., .....	3	.....	3	13	1	14	269,599	62,213	1,222	304	1,626	407	94	404	404
Kingston Coal Co., .....	5	.....	5	7	4	11	124,136	88,668	803	409	1,312	181	129	102	102
West End Coal Co., .....	3	.....	3	6	1	8	161,222	241,983	526	278	804	175	263	278	278
Plymouth Coal Co., .....	.....	.....	.....	.....	.....	.....	.....	75,497	268	146	444	.....	.....	99	99
George F. Lee Coal Co., .....	.....	.....	.....	3	.....	3	.....	15,497	58	59	117	.....	.....	19	19
Old Plymouth Coal Co., .....	.....	.....	.....	.....	1	1	.....	21,284	9	47	56	.....	.....	.....	47
Totals and averages for district, .....	35	2	37	104	15	119	180,999	60,913	8,246	3,187	11,433	236	79	1,533	212

TABLE C.—Eighth Anthracite District, 1903  
Classification of Fatal Accidents

	Inside of Mines					Outside of Mines						Grand total												
	Coal	State	Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shirts	Slopes	Manways, breast, etc.		Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes	Total inside	By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside	
January, .....				1	1				1				1											1
February, .....																								
March, .....	1		2	2																			1	1
April, .....				1																				
May, .....				1																				
June, .....	2		15	1																				
July, .....	1																							
August, .....			12	1																				
September, .....			1	1	1																			
October, .....	1		1																					
November, .....																								
December, .....	1			1	1																			
Totals, .....	6		9	9	2	1	3	3	3		2	2	2	2		35	1	1	1				2	37

TABLE D—Eighth Anthracite District, 1903  
Classification of Non-Fatal Accidents

	Inside of Mines										Outside of Mines					Grand total						
	By Falls of		By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shatts	Slopes	Manways, breasts, etc.	Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes	Total inside		By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside
	Coal	Slate																				
January	1		4	1		1								3	9	1					1	10
February			4	1			1								4							9
March	1		2												4							9
April	1		4	5			2				1			1	14						1	15
May	1														1							1
June	1		4	4			1				1			1	11						2	13
July	1	3	2	1	3	1					1			2	14						1	15
August	2	1	1				1				1				8						1	9
September	1						1				1				7							9
October	1			3			1				1				4						1	6
November			1	1			1				1			3	4						1	8
December			3	4	7		1				1			1	16						1	18
Totals	8	7	11	27	24		2	9			4			12	104	5	4				6	119



TABLE E.—Eighth Anthracite District, 1903  
Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines

	Inside										Outside							Grand total			
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Book-keepers and clerks	All other employes	Total outside
January						1			1										1		
February																					
March																				1	
April						1			1											1	
May																					
June									1											1	
July																					
August																					
September																					
October									1												
November																					
December																					
Totals				13	8	6	1		5										6	3	37

TABLE F.—Eighth Anthracite District, 1903  
Occupations of Persons Injured Inside and Outside the Mines

	Inside										Outside										Grand total
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes	Total outside	
January, .....				4	3	2			1	2	9								1	1	10
February, .....				2	1	1				4	9										9
March, .....				1	1	1				4	4										4
April, .....			1	5	3	1				2	14										15
May, .....			2	1	1	1				2	1										3
June, .....				1	1	4				1	11					1			1	1	13
July, .....				3	1	1				1	14										14
August, .....				3	4	1				1	8										9
September, .....				3	4	1				1	7										9
October, .....				3	1	1				1	4				1						6
November, .....				1	2	1				1	4										8
December, .....				1	1	3				1	16					1					18
Totals, .....	2		1	40	21	20	4		1	15	104				1	3			11	15	119

TABLE G.—Eighth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	English	Welsh	Irish	Polish	Italian	Lithuanian	Austrian	Totals
January, .....	1		1		1				3
February, .....	1	1						1	3
March, .....	1	1	1		1			1	5
April, .....	2		1		1				5
May, .....		1	1	1			1		4
June, .....	1		1			1			5
July, .....					1				1
August, .....	2			1	1				4
September, .....			1			1			2
October, .....				1		1			2
November, .....					2				2
December, .....	1								1
Totals, .....	9	3	6	4	9	3	1	2	37

TABLE H.—Eighth Anthracite District, 1903.

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Italian	Slovenian	Lithuanian	Austrian	Russian	Armenian	Totals
January, .....	3		2	1		2			1		1		10
February, .....	1	1	1			3				1			9
March, .....	1		2							1			4
April, .....	2	1	4	1		1	1	4					15
May, .....	3			1		2			1				13
June, .....	1	2	2		2	2		1			1		14
July, .....	1		1			5			1				9
August, .....	3		1			2		1	1		1		9
September, .....	3					1		1		1			9
October, .....	2			1		1		2		1			8
November, .....	4		1			5	1	3		1		1	13
December, .....													
Totals, .....	28	4	16	6	3	23	2	12	8	3	7	1	119

TABLE I.—Eighth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of fans, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employee per minute.

Names of Operators and Mines	Kind of opening	Gasous or non-gasous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
<b>Lehigh and Wilkes-Barre</b>																
Nottingham colliery, . . . . .	Shaft...	Gasous,	Fan.....	24	7.10	6	76	1.75	Guibal.....	Steam..	11	630,000	342,700	651,200	601	570
Nottingham colliery, . . . . .	Shaft...	Gasous,	Fan.....	8	6	6	70	1	Guibal.....	Steam..						
Nottingham colliery, . . . . .	Shaft...	Gasous,	Fan.....	24	8	6	70	1	Guibal.....	Steam..						
Nottingham colliery, . . . . .	Shaft...	Gasous,	Fan.....	24	8	6	70	1.75	Guibal.....	Steam..						
Nottingham colliery, . . . . .	Shaft...	Gasous,	Fan.....	24	8	6	70	1.75	Guibal.....	Steam..						
Nottingham colliery, . . . . .	Slope...	Gasous,	Fan.....	23.9	5.7	5.9	68	2	Guibal.....	Steam..	5	98,800	49,220	100,660	209	236
Wanamie colliery, . . . . .	Slope...	Gasous,	Fan.....	15	4.6	3.9	80	4	Guibal.....	Steam..	7	110,115	85,300	108,875	278	317
Wanamie colliery, . . . . .	Slope...	Gasous,	Fan.....	8	2.11	2	91	4	Guibal.....	Steam..						
Wanamie colliery, . . . . .	Slope...	Gasous,	Fan.....	13	4.6	3.5	80	4	Guibal.....	Steam..	5	53,650	45,850	60,100	102	450
Lance colliery, . . . . .	Shaft...	Gasous,	Fan.....	34.3	10.11	8.4½	49	1.3	Guibal.....	Steam..						
Lance colliery, . . . . .	Shaft...	Gasous,	Fan.....	35	11.9	8.9	49	1.8	Guibal.....	Steam..	10	429,940	351,780	478,650	379	955
Lance colliery, . . . . .	Shaft...	Gasous,	Fan.....	35	11.9	8.9	49	1.8	Guibal.....	Steam..						
<b>Delaware and Hudson Co.</b>																
Plymouth No. 1, . . . . .	Shaft...	Gasous,	Fan.....	23	5	6.6	50	2.75	Guibal.....	Steam..	6	136,275	131,175	158,000	352	373
Plymouth No. 2, . . . . .	Shaft...	Gasous,	Fan.....	10	7.6	6.0	60	2.7	Guibal.....	Steam..						
Plymouth No. 3, . . . . .	Shaft...	Gasous,	Fan.....	5	6.6	6.0	60	2.9	Guibal.....	Steam..						
Plymouth No. 4, . . . . .	Shaft...	Gasous,	Fan.....	17	5	4	50	1.3	Guibal.....	Steam..	10	202,376	198,188	214,308	301	658
Plymouth No. 5, . . . . .	Shaft...	Gasous,	Fan.....	28	10	7.10	40	3.1	Guibal.....	Steam..						
Plymouth No. 6, . . . . .	Shaft...	Gasous,	Fan.....	17	5	4	40	1	Guibal.....	Steam..	10	274,220	243,050	315,170	473	534
Plymouth No. 7, . . . . .	Shaft...	Gasous,	Fan.....	17	5	4	4	1.9	Guibal.....	Steam..	6	91,440	116,070	108,380	317	366
Plymouth No. 8, . . . . .	Shaft...	Gasous,	Fan.....	22.5	5	6.6	43	2.3	Guibal.....	Steam..	8	171,000	165,000	182,000	232	505



TABLE 1.—Eighth Anthracite District, 1903  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
Lehigh and Wilkes-Barre Coal Co. Nottingham, .....	Luzerne, .....	C. F. Huber, .....	Wilkes-Barre, .....	Morgan R. Morgans, in- spector, .....	Wilkes-Barre, .....	C. R. R. of N. J.
Lance, .....	Luzerne, .....	C. F. Huber, .....	Wilkes-Barre, .....	do. .....	Wilkes-Barre, .....	C. R. R. of N. J.
Reynolds, .....	Luzerne, .....	C. F. Huber, .....	Wilkes-Barre, .....	do. .....	Wilkes-Barre, .....	C. R. R. of N. J.
Wanamie, .....	Luzerne, .....	C. F. Huber, .....	Wilkes-Barre, .....	do. .....	Wilkes-Barre, .....	C. R. R. of N. J.
Delaware and Hudson Co. Plymouth No. 2, .....	Luzerne, .....	C. C. Rose, .....	Scranton, .....	E. R. Pettibone, .....	Scranton, .....	Delaware and Hudson
Plymouth No. 3, .....	Luzerne, .....	C. C. Rose, .....	Scranton, .....	E. R. Pettibone, .....	Scranton, .....	Delaware and Hudson
Plymouth No. 4, .....	Luzerne, .....	C. C. Rose, .....	Scranton, .....	E. R. Pettibone, .....	Scranton, .....	Delaware and Hudson
Plymouth No. 5, .....	Luzerne, .....	C. C. Rose, .....	Scranton, .....	E. R. Pettibone, .....	Scranton, .....	Delaware and Hudson
Boston, .....	Luzerne, .....	C. C. Rose, .....	Scranton, .....	E. R. Pettibone, .....	Scranton, .....	Delaware and Hudson
Delaware, Lackawanna and Woodward, .....	Luzerne, .....	R. A. Phillips, .....	Scranton, .....	Henry G. Davis, .....	Kingston, .....	D., L. and W.
Avondale, .....	Luzerne, .....	R. A. Phillips, .....	Scranton, .....	Henry G. Davis, .....	Kingston, .....	D., L. and W.
Parrish, .....	Luzerne, .....	H. H. Ashley, .....	Plymouth, .....	Thomas R. Evans, .....	Plymouth, .....	C. R. R. of N. J.
Buttonwood, .....	Luzerne, .....	H. H. Ashley, .....	Plymouth, .....	Thomas R. Evans, .....	Plymouth, .....	C. R. R. of N. J.
Kingston Coal Co. Kingston No. 2, .....	Luzerne, .....	R. S. Mercier, .....	Kingston, .....	Gwilliam Edwards, .....	Edwardsdale, .....	D., L. and W.
Gaylord, .....	Luzerne, .....	R. S. Mercier, .....	Kingston, .....	Gwilliam Edwards, .....	Edwardsdale, .....	D., L. and W.
West End Coal Co. West End, .....	Luzerne, .....	H. H. Brady, Jr., .....	Scranton, .....	H. A. Fillmore, .....	Shickshinny, .....	Pennsylvania
Plymouth Coal Co. Dodson, .....	Luzerne, .....	James E. Davies, .....	Plymouth, .....	.....	.....	D., L. and W.
George F. Lee Coal Co. Chauncey, .....	Luzerne, .....	George F. Lee, .....	Wilkes-Barre, .....	M. H. Corgan, .....	Nanticoke, .....	D., L. and W.
North American Coal Co. Plymouth washer, .....	Luzerne, .....	H. W. Samms, .....	Wilkes-Barre, .....	J. J. Richards, .....	Plymouth, .....	C. R. R. of N. J.
West Nanticoke Coal Co. Washery, .....	Luzerne, .....	A. D. W. Smith, .....	Kingston, .....	.....	.....	Pennsylvania
Old Plymouth Coal Co. Old Plymouth, .....	Luzerne, .....	H. E. Rissinger, .....	Plymouth, .....	.....	.....	D., L. and W.

TABLE 2.—Eighth Anthracite District, 1903  
 Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number and heat at collieries and heat at collieries used for steam	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lehigh and Wilkes-Barre Coal Co.												
Nottingham, .....	Luzerne, .....	626,778	59,796	7,001	685,178	†	964	6	17	12,772	2,008	128
Vance, .....	Luzerne, .....	343,353	28,211	2,061	374,255	249	600	1	10	8,157	54,694	89
Vanantle, .....	Luzerne, .....	414,480	33,656	2,066	459,142	243	240	2	9	10,476	14,775	90
Reynolds, .....	Luzerne, .....	106,895	14,304	139	116,338	240	665	.....	.....	3,672	2,239	71
Totals, .....		1,545,516	136,967	12,110	1,681,893	241	2,576	9	38	35,108	73,716	378
Delaware and Hudson Co.												
Plymouth No. 2 washery, .....	Luzerne, .....	15,511	.....	.....	15,511	58	.....	.....	.....	.....	.....	.....
Plymouth No. 2, .....	Luzerne, .....	180,551	31,044	.....	211,595	186	558	3	11	7,258	1,879	74
Plymouth No. 3, .....	Luzerne, .....	287,388	22,066	3,062	312,516	266	651	3	5	9,889	811	84
Plymouth No. 4, .....	Luzerne, .....	388,598	13,188	4,151	433,142	259	355	2	2	6,371	1,072	52
Plymouth No. 5, .....	Luzerne, .....	247,218	18,659	.....	285,827	249	481	3	5	6,105	1,418	54
Boston, .....	Luzerne, .....	.....	.....	.....	.....	.....	545	2	5	9,377	923	73
Totals, .....		1,123,675	112,292	7,213	1,243,080	240	2,583	13	28	39,000	5,703	317
Delaware, Lackawanna and Western F. R. Co.												
Woodward, .....	Luzerne, .....	1,129,176	112,392	7,213	1,258,591	249	2,543	13	28	39,000	5,703	337
Avondale, .....	Luzerne, .....	549,075	43,865	4,663	597,303	309	1,318	2	14	14,369	5,945	119
Totals, .....		169,833	40,000	1,521	210,854	196	516	2	4	4,601	3,775	72
Totals, .....		718,408	83,265	6,184	808,157	243	1,834	4	18	18,970	9,020	184

†Totals in this column are averages.





Old Plymouth Coal Co.	55,781	3,000	730	59,511	129	56	1	2
Old Plymouth washery, .....								
West Nanticoke Coal Co.	2,907	275		3,272	11	15		
Washery, .....								
Grand totals, .....	5,783,353	459,361	92,248	6,334,962	11,433	37	119	152,468
								196,639
								1,418

TABLE 2—Recapitulation

Lehigh and Wilkes-Barre Coal Co., .....	1,515,516	126,367	12,410	1,654,893	841	2,576	9	38	35,108	73,716	275
Delaware and Hudson Co., .....	1,133,106	112,252	6,243	1,251,601	549	2,762	12	28	39,060	5,703	334
Delaware, Lackawanna and Western R. R. Co., .....	738,303	53,491	6,243	808,317	563	834	4	18	38,970	9,620	184
Farrash Coal Co., .....	520,391	59,491	19,728	598,771	227	1,426	3	14	23,448	68,150	225
Kingston Coal Co., .....	469,691	17,633	33,947	521,271	225	1,312	5	11	21,245	1,160	158
Lehigh Valley Coal Co., .....	453,363	23,800	6,866	483,967	212	894	3	3	9,640	36,500	76
Plymouth Coal Co., .....	294,649	20,000	2,443	317,102	221	444	.....	3	4,377	560	37
George F. Lee Coal Co., .....	57,923	5,475	453	63,851	179	117	.....	3	700	1,350	18
North American Coal Co., .....	297,654	6,700	2,334	306,688	.....	76	.....	1	.....	.....	3
Old Plymouth Coal Co., .....	55,781	3,000	730	59,511	.....	56	.....	.....	.....	.....	2
West Nanticoke Coal Co., .....	2,907	275	.....	3,272	.....	15	.....	.....	.....	.....	.....
Totals, .....	5,783,353	459,361	92,248	6,334,962	220	11,433	37	119	152,468	196,639	1,418

\*Not including washeries.

TABLE 2—Continued

Names of Operators and Collieries	County	Number of Boilers			Locomotives			Total horse power	Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Tubular	Horse power	Steam	Air	Electric								
Lehigh and Wilkes-Barre Coal Co.															
Nottingham, Luzerne, .....	Luzerne, .....	14	2,372	2,372	3		2,372	48	6,062	3	3,930	2,500			
Lance, Luzerne, .....	Luzerne, .....	8	1,488	1,488			1,488	53	3,123	1	800	500			1
Wanamie, Luzerne, .....	Luzerne, .....	10	365	1,250	2		1,615	24	3,112	3	4,538	2,465			
Reynolds, Luzerne, .....	Luzerne, .....	8	528	800	1		1,328	17	653						
Totals, .....		18	893	5,910	6		6,803	134	12,950	7	9,258	5,465			3
Delaware and Hudson Co.															
Plymouth No. 2 washery, Luzerne, .....	Luzerne, .....														
Plymouth No. 2, Luzerne, .....	Luzerne, .....			2,000			2,000								
Plymouth No. 3, Luzerne, .....	Luzerne, .....	36	1,680	1,080			2,760	95	9,504	4	7,850	3,600			2
Plymouth No. 4, Luzerne, .....	Luzerne, .....	39	1,900	600			2,500	20	2,581	1	1,050	350			
Plymouth No. 5, Luzerne, .....	Luzerne, .....	39	1,100				1,100	11	1,315						
Boston, Luzerne, .....	Luzerne, .....	33	990	990			990	18	1,515						
Totals, .....		126	3,800	2,060	9		5,860	105	9,785	5	8,900	3,950			4
Delaware, Lackawanna and Western R. R. Co.															
Woodward, Luzerne, .....	Luzerne, .....	126	3,800	2,060	9		5,860	105	9,785	5	8,900	3,950			4
Avondale, Luzerne, .....	Luzerne, .....	6	180	2,000	2		2,180								
Totals, .....		6	180	4,504	3		4,684	23	3,443	1	1,560	1,000			2
Parrish Coal Co.															
Parrish, Luzerne, .....	Luzerne, .....	18	720	1,650			2,370	45	4,927	6	9,501	5,700			3
Totals, .....		18	720	1,650			2,370	18	3,653	1	1,500	1,100			1

Buttonwood, .....	Luzerne, .....	18	720	1,350	1,350	21	3,967	1	667	352	2
Totals, .....	Kingston Coal Co.	18	720	3,000	3,720	39	7,421	2	2,167	1,452	3
Nos. 2 and 3 shafts, Colliery No. 2, .....	Luzerne, .....	43	1,115	150	1,265	4	1,085	2	800	400	.....
Gaylord, .....	Luzerne, .....	24	615	615	615	6	550	1	400	200	.....
Totals, .....	.....	67	1,730	150	1,880	4	1,635	3	1,200	600	.....
West End, .....	West End Coal Co.	14	1,675	1,675	1,675	6	1,065	3	515	265	1
West End washery, .....	Luzerne, .....	3	375	375	375	2	100	.....	.....	.....	.....
Totals, .....	.....	17	2,050	2,050	2,050	6	1,165	3	515	265	1
Dodson, .....	Plymouth Coal Co.	12	1,500	1,500	1,500	12	1,350	10	2,140	674	2
Chauncey, .....	George F. Lee Coal Co.	4	350	350	350	4	260	.....	.....	.....	.....
Plymouth washery, .....	North American Coal Co.	6	560	560	560	9	370	.....	.....	.....	.....
Old Plymouth Coal Co., .....	Luzerne, .....	5	400	400	400	6	210	.....	.....	.....	.....
Old Plymouth washery, .....	Luzerne, .....	2	250	250	250	1	75	1	800	800	.....
Washery, .....	West Nanticoke Coal Co.	255	7,323	129	20,734	28,057	19	.....	6	400	40,368
Grand totals, .....	.....	255	7,323	129	20,734	28,057	19	.....	6	400	40,368
	.....	37	34,441	18,906	4	15	.....	.....	.....	.....	.....

TABLE 2—Recapitulation.

Lehigh and Wilkes-Barre Coal Co., .....	Luzerne, .....	18	833	5,910	6,803	6	12,950	7	9,258	5,465	3
Delaware and Hudson Co., .....	Luzerne, .....	125	3,800	2,060	5,860	.....	9,785	5	8,900	3,950	4
Delaware, Lackawanna and Western R. Co., .....	Luzerne, .....	6	189	4,504	4,684	3	4,927	6	9,501	5,700	3
Parrish Coal Co., .....	Luzerne, .....	18	730	3,730	5,730	.....	7,621	2	2,167	1,452	3
Kingston Coal Co., .....	Luzerne, .....	67	1,730	150	1,880	4	1,635	3	1,200	600	.....
West End Coal Co., .....	Luzerne, .....	12	2,050	2,050	2,050	6	1,165	3	515	265	1
Plymouth Coal Co., .....	Luzerne, .....	12	1,500	1,500	1,500	10	1,350	10	2,100	674	2
George F. Lee Coal Co., .....	Luzerne, .....	4	350	350	350	.....	260	.....	.....	.....	.....
North American Coal Co., .....	Luzerne, .....	6	560	560	560	9	370	.....	.....	.....	.....
Old Plymouth Coal Co., .....	Luzerne, .....	5	400	400	400	6	210	.....	.....	.....	.....
Old Plymouth washery, .....	Luzerne, .....	2	250	250	250	1	75	1	800	800	.....
Washery, .....	West Nanticoke Coal Co.	255	7,323	129	20,734	28,057	19	.....	6	400	40,368
Totals, .....	.....	255	7,323	129	20,734	28,057	19	.....	6	400	40,368
	.....	37	34,441	18,906	4	15	.....	.....	.....	.....	.....

TABLE 3—Eighth Anthracite District, 1903.  
Number of Each Class of Employes at Each Colliery

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside							Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (Boys)	State pickers (men)		Book-keepers and clerks	All other employes	Total outside
Lehigh and Wilkes-Barre Coal Co.	Luzerne	1	5	140	110	60	30	6	76	21	447	1	1	5	25	55	15	2	50	153	600	
Lance, .....	Luzerne	1	8	280	199	80	17	9	40	95	222	1	1	10	23	82	34	4	53	242	964	
Nottingham, .....	Luzerne	1	1	61	74	42	10	.....	60	.....	251	1	1	7	32	31	23	2	77	317	1,016	
Rising Sun, .....	Luzerne	1	4	294	110	52	24	7	56	25	483	1	1	1	21	39	22	2	74	180	665	
Wanamie, .....	Luzerne	1	3	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	
Totals, .....	.....	4	6	685	484	234	81	82	226	141	1,905	4	4	26	90	217	90	11	233	671	2,575	
Delaware and Hudson Co.	Delaware	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Plymouth No. 2 washery, .....	Luzerne	1	1	84	119	32	16	3	34	70	363	*	1	5	21	51	23	2	87	195	558	
Plymouth No. 3, .....	Luzerne	1	3	154	183	62	21	53	53	19	489	1	1	6	13	41	42	2	54	165	674	
Plymouth No. 4, .....	Luzerne	1	2	104	118	34	13	1	44	9	326	1	1	1	9	.....	.....	.....	18	29	365	
Plymouth No. 5, .....	Luzerne	1	3	94	90	58	10	1	43	.....	390	1	1	1	16	53	40	2	63	181	481	
Boston, .....	Luzerne	1	1	125	128	60	14	2	60	.....	393	1	1	1	4	56	18	2	56	152	545	
Totals, .....	.....	5	2	561	638	246	74	7	236	89	1,871	5	5	23	79	201	128	8	278	722	2,598	
Delaware, Lackawanna and Western R. R. Co.	Delaware	3	1	247	330	106	52	4	213	.....	1,054	1	1	9	27	65	12	3	147	264	1,318	
Woodward, .....	Luzerne	1	3	105	115	39	20	10	17	89	460	1	1	6	5	19	1	2	44	116	516	
Avondale, .....	Luzerne	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	
Totals, .....	.....	4	2	11	452	435	145	72	14	230	80	1,454	2	2	15	60	94	13	5	191	380	1,834

\*Employes included in other collieries.

Kingston Coal Co.	2	3	310	168	108	58				60	729	1	1	21	18	135		2	141	319	1,058	
No. 2 colliery.	1		58	25	40	6				164				1	4	8	25		1	51	96	254
Gaylord.	3	368	227	148	64					90	903	1	2	25	26	100		3	132	469	1,312	
Totals.																						
Farrish Coal Co.	1	2	4	169	137	58	31	4	21	67	494	3	1	7	20	56	42	3	47	179	673	
Buttwood.	1	2	6	217	212	90	46	2	25	127	728	3	1	9	17	74	37	6	81	225	953	
Totals.	2	4	10	386	349	148	77	6	46	194	1,222	3	2	16	37	130	79	9	128	404	1,626	
West End Coal Co.	1	2	1	180	180	64	17	2	20	59	526	2	2	12	32	43	17	2	148	258	784	
West End.	1	2	1	180	180	64	17	2	20	59	526	2	2	12	32	43	17	2	148	258	784	
West End washery.	1	2	1	180	180	64	17	2	20	59	526	2	2	12	36	44	17	2	163	278	894	
Totals.																						
Plymouth Coal Co.	1	1	3	87	90	27	25	4	60		298	1	1	7	20	63	6	2	46	146	441	
Dodson.	1	1	3	87	90	27	25	4	60		298	1	1	7	20	63	6	2	46	146	441	
George F. Lee Coal Co.	1	1	13	25	6	1					58	1	1	3	4	21	8	1	21	59	117	
Chauncey.	1	1	13	25	6	1					58	1	1	3	4	21	8	1	21	59	117	
North American Coal Co.																						
Plymouth washery.																						
Old Plymouth Coal Co.	1																					
Old Plymouth washery.	1																					
Washery.	1																					
West Nanticoke Coal Co.																						
Totals.	22	17	61	2,732	2,428	1,018	411	55	830	672	8,246	8	22	132	364	941	350	44	1,336	3,187	11,433	

TABLE 3—Recapitulation

Lehigh and Wilkes-Barre Coal Co.	4	6	19	685	484	234	81	22	226	144	1,905	4	26	90	217	90	217	90	217	90	217	2,576
Delaware and Hudson Co.	5	2	13	561	638	246	74	7	226	89	1,871	5	33	74	201	128	201	128	278	722	2,533	
Delaware, Lackawanna and Western																						
R. R. Co.	4	2	11	452	435	145	72	14	230	89	1,454	2	15	60	94	13	5	191	380	1,884	5,191	
Kingston Coal Co.	3	3	368	227	148	64				90	903	1	2	25	26	100		3	132	469	1,312	
Parrish Coal Co.	2	4	10	386	349	148	77	6	46	194	1,222	3	2	16	37	130	79	9	128	404	1,626	
West End Coal Co.	1	2	1	180	180	64	17	2	20	59	526	2	2	12	36	44	17	2	163	278	894	
Plymouth Coal Co.	1	1	3	87	90	27	25	4	60		298	1	1	7	20	63	6	2	46	146	444	
George F. Lee Coal Co.	1	1	13	25	6	1				58		1	3	4	21	8	1	21	59	117	319	
North American Coal Co.																						
Old Plymouth Coal Co.	1																					
Old Plymouth washery.	1																					
Washery.	1																					
West Nanticoke Coal Co.																						
Totals.	22	17	61	2,732	2,428	1,018	411	55	830	672	8,246	8	22	132	364	941	350	44	1,336	3,187	11,433	

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Lehigh and Wilkes-Barre Coal Co.	Luzerne.....	84.6	81.3	84.5	81.2	80.4	81.5	81.4	86.7	90.4	90.3	85.7	85.6	846
	Nottingham, .....	55.9	52.2	51.6	56.2	55.4	56.3	50.8	52.9	53.4	52.1	48.1	48.9	216
	Luzerne.....	22.1	21.7	21.4	20.9	20.6	20.9	20.8	19.6	17.5	14.4	14.4	14.6	231
	Reynolds, .....	24.5	20.2	22.7	21.4	20.6	20.9	17.9	19.8	20	19.9	15.6	16.9	240
	Wanmire, .....	24.5	20.2	22.7	21.4	20.6	20.9	17.9	19.8	20	19.9	15.6	16.9	240
Averages, .....		24.5	21.3	23.2	21.2	20.6	21.4	20.1	19.8	18.2	19.5	15.5	15.8	241
Delaware and Hudson Co.	Luzerne.....	26.6	21.6	20.2	14.7	20.1	23.8	22.4	14.7	15.6	6.5	.....	.....	186
	Plymouth No. 2, .....	26.6	22.4	22.2	23.3	22.2	24.6	23.6	24.8	19.4	14.8	.....	.....	266
	Luzerne.....	27	23.8	23.5	23.3	18	24	23.1	20.6	20.5	15.2	20.1	19.6	259
	Plymouth No. 4 and 5, .....	23.6	20.5	21.3	23.7	21.7	21.3	21.6	20.5	19.1	15.1	20.8	19.4	249
	Boston, .....	23.6	20.5	21.3	23.7	21.7	21.3	21.6	20.5	19.1	15.1	20.8	19.4	249
Averages, .....		26	22.1	21.8	21.2	20.5	23.4	22.7	20.1	18.7	12.9	20.9	19.7	210
Delaware, Lackawanna and Western R. Co.	Luzerne.....	23.7	15.8	13.2	21.9	17.7	21.8	21.3	21.3	17	4.7	14.8	16.2	209
	Woodward, .....	9.8	17.5	9.7	21.4	20.5	22.1	22.7	22.5	18.2	7.6	13.2	14.8	196
	Avondale, .....	14.8	16.7	11.5	21.7	19.1	22	22	21.9	17.6	6.2	14	15.5	203
	Averages, .....		14.8	16.7	11.5	21.7	19.1	22	21.9	17.6	6.2	14	15.5	203
	Kingston Coal Co.	No. 2 colliery, .....	27	21.5	26.5	24.5	22	24	23	23.5	20.5	12	19.5	18
Parrish Coal Co.	Gaylor, .....	18.5	15.2	19.5	17.1	17.5	16.5	16.5	16	16.5	10.6	10.3	11.7	186
	Averages, .....	22.8	19.4	23	20.8	19.8	20.3	19.8	19.8	18.5	11.3	14.9	14.9	225
	Parrish, .....	22	19	23.1	18.5	18.3	19.6	18	18.9	20.3	18.9	15.3	14.9	227

Bottomwood, .....	23	38.7	22.7	19	18	20.4	19	18.2	18.5	18.8	15.1	15.4	227
Averages, .....	22.5	13.9	22.9	18.8	18.2	20	18.5	18.5	19.4	18.9	15.2	15.2	227
West End, .....	24.3	20.8	22.7	19.5	18.1	20.8	18.4	21.8	19.3	20.3	18.3	17.4	242
West End Coal Co. ....													
Plymouth Coal Co. ....													
Dodson, .....	18.1	17.3	17.8	19.4	18.4	20	17.9	20	17.9	16.4	18.2	19.6	231
George F. Lee Coal Co. ....													
Chauncey, .....	21.7	16.1	10.3	15.5	13.5	14.2	15.9	12.1	8.8	9.5	9.9	11.5	159
Averages, .....	21.8	19.1	19.2	19.8	18.5	20.3	19.4	19.3	17.3	14.4	15.9	16.2	220

TABLE 3—Recapitulation

Lehigh and Wilkes-Barre Coal Co., .....	24.5	21.3	23.2	21.2	20.6	21.4	20.1	19.8	18.2	19.5	15.5	15.8	241
Delaware and Hudson Co., .....	24	22.7	21.5	21.7	20.3	23.4	22.7	20.6	18.7	19.9	20.9	16.7	249
Dickinson, .....	14.8	16.7	11.5	19.8	19.8	20.3	22	21.5	17.4	16.9	14	15.5	233
Luzerne, .....													
Kingston Coal Co., .....	22.8	19.4	23	20.8	18.2	20.3	19.8	19.8	18.9	17.3	14.9	15.9	235
Parrish Coal Co., .....	22.5	18.9	22.9	18.8	18.2	20	18.5	18.5	19.4	18.9	15.9	15.9	227
West End Coal Co., .....	24.3	20.8	22.7	19.5	18.1	20.8	18.4	21.8	19.3	20.3	18.3	17.4	242
Plymouth Coal Co., .....	18.1	17.3	17.8	19.4	18.4	20	17.9	20	17.9	16.4	18.2	19.6	221
George F. Lee Coal Co., .....	21.7	16.1	10.3	15.5	13.5	14.2	15.9	12.1	8.8	9.5	9.9	11.5	159
Averages, .....	21.8	19.1	19.2	19.8	18.5	20.3	19.4	19.3	17.3	14.4	15.9	16.2	220

TABLE 4.—Eighth Anthracite District, 1903  
Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 23	David Roberts, .....	Welsh, .....	Stojeman, ....	19	S.	.....	.....	Nottingham, .....	Luzerne,	Squeezed between car and prop while making flying switch. Died at home January 26.
29	George Machinski, .....	Polish, .....	Footman, .....	24	S.	.....	.....	No. 3 shaft, Kingston,	Luzerne,	Fell down shaft and was instantly killed.
29	Edward Hagle, .....	American, ..	Driver, .....	17	S.	.....	.....	No. 4 shaft, D. & H.,	Luzerne,	Kicked on the head by a mule. Died January 30.
Feb. 3	Samuel Honey, .....	English, ....	Miner, .....	57	M.	1	.....	No. 2 shaft, D. & H.,	Luzerne,	Fell down shaft and was instantly killed.
6	David R. Dare, .....	American, ..	Door-boy, ....	15	S.	.....	.....	No. 3 shaft, D. & H.,	Luzerne,	Killed by a mule falling on him.
10	Andrew Kondrack, .....	Austrian, ..	Miner, .....	37	M.	1	.....	No. 4 shaft, D. & H.,	Luzerne,	Instantly killed by a piece of coal striking him on head from a blast.
March 4	Reese Owens, .....	American, ..	Driver, .....	18	S.	.....	.....	Nottingham, .....	Luzerne,	Killed by being squeezed between loaded car and rib.
11	David J. Williams, ...	Welsh, .....	Miner, .....	38	M.	1	3	No. 3 shaft, Kingston,	Luzerne,	Instantly injured by a fall of rock. Died 6 days after accident.
12	Samuel Rogers, .....	English, ....	Miner, .....	27	M.	1	2	Wanmie 18,	Luzerne,	Instantly killed by a fall of rock.
20	Andrew Braddock, ...	Austrian, ...	Loader, .....	32	M.	1	2	No. 2 shaft, D. & H.,	Luzerne,	Fatally injured between car and timber. Died following day at hospital.
23	Edward Katoski, .....	Polish, .....	Laborer, .....	26	S.	.....	.....	Nottingham, .....	Luzerne,	Instantly killed by a fall of top coal.
April 9	Richard M. Davis, ....	Welsh, .....	Miner, .....	20	M.	1	1	Buttonwood, .....	Luzerne,	Fatally injured by a fall of top rock. Died April 11.
13	Leslie Nuss, .....	American, ..	Trackman, ...	34	M.	1	2	West End, .....	Luzerne,	Fatally injured by cars at foot of rock plane. Died same day at hospital.
16	Samuel Moreland, .....	American, ...	Miner, .....	36	M.	1	4	No. 3 shaft, Kingston,	Luzerne,	Instantly killed by fall of rock.
17	Michael Washlison, ...	Polish, .....	Asst. driver, ...	17	S.	.....	.....	Nottingham, .....	Luzerne,	Fatally injured by being squeezed between loaded car. Died April 18.
29	John McGlynn, .....	Irish, .....	Miner, .....	29	M.	1	2	No. 3 shaft, Kingston,	Luzerne,	Instantly killed by a fall of rock. Died following day at hospital.
May 12	John Ward, .....	Irish, .....	Laborer, .....	27	S.	.....	.....	No. 2 shaft, D. & H.,	Luzerne,	Killed by runaway trip on slope.
15	William Wilson, .....	English, ...	Breaker swpr.	45	S.	.....	.....	Avondale, .....	Luzerne,	Instantly killed by falling on revolving screen.
23	John Piavitch, .....	Lithuanian, ..	Miner, .....	33	M.	1	.....	Lance, .....	Luzerne,	Fatally injured by a spark dropping into a keg of powder. Died May 30 at hospital.



June	28	William R. Jones, .....	Welsh, .....	Co. man, .....	22	S. ....	Nottingham, .....	Luzerne, .....	Instantly killed by falling down shaft.
	4	Roman Lauring, .....	Polish, .....	Miner, .....	30	S. ....	Boston, D. & H., .....	Luzerne, .....	Fatally injured by a fall of coal. Died June 6.
	5	Adam Jadamis, .....	Polish, .....	Laborer, .....	39	M. 1	Woodward, .....	Luzerne, .....	Instantly killed by a fall of top coal.
	6	Mario Trove, .....	Italian, .....	Miner, .....	47	M. 1	West End, .....	Luzerne, .....	Instantly killed by a fall of top rock.
	13	David Davis, .....	American, ..	Co. man, .....	68	M. 1	Easton, D. & H., ....	Luzerne, .....	Fatally injured between door and loaded cars. Died June 24.
July	20	Thomas Pugh, .....	Welsh, .....	Miner, .....	43	M. 1	Woodward, .....	Luzerne, .....	Killed by a fall of rock.
	6	John Nowzavich, .....	Polish, .....	Laborer, .....	33	M. 1	Parrish, .....	Luzerne, .....	Killed by a fall of coal.
Aug.	11	Michael Wright, .....	Irish, .....	Miner, .....	67	M. 1	No. 3 shaft, D. & H., ..	Luzerne, .....	Instantly killed by premature blast.
	24	John Straud, .....	American, ..	Runner, .....	18	S. ....	No. 3 shaft, Kingston, ..	Luzerne, .....	Instantly killed by loaded cars becoming derailed, crushing him.
	26	Joshua Steever, .....	American, ..	Miner, .....	66	M. 1	No. 5, D. & H., .....	Luzerne, .....	Instantly killed by a fall of top rock in the shape of a bell.
Sept.	26	Peter Crok, .....	Polish, .....	Laborer, .....	29	S. ....	No. 5, D. & H., .....	Luzerne, .....	Instantly killed by a fall of top rock in the shape of a bell.
	3	Dante Vitalli, .....	Italian, .....	Laborer, .....	45	M. 1	West End, .....	Luzerne, .....	Instantly killed by a trip of cars while in the act of crossing slope.
	30	Thomas Anthony, ....	Welsh, .....	Bratticeman, ..	38	M. 1	Avondale, .....	Luzerne, .....	Fatally injured by an explosion of gas. Died October 7.
Oct.	13	Abel Reagan, .....	Italian, .....	Miner, .....	28	S. ....	Wanamie No. 19, .. ..	Luzerne, .....	Instantly killed by a fall of coal.
	30	John P. Burke, .....	Irish, .....	Miner, .....	52	M. 1	No. 5, D. & H., .....	Luzerne, .....	Instantly killed by a premature blast.
Dec.	1	Joseph Herman, .....	Polish, .....	Laborer, .....	25	S. ....	No. 3, D. & H., .....	Luzerne, .....	Died in a few hours.
	21	Anthony Comitiski, ....	Polish, .....	Laborer, .....	25	M. 1	Nottingham, .....	Luzerne, .....	Fatally injured by an explosion of gas. Died December 21 at hospital.
	24	Albert Hussey, .....	American, ..	Driver, .....	19	S. ....	Parrish, .....	Luzerne, .....	Instantly killed by being squeezed between loaded car and rib.

TABLE 5.—Eighth Anthracite District, 1903  
Non-Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 3	William Supream, .....	Lithuanian, .....	Miner, .....	46	M.	Nottingham, .....	Luzerne, .....	Burned on hands and face by an explosion of gas.
5	Thomas Williams, .....	American, .....	Driver, .....	38	M.	Chauncey, .....	Luzerne, .....	Skull fractured and jaw broken by being run over by loaded car.
10	Stanley Bazzawiski, .....	Polish, .....	Driver, .....	17	S.	No. 5, D and H, .....	Luzerne, .....	Cut on hand by a piece of coal falling from a car.
10	Richard H. Jones, .....	Welsh, .....	Driver, .....	17	S.	Woodward, .....	Luzerne, .....	Foot crushed by cars.
13	John Nolan, .....	Irish, .....	Slope man, .....	24	S.	Woodward, .....	Luzerne, .....	Lost his eye; injured while driving spike.
14	John Kosguski, .....	Polish, .....	Miner, .....	59	M.	Woodward, .....	Luzerne, .....	Loaded finger of right hand severed by fall of rock.
14	George Raffle, .....	Russian, .....	Laborer, .....	28	M.	Gaylord, .....	Luzerne, .....	Back and leg bruised; also, arm broken by being run over by empty car.
20	William Jones, .....	Welsh, .....	Miner, .....	45	M.	Woodward, .....	Luzerne, .....	Burned on hands and face by charge of powder.
28	John Brogan, .....	American, .....	Miner, .....	38	S.	No. 1 shaft, No. 2 colliery, D. and H. ....	Luzerne, .....	Thigh broken by cage striking bottom of shaft.
31	Samuel Peters, .....	American, .....	Slope man, .....	24	M.	Parish, .....	Luzerne, .....	Arm broken by playing.
Feb. 5	James Duffy, .....	American, .....	Driver, .....	22	S.	Chauncey, .....	Luzerne, .....	Head injured and foot dislocated by a fall of rock.
7	Albert Wenner, .....	Polish, .....	Rock dumper, .....	17	S.	No. 2, D. and H., .....	Luzerne, .....	Two fingers severed by car leaving track and rooming.
12	Frank Wolkofski, .....	Polish, .....	Miner, .....	43	M.	Woodward, .....	Luzerne, .....	Ribs fractured, left side, by fall of coal.
12	Henry Lewis, .....	English, .....	Miner, .....	42	M.	Lance, .....	Luzerne, .....	Blast on ribs and face by an explosion of gas.
17	Thomas Condon, .....	American, .....	Stopeman, .....	25	S.	No. 2, D. and H., .....	Luzerne, .....	Two ribs fractured by flying coal from a blast.
18	John Swales, .....	American, .....	Laborer, .....	28	S.	Wanamie, .....	Luzerne, .....	Two fingers severed by fall of rock.
19	Stanley Osew, .....	Polish, .....	Laborer, .....	24	S.	Wanamie, .....	Luzerne, .....	Leg broken by a fall of rock.
20	John Wargo, .....	Austrian, .....	Miner, .....	52	S.	No. 3, D. and H., .....	Luzerne, .....	Cut on head and chest bruised by a fall of rock.
28	William J. Owens, .....	Welsh, .....	Company laborer, .....	41	S.	Parish, .....	Luzerne, .....	Head injured by falling off a trip of cars.
March 9	Daniel V. Evans, .....	Welsh, .....	Driver boss, .....	30	M.	Buttonwood, .....	Luzerne, .....	Arm broken; squeezed between car and prop.

No.	Name	Nationality	Company	Position	Age	Locality	Accident Description
11	Robert Thomas	Welsh	Company miner	Miner	45	M. Buttonwood	Injured on chest, pelvis and ribs by a fall from a horse.
21	Edward Williams	American	Silversman	Driver boss	23	M. Woodward	Leg injured by car running over it.
21	Joseph Lynchey	Austrian	Mine boss	Driver boss	25	M. Woodard	Hand injured by car running over it.
21	William E. Jones	Welsh	Mine foreman	Miner	42	M. Lane, No. 4 shaft, D. and H.	Burned on hands and face by an explosion of gas.
3	John Bowden	English	Miner	Miner	24	M. Lane	Right foot injured by a fall of coal.
3	Anthony Zunie	Irish	Miner	Miner	24	M. Buttonwood	Burned on hands and face by an explosion of gas.
16	Patrick Dunn	Irish	Miner	Miner	48	M. Avondale	Left arm broken; caught by pinion wheel.
17	Frederick Tolliver	American	Slate boss	Laborer	33	M. No. 2, D. and H.	Hands and face burned by an explosion of gas.
23	Paul Tomach	Slavonian	Laborer	Laborer	33	M. No. 3, D. and H.	Hand injured; finger severed by car.
23	Adam Chacklock	Slavonian	Laborer	Laborer	46	M. No. 3, D. and H.	Ribs and collar bone broken; squeezed between car and rib.
24	Constant Bonavage	Lithuanian	Laborer	Laborer	22	M. Buttonwood	Cut on head and face by flying coal from a horse.
25	Dominick Powletto	Italian	Miner	Miner	38	M. Chauncey	Leg fractured by falling off a car.
25	Nicholas Onko	Slavonian	Miner	Miner	27	M. No. 3 shaft, Kingston	Shoulder blade broken; squeezed between car and prop.
25	Charles Edwards	Welsh	Driver	Driver	55	M. Nottingham	Right ankle dislocated by being hit with plane rope.
25	Adam Necronas	Lithuanian	Miner	Miner	32	M. Lane	Face injured; kicked by a mule.
27	John Williams	American	Rock loader	Rock loader	25	M. Buttonwood	Fracture of cheek bone; struck by coal from blast.
27	Michael Pushkar	Slavonian	Car oiler	Car oiler	19	M. Boston	Right arm broken by falling out of wagon.
29	Mordecai Dando	Welsh	Mine foreman	Mine foreman	49	M. Boston, No. 2 shaft, Kingston	Arm broken by falling off a mule.
30	Thomas Brace	Welsh	Teamster	Teamster	26	M. Gaylord	Leg broken by being run over by a car.
5	Joseph Davidson	American	Minor	Minor	18	M. Parrish	Left wrist dislocated by falling on chute.
7	Michael Vitceavage	Lithuanian	Minor	Minor	49	M. Nottingham	Burned on face by gas.
12	Michael St. John	American	Slate picker	Slate picker	14	M. Boston	Squeezed about body between car and rib.
5	Peter Saloski	Polish	Slate picker	Slate picker	11	M. Wanamie	Burned on hands and face by an explosion of gas.
6	John Lobenski	Polish	Driver	Driver	25	M. Wanamie	Burned on hands and face by an explosion of gas.
8	Thomas Swanbarns	American	Bratticeaman	Bratticeaman	22	M. Woodward	Arm broken by being squeezed between car and prop.
8	Edward Davis	American	Miner	Miner	22	M. Woodward	Leg bruised by ash cart running over it.
11	Joseph Smith	German	Miner	Miner	51	M. Buttonwood	Cut on head and face by premature blast.
13	James Gallagher	Irish	Driver	Driver	18	M. Boston	Cut on head, also shoulder bruised by a fall of coal.
15	David Lawrence	Welsh	Laborer	Laborer	55	M. Gaylord	Two fingers severed by being caught between latches and car.
15	Peter Coplas	Polish	Miner	Miner	38	M. Nottingham	Thigh fractured by collar falling on him.
19	Kzinofat Potornia	Russian	Laborer	Laborer	27	M. No. 2, D. and H.	Cut on head and hip bruised by fall of slate.
25	John Pritchard	Welsh	Runner	Runner	24	M. Nottingham	Jaw bone fractured by being struck with rail.
25	Benjamin Spade	English	Runner	Runner	33	M. Lane	Nose broken and jaw bruised by a fall of rock.
25	Edward Wicklam	American	Driver	Driver	28	M. Avondale	
26	Alfred Cherritt	English	Timberman	Timberman	57	M. No. 2, D. and H.	
26	Simon Lawrence	Polish	Laborer	Laborer	23	M. Nottingham	
3	Anthony Joelinski	Lithuanian	Laborer	Laborer	30	M. Nottingham	
6	John Elko	Slavonian	Miner	Miner	35	M. Boston	

April

May

June

July

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
14	Stanley Syneck, .....	Polish, .....	Driver, .....	18	S.	Woodward, .....	Luzerne,	Kicked by a mule.
18	Henry Birkenstock, .....	German, .....	Rock miner, .....	39	M.	No. 2, D. and H., .....	Luzerne,	Burned on hands and face by an explo-
18	Thomas Davis, .....	Welsh, .....	Rock miner, .....	35	M.	No. 2, D. and H., .....	Luzerne,	sion of gas.
18	James Cool, .....	German, .....	Rock miner, .....	47	M.	No. 2, D. and H., .....	Luzerne,	
18	Joseph Wydrá, .....	Polish, .....	Miner, .....	36	M.	No. 2 shaft, Kingston,	Luzerne,	Injured by fall of rock.
21	Waseel Dargel, .....	Polish, .....	Miner, .....	30	M.	Nottingham, .....	Luzerne,	Leg broken by a fall of top slate while setting prop.
23	Jacob Zorański, .....	Polish, .....	Miner, .....	34	M.	Lance, .....	Luzerne,	Leg broken by a fall of top slate while wedging prop.
24	George Rowlands, .....	American, .....	Driver, .....	20	S.	Reynolds, .....	Luzerne,	Squeezed between a derailed car and rib.
24	John Stevens, .....	Welsh, .....	Miner, .....	49	M.	Reynolds, .....	Luzerne,	Turned by powder.
28	Michael Sheokoski, .....	Polish, .....	Miner, .....	42	S.	Nottingham, .....	Luzerne,	Arm broken by a piece of coal falling out of the prop.
29	George Scotty, .....	Polish, .....	Footman, .....	22	S.	Nottingham, .....	Luzerne,	Leg broken by being hit by rope.
1	John Loshinski, .....	Polish, .....	Headman, .....	20	S.	West End, .....	Luzerne,	Body injured by falling off slope tulp.
4	Joseph Pascal, .....	Lithuanian, .....	Laborer, .....	22	S.	Nottingham, .....	Luzerne,	Ankle dislocated by collar falling on him.
5	Frank Tanza, .....	Polish, .....	Laborer, .....	39	M.	No. 3 shaft, Kingston,	Luzerne,	Ankle dislocated by a piece of rock rolling against him.
7	William Piavitch, .....	Polish, .....	Laborer, .....	38	S.	No. 2, D. and H., .....	Luzerne,	Leg broken by a fall of coal.
7	John Romanski, .....	Polish, .....	Laborer, .....	32	S.	No. 2, D. and H., .....	Luzerne,	Both ankles dislocated by a piece of coal falling against him.
13	Frank Salvage, .....	Polish, .....	Miner, .....	42	M.	Woodward, .....	Luzerne,	Cut on shoulder by a piece of top slate.
13	Richard Jones, .....	Welsh, .....	Driver, .....	24	M.	Farrish, .....	Luzerne,	Back injured by cars.
14	Michael Lasniek, .....	Russian, .....	Miner, .....	30	S.	Farrish, .....	Luzerne,	Cut on head and face by a premature blast.
16	David Williams, .....	American, .....	Breaker boss, .....	21	S.	Woodward, .....	Luzerne,	Finger crushed by machinery.
2	John Shumack, .....	Polish, .....	Laborer, .....	37	S.	Reynolds, .....	Luzerne,	Thumb broken; hit with piece of coal from a blast.
2	William Richards, .....	Welsh, .....	Driver, .....	17	S.	Woodward, .....	Luzerne,	Leg broken by derailed car.
5	Michael Nicovitch, .....	Russian, .....	Car coupler, .....	39	M.	No. 2, Kingston, .....	Luzerne,	Leg broken; squeezed between cars.
8	Oliver Reese, .....	American, .....	Driver, .....	22	S.	Lance, .....	Luzerne,	Jaw broken; kicked by a mule.
8	James Monahan, .....	American, .....	Miner, .....	30	S.	No. 3, D. and H., .....	Luzerne,	Cut on head and leg by a fall of top slate.
15	Frank Oravishi, .....	Slavonian, .....	Miner, .....	40	M.	No. 3 shaft, Kingston,	Luzerne,	Hip dislocated by fall of coal.

Aug.

Sept.

26	Joseph Morris,	American,	Pocket tender,	17	S. Woodward,	Luzerne,	Right leg crushed, trying to adjust belt while engine was in motion.
26	Stanley Carter,	Lithuanian,	Miner,	32	M. Parrish,	Luzerne,	Injured by premature blast.
26	Michael Barron,	Polish,	Driver,	20	S. Wanamie,	Luzerne,	Squeezed by falling under loaded cars.
5	Frank Zwyky,	Russian,	Laborer,	21	M. Dodson,	Luzerne,	Burned on hands and face by explosion of gas.
5	John Szokoski,	Russian,	Laborer,	26	M. Dodson,	Luzerne,	Head crushed; wiping engine while in motion.
5	Isaac Eddy,	American,	Engineer,	35	M. Nottingham,	Luzerne,	Body injured by premature blast.
6	Nelson Ogen,	American,	Miner,	30	M. Wanamie,	Luzerne,	Leg broken by fall of coal.
22	Michael Figler,	Slavonian,	Miner,	25	M. No. 5, D. and H.,	Luzerne,	Body injured; fell from scaffold.
16	John Dugan,	American,	Machinist,	20	S. Wanamie,	Luzerne,	Arm broken while side hooking car.
3	Thomas Manning,	American,	Door boy,	17	M. No. 5, D. and H.,	Luzerne,	Two fingers severed while cleaning blasting barrel.
5	Andrew Lasco,	Slavonian,	Miner,	22	S. No. 3, D. and H.,	Luzerne,	Burned on hands and face by explosion of gas.
5	William Bardulis,	Lithuanian,	Miner,	31	M. Lance,	Luzerne,	Leg broken by fall of rock.
6	Joseph August,	Slavonian,	Laborer,	21	S. Wanamie,	Luzerne,	Leg amputated; was run over by loaded car.
9	Frank Allen,	American,	Car runner,	20	S. West End,	Luzerne,	Finger severed by slipping on lump of coal.
11	Joseph Push,	Russian,	Laborer,	21	M. No. 5, D. and H.,	Luzerne,	Leg broken by flying coal from runaway trip on slope.
16	Michale Bolica,	Polish,	Laborer,	41	M. Nottingham,	Luzerne,	Arm amputated; kicked by mule and fell under trip.
24	Thomas Keating,	Irish,	Driver,	22	S. Woodward,	Luzerne,	Arm broken; caught between door and stam post.
4	John Mills,	American,	Door boy,	17	S. Parrish,	Luzerne,	Leg broken by a fall of rock.
4	Daniel Blakslie,	American,	Driver,	19	S. Parrish,	Luzerne,	Burned on hands and face by an explosion of gas.
4	Joseph Domanski,	Slavonian,	Miner,	35	M. Lance,	Luzerne,	Body injured; fell into scraper line.
4	Joseph Close,	Slavonian,	Laborer,	31	M. Lance,	Luzerne,	Arm broken; hit by lever.
12	George Bargentas,	Polish,	Slate picker,	15	S. Old Plymouth,	Luzerne,	Rupture; hit by sprag.
16	Walter Jones,	American,	Door tender,	17	S. Avondale,	Luzerne,	Leg broken while unloading pipe from wagon.
18	Michael Kutcher,	American,	Miner,	43	M. Woodward,	Luzerne,	Leg broken; caught between car and pulley on slope.
18	Jacob Gorniko,	Slavonian,	Runner,	22	S. Boston,	Luzerne,	Burned by an explosion of gas.
19	David D. Thomas,	Welsh,	Machinist,	61	M. No. 2, Kingston,	Luzerne,	Ribs fractured by a fall of rock.
19	James Simmons,	Irish,	Door boy,	16	S. Dodson,	Luzerne,	Kicked by mule and fell under car.
21	John Burner,	Polish,	Miner,	33	M. Nottingham,	Luzerne,	Burned by an explosion of gas.
21	Michael Ryoski,	Polish,	Miner,	43	S. Nottingham,	Luzerne,	
21	Martin Stafanski,	Polish,	Driver,	18	S. Nottingham,	Luzerne,	
21	James Brace,	Irish,	Driver,	24	S. Nottingham,	Luzerne,	
21	John Wisga,	Austrian,	Miner,	48	M. No. 4 shaft, D. and H.,	Luzerne,	
21	Charles Hutton,	American,	Slope runner,	46	M. Avondale,	Luzerne,	
21	Nicola Vitulucia,	Italian,	Miner,	26	S. West End,	Luzerne,	
29	Martin Wilkes,	Polish,	Miner,	53	M. Gaylord,	Luzerne,	Body injured by premature blast.

Oct.

Nov.

Dec.

### Fatal Accidents—By Falls of Coal, Slate and Roof.

David J. Williams, miner, was fatally injured March 11, by a fall of rock in Orchard vein No. 3 shaft, Kingston. He was in the act of barring down some top rock and while so doing a large piece fell on him and crushed him.

Samuel Rogers, miner, was instantly killed March 12, by a fall of rock at Wanamie. He was robbing pillars in the Ross vein. The place was well timbered, but a piece of rock fell from within a small enclosure of two props and killed him.

Edward Katoski, laborer, was instantly killed March 23, by a fall of top coal in Red Ash vein of Nottingham colliery. Two large slips running in opposite directions and ending at the same point in the roof fell, displacing about six sets of timber. The victim and his miner were tamping a hole in the face of chamber when the fall occurred. The miner fortunately escaped with a slight injury.

John Nowzavich, miner, was fatally injured by a fall of coal in Bennett vein, Parrish colliery, July 6. The miner in the next chamber notified him that they were about to fire in the cross-heading. The victim retreated to the foot of chamber, but through some unaccountable manner went back to the face of chamber, just as the shot went off. A large piece of coal fell from the rib, due to a slip, and pinned him against the car. The crosscut had several yards to go before breaking through.

Joshua Steever, miner, and Peter Cook, laborer, were instantly killed by a fall of rock in Red Ash vein No. 5, Delaware and Hudson Company, August 26. Steever was known to be a very careful miner and a most practical one. He had just fired a blast in the top bench in the left corner of his chamber. The driver was waiting on the branch to take him up an empty car. Both men were engaged in cleaning some coal off the road when a fall of rock occurred. The rock which approximately weighed about 100 tons was in reality a geological freak. It resembled the stump of a giant tree with its vast roots shooting out in every direction while on top marks plainly visible of branches as large as ordinary sized trees, lying zigzag. The rock fell due to a slip almost circular in shape.

Adam Jadamis, laborer, was instantly killed June 5, by a fall of coal in Red Ash vein, Woodward colliery. The top coal was full of slips and the chamber was double timbered and lagged, but the miner apparently did not realize the condition of the roof, and permitted himself to drive a considerable greater distance between the last set of timber and the face of chamber.

Mario Profire, miner, was instantly killed June 6, by a fall of rock at West End colliery. He had fired a blast which knocked out a set

of timber when a fall of rock took place. While cleaning this fall a second one occurred, with the above result.

Thomas Pugh, miner, was instantly killed June 20, by a fall of rock in the Bennett vein, Woodward colliery. He realized that a loose piece of rock between the mining bench and top coal was treacherous. His laborer told him that while he would be drilling the hole underneath it there would be danger of it falling on him, but he thought differently. While he was in the act of driving in the machine bar it shook the piece of rock loose and it fell upon him.

Richard M. Davis, miner, was fatally injured April 9 at Buttonwood mine of the Parrish Coal Company, Kidney vein. He was in the act of digging a hitch in the bottom in order to set a prop when a piece of fire clay fell upon him. He had instructed his laborer to keep his hand on the rock and in case of any danger to shout. It certainly was a mistake in not barring down this piece of rock previous to his digging a hitch directly underneath it.

Samuel Moreland, miner, was instantly killed April 16, at No. 3 shaft, Kingston, in Orchard vein. He realized the top rock was bad and had set a prop within a few feet of the face of his chamber, but a fall of rock occurred between the prop in the face and another prop that stood back a considerable distance.

John McGlynn, miner, was fatally injured April 29, by a fall of top rock at Kingston No. 3 shaft. He was working on the night shift and had fired his last shot which knocked out a prop. He proceeded to reset it when the rock fell.

Roman Lawing, was fatally injured June 4, at Boston mine, in Red Ash vein by a fall of top coal. He was undermining the bottom bench when a piece of top coal fell out against him.

Abel Reagan, miner, was instantly killed October 13, by a fall of coal in the Bennett seam at Wanamie colliery. He was working in close proximity to the outcrop. His coal seemed to be in layers or slips two or three feet apart across the entire width of his chamber. He tried to bar down a piece of the top bench, but failing to accomplish his task he proceeded to drill a hole beneath it when the top coal fell upon him.

Joseph Herman, laborer, was fatally injured December 1, in the Red Ash vein No. 3, Delaware and Hudson. The colliery was working half days. His miner went home at 11.40 A. M., leaving the victim to load the last car. While doing so a large lump of slate and coal slid from rib and pinned him to the car. How he managed to extricate himself from so narrow a space is a miracle, or how long he worked to free himself no one knows. However he proceeded back to his box, secured his overcoat, threw it over his shoulders, returned to the fact of the place he was working, adjusted his shovel against the rib for a head rest and laid down. He was dis-

covered dead at 12 o'clock midnight by employes of the colliery who went in search for him.

### By Cars

David Roberts, slopeman, was fatally injured January 23, at Nottingham colliery. He was endeavoring to make a flying switch on the head of the Ross slope with an ash car.

Reese Owens, driver, was fatally injured March 4, by being squeezed between loaded cars and rib in Nottingham colliery, Red Ash vein. He was coming out of gangway seated on the head end of a loaded car engaged in conversation with the runner who occupied the other bumper, when the accident occurred.

Leslie Nuss, trackman, was fatally injured April 13, in Red Ash vein, West End colliery. He was engaged in tending foot of Rock plane. A loaded trip became derailed at the latches while descending and he ran out of the safety hole to signal the engineer to stop, when he was caught between the trip and rib.

Michael Washilision, driver, was fatally injured April 17, at Nottingham colliery. He was endeavoring to unhook his team from a loaded trip. His team not giving him sufficient slack, he continued in this manner until he was caught by both trips.

John Ward, laborer, was instantly killed May 12, by a runaway trip of cars in Red Ash vein No. 2 colliery, Delaware and Hudson Company. He was laboring in slope airway. They pulled his loaded car out by tail rope. Ward was in the habit of hooking and unhooking the tail rope at a point where it was convenient for the main slope trip to be coupled to the car. He stood out on the main slope while the trip was descending. A coupling broke allowing two cars to run back which caught him against the pillar.

David Davis, laborer, was fatally injured June 15, in Red Ash vein, Boston colliery, Delaware and Hudson Company. He was tending two doors in close proximity to each other. While in the act of opening his second door he was run down by a loaded trip. The per cent. of grade was very small. The supposition is that he permitted the trip to get too close to him before he opened door No. 1.

John Straud, runner, was instantly killed August 24, at No. 3 shaft, Kingston. He was riding down a counter on the headend of a loaded trip, his lamp went out, and it was thought that he fell off and the trip passed over him.

Dante Vitalli, laborer, was instantly killed September 3, at West End colliery. He was on his way home and had walked up the manway with others. At a point 30 feet below the apex of main slope he proceeded to cross when he was hurled to one side by an ascending loaded trip.



Albert Hussey, driver, was instantly killed December 24, in Bennett vein, Parrish mine. It is supposed that in attempting to get on the head end of a loaded car, which his team was pulling out of a chamber branch, he lost his hold and came in contact with a close rib and car.

#### By Powder

John Piavitch, miner, at Lance, was fatally burned by a spark dropping into a keg of powder causing an explosion. He died at the hospital on May 30. I have frequently called attention to the danger of making cartridges of powder while the naked lights are on their heads, and have positively prohibited them under penalty of the law from so doing, but a wonderful amount of carelessness exists among the men in this respect.

#### By Cars—Outside

Andrew Bradcock, loader, was running a 100,000 capacity steel car under the breaker in No. 2, Delaware and Hudson Company. He jumped off the rear end of the car, and running on the platform endeavored to jump on the side of the car to get inside. He was caught by the timber that supports the pockets, and so badly squeezed that he died the following day at the hospital.

#### By Machinery—Outside

William Wilson, breaker-sweeper, at Avondale, was found dead under the screen by one of the slate picker boys. No one was able to tell how he was caught by revolving screen. It was stated at inquest that his work did not call him there at that particular time. The screens were protected. The manner in which they discovered Wilson was, the coal had blocked up at the screen, and upon investigating they found his body directly underneath. He must have been killed instantly.

#### By Premature Blasts

Andrew Kondrack, miner, No. 4 shaft, Delaware and Hudson Company, was working in a chamber on the pitch. He applied his lamp to the match and before he reached a place of safety the shot went off, one large piece of coal striking him on the head killing him. This is about the third time that Kondrack had been struck by flying coal from blasts. It was customary for him to retreat to a place where he could see the shot going off.

Michael Wright, miner, No. 3, Delaware and Hudson Company, was in the act of firing a blast, and before he could get away from the fact of his chamber, it exploded, killing him instantly. Wright was a miner of about 40 years experience.

John P. Burke, miner, No. 5, Delaware and Hudson Company, was driving a cross heading. He sent his laborer back with the tools and to warn the other men that he was about to fire. The laborer had just reached the chamber road and a very short distance below the cross-cut when the shot went off. Burke did not have the slightest chance to get away from the blast. He was most horribly mangled. He was known to be a very practical miner, the writer having known his serving in this capacity for 25 years.

### By Falling Down Shafts

George Machinski, laborer was engaged in tending foot of shaft. They had finished hoisting from the bottom or Red Ash vein and commenced to hoist from the Orchard vein. Machinski, with one other person, was engaged on one side of the shaft in handling empty cars, while two men were on the opposite side of the shaft running loaded cars on the cage. One car not running a sufficient distance on the cage, to enable the block to be properly adjusted, they called on Machinski who was pushing an empty car, to help adjust the one on the carriage. However, he continued to push his car to its place on the branch, during which time the men who handled the loaded cars properly placed the car on the carriage, gave the signal to hoist and returned to run in another loaded. In the meantime Machinski returning to the shaft and seeing the loaded car still standing on the cage thought it was not properly adjusted. He proceeded to place his back to the car and while in this position the cage was hoisted, permitting him to fall down the shaft when he was instantly killed. I would advise all foremen when they are short of foottenders not to substitute in their place men who are not acquainted with the handling of cars, but only those who are acquainted with this kind of work. It was very evident that Machinski was a stranger to this work.

Samuel Honey, miner, at G vein No. 2, Delaware and Hudson Company, was instantly killed February 3, by being crushed between cage and roof of landing. A cage load of men was about to be hoisted and he was the last man to step on. As he did so the cage was hoisted, crushing him against the roof of the landing. He fell down the shaft. At the inquest it developed that no signal had been given to hoist. This was sworn to by the boss foot-man and the men who were on the cage. The engineer, Charles Bittenbender,

swore that he received a signal, one whistle, to hoist coal. However, the jury placed the blame on the engineer.

William R. Jones, company men, at Nottingham, was killed May 28. He was on the night shift and with others was getting on the cage to be lowered, when in some unaccountable means the cage was hoisted, throwing Jones down the shaft, killing him instantly. It was stated at inquest that a cage load of men just hoisted to landing, and before they had an opportunity of stepping off, the night shift men crowded on. The head tender stated he saw some one through the rush take hold of signal wire. The engineer, John Davis, when sworn stated that he received a signal to hoist. The company was censured for not having appliances for return signals.

#### By Explosions of Gas

Thomas Anthony, bratticeman, at Avondale, was fatally burned September 30, by an explosion of gas in fourth east lift, fifth slope, Ross vein. The colliery was idle on that date. Anthony was engaged in repairing main door on this lift. He went into the face of the gangway to borrow some tools. After he was through he returned them to the face, and on his way out on the main gangway road he ignited a small quantity of gas. He seemed to be burned slightly, but he died at his home on October 7.

Anthony Cominski, laborer, at Nottingham colliery, was fatally burned December 21, by an explosion of gas. He was engaged with four others in placing a truck of timber on the track in a chamber. A slight explosion of gas took place in the first chamber in the lift. In a short time the second explosion occurred in the chamber where Cominski and four others were engaged with the timber. The fire-boss records showed that this last chamber was free from gas. It evidently appears that an accumulation of gas must have taken place in this chamber. The force of the first explosion dislodged it and carrying it down upon them. Cominski died December 26 at the hospital.

#### By Mules

Edward Hagle, driver, No. 4 shaft, Delaware and Hudson Company, was kicked by a mule January 29, causing a fracture of the skull. He died at his home on the following day.

David R. Dare, doorboy, at No. 3, Delaware and Hudson Company, was riding on head end of loaded trip when team turned out, causing him to fall off. The hind mule fell on him and killed him.

#### Condition of Collieries

Nottingham colliery.—Condition good as to safety, drainage and ventilation.

Lance colliery.—Condition good as to safety, drainage and ventilation.

Reynolds colliery.—Condition good as to safety, drainage and ventilation.

Wanamie 18.—In safe condition; drainage and ventilation fair.

Wanamie 19.—Condition good as to safety, drainage and ventilation.

Plymouth No. 2.—Condition good as to safety, drainage and ventilation.

Plymouth No. 3.—Condition good as to safety, drainage and ventilation.

Plymouth No. 4.—Condition good as to safety, drainage and ventilation.

Plymouth No. 5.—Condition good as to safety, drainage and ventilation.

Boston.—Condition good as to safety, drainage and ventilation.

West End.—In safe condition; drainage and ventilation fair.

Dodson.—Condition good as to safety, drainage and ventilation.

Woodward.—Condition good as to safety, drainage and ventilation.

Avondale.—Condition good as to safety, drainage and ventilation.

Parrish.—Condition good as to safety, drainage and ventilation.

Buttonwood.—Condition good as to safety, drainage and ventilation.

Kingston No. 2.—In safe condition; drainage and ventilation fair.

Kingston No. 3.—In safe condition; drainage and ventilation fair.

Gaylord.—In safe condition; drainage and ventilation fair.

Chauncey.—In safe condition; drainage good, ventilation fair.

## IMPROVEMENTS DURING THE YEAR

### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

#### Avondale Colliery

This mine was flooded during the year 1902. This great accumulation of water has now been pumped out and the pumps lost during the flood have been recovered.

#### Jersey Mine Fire

This most disastrous and serious underground conflagration is known to the people of this region from one end to the other, on which volumes could be written, giving the experiences that we have met with and the difficulties we have had to contend with in fighting

this most dangerous enemy to the underground worker. I am glad to be able to report to you at this date that we are led to believe that we have succeeded in surrounding this affected district with incombustible material to prevent further spreading of the fire, and expect to be able to report in the near future that this destructive fire has been taken care of.

#### Woodward Colliery

Outside.—The improvements at this breaker during the year consist of labor-saving machinery, automatic slate pickers, conveyors, elevators, shakers, etc., together with a 15-foot dust fan which is materially assisting in improving the conditions at this breaker.

Inside.—The installation of two  $7\frac{1}{2}$  ton electric locomotives, two electric hoists. Cooper and Abbot veins have been opened at No. 2 shaft, which will materially assist in increasing the output of this colliery in the future.

The condition of the colliery has been improved by a general cleaning up, white washing and painting of the buildings, on the outside, and the cleaning and ballasting of the roads on the inside.

#### DELAWARE AND HUDSON COMPANY

##### Plymouth No. 2 Colliery

Reopening Hillman vein, repairs to No. 1 shaft, concreting, etc., making branches, etc., at foot of No. 9 plane; electrical machinery for lighting this division, buildings, etc., two large boilers added to the present boiler plant, extension of boiler house Hillman vein improvements; pump room and tunnel; additions to the washery, fifty new mine cars.

##### Plymouth No. 3 Colliery

Tunnel from bottom to top split of Red Ash vein. Additional compressor with house additions, etc. Additional boilers; fifty new mine cars.

##### Plymouth No. 4 Colliery

Mountain plane in the outcrop, conveyor for fuel to boiler house; fifty new mine cars.

##### Plymouth No. 5

Fifty new mine cars; coal conveyor.

##### Boston Colliery

No. 4 plane, bottom to top split Red Ash; one additional compressor; compressor house, addition to boiler house; rope haulage and extension, 100 new mine cars; chain hoist from tunnel to foot of shaft.

## LEHIGH AND WILKES-BARRE COAL COMPANY

## Lance Colliery

Outside.—Duplex air compressor, simple steam, compound air; forced fan draft system for boilers, and addition to new boiler house.

Inside.—No. 18 tunnel, Red Ash to top Red Ash, 15 yards. No. 19 tunnel, Red Ash to top Red Ash, 15 yards. No. 20 tunnel, Red Ash to top Red Ash, 15 yards. No. 21 tunnel, Cooper to Five Foot, 50 yards.

## Nottingham Colliery

Outside.—Started erection of new breaker; shaft hoisting engines; No. 1 slope engines and No. 2 slope engines placed on new foundations, and new houses erected for the same; colliery supply store; colliery shop; extended brick compressor house, for accommodation of three stage air compressors.

Inside.—Eighteen inch by 30 inch hoisting engines and engine room in rock, on No. 2 slope anticlinal. Pumping plants on 5th, 7th and 9th, Red Ash levels, remodeled with the addition of two simple duplex pumps and two bore holes for water from Ross to Red Ash, thereby concentrating all pumping in Red Ash vein.

## Reynolds Colliery

Outside.—Five hundred H. P. battery B. & W. boilers.

Inside.—No. 8 Rock plane, through Red Ash fault, 125 yards.

## Wanamie

Outside.—Five hundred H. P. battery B. & W. boilers.

Inside.—Pumping plant No. 6 Red Ash slope; extending No. 6 slope through rock, 100 yards; No. 11 tunnel, Baltimore to Red Ash across basin No. 2 drift, 190 yards.

## PARRISH COAL COMPANY

## Parrish Colliery

One 8 inch bore hole for flushing; one crusher for crushing slate and bone, for flushing; one pair breaker engines; No. 6 slope extended 300 feet; intake air shaft, concreted from surface to rock; one 30,000 gallon water tank; one 20,000 gallon water tank.

## Buttonwood

Tunnel driven from Kidney to Abbot vein about 560 feet; one 35 foot fan, also fan engine 22x36; one saw engine, etc., for cutting prop timber, etc.; outside railroad, plane and engine, for handling timber, etc., from railroad to head of shaft; concrete wall erected around coal shaft head, also around boiler house; one 30,000 gallon water tank.

# Ninth Anthracite District

LUZERNE AND CARBON COUNTIES

---

Hazleton, Pa., February 24, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of submitting herewith my annual report as Inspector of Mines for the Ninth Anthracite District for the year ending December 31, 1903.

It contains the usual tables, also the quantity of coal mined, the quantity shipped to market, the number of employes in the district, a list of the fatal and non-fatal accidents, the number of tons of coal produced per each fatal and non-fatal accident, and remarks on some of the fatal accidents which occurred during the year. The improvements made by the several companies will also be found embodied in the report.

Respectfully submitted,

DAVID J. RODERICK,

Inspector.

## Ninth Anthracite District, 1903

## SUMMARY OF STATISTICS

Number of mines in district, .....	98
Number of mines in operation, .....	97
Number of tons of coal produced, .....	6,358,127
Number of tons shipped to market, .....	5,456,405
Number of tons sold at mines to local trade, .....	126,726
Number of tons consumed at mines in generating steam and heat, .....	774,996
Number of persons employed inside the mines, .....	8,453
Number of persons employed outside, .....	6,173
Number of fatal accidents inside the mines, .....	34
Number of tons produced for each fatal accident inside, .....	187,004
Number of persons employed per fatal accident inside, .....	249
Number of fatal accidents outside, .....	19
Number of persons employed per fatal accident outside, .....	325
Number of wives made widows by fatal accidents, .....	31
Number of children orphaned by fatal accidents, .....	70
Number of non-fatal accidents inside the mines, .....	75
Number of persons employed per non-fatal accident in- side, .....	113
Number of non-fatal accidents outside, .....	22
Number of persons employed per non-fatal accident out- side, .....	281
Number of steam locomotives used inside, .....	7
Number of compressed air locomotives used inside, .....	12
Number of fans used for ventilation, .....	54
Number of furnaces used for ventilation, .....	1
Number of gaseous mines in operation, .....	35
Number of non-gaseous mines in operation, .....	63
Number of new mines opened, .....	1



TABLE A.—Ninth Anthracite District, 1903

PRODUCTION OF COAL	
Names of Companies	Tons
A. Pardee and Company, .....	479,146
Coxe Brothers and Company, Incorporated, .....	991,788
Lehigh Coal and Navigation Company, .....	1,085,102
G. B. Markle and Company, .....	1,091,513
Lehigh Valley Coal Company, .....	998,827
Estate A. S. Van Winkle, .....	353,426
Calvin Pardee and Company, .....	318,635
Pardee Brothers and Company, .....	340,085
Upper Lehigh Coal Company, .....	262,710
C. M. Dodson and Company, .....	220,538
John S. Wentz and Company, .....	112,324
M. S. Kemmerer and Company, .....	35,569
Black Creek Coal Company, .....	29,203
Pond Creek Coal Company, .....	16,134
W. R. McTurk and Company, .....	14,629
Thomas R. Reese and Son, .....	8,498
Total, .....	6,358,127

## Production by Counties

Luzerne, .....	4,438,465
Carbon, .....	1,919,662
Total, .....	6,358,127

TABLE E.—Ninth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Companies	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Fatal Accidents		Total	Non-Fatal Accidents		Total									
	Inside	Outside		Inside	Outside										
A. Pardee and Co., .....	2	1	3	10	2	12	239,573	47,915	755	448	1,203	378	448	75	294
C. S. Parsons and Co., Inc., .....	9	1	10	5	6	11	185,745	320,690	1,156	1,065	2,221	1,156	1,065	378	311
Lehigh Coal and Navigation Co., .....	4	2	6	25	4	29	272,878	43,963	1,937	1,065	3,002	1,131	253	253	167
G. B. Markle and Co., .....	6	3	9	13	3	15	166,471	76,833	1,511	675	2,186	378	337	189	189
Lehigh Valley Coal Co., .....	4	3	7	4	1	5	176,713	88,256	1,579	770	2,349	263	121	257	385
Estate A. S. Van Winkle, .....	2	.....	2	4	1	5	.....	106,212	453	361	814	226	.....	361	361
Calvin Pardee and Co., .....	.....	.....	.....	3	1	4	.....	340,685	464	392	856	.....	.....	155	392
Pardee Brothers and Co., .....	2	2	4	1	2	3	179,042	340,685	384	432	817	192	384	384	216
Upper Lehigh Coal Co., .....	1	1	2	4	2	6	262,710	65,677	295	343	638	295	74	74	343
C. M. Dodson and Co., .....	1	.....	1	3	1	4	229,538	110,269	253	189	443	253	126	.....	171
John S. Wentz and Co., .....	.....	.....	.....	.....	1	1	.....	37,441	189	161	349	.....	.....	63	161
M. S. Kenner and Co., .....	1	.....	1	1	.....	2	35,569	35,569	55	81	136	55	.....	55	.....
Black Creek Coal Co., .....	.....	.....	.....	.....	1	1	.....	29,205	56	79	135	.....	.....	56	.....
W. R. McFurk and Co., .....	.....	.....	.....	.....	1	1	.....	.....	.....	136	136	.....	.....	.....	136
Totals and averages for district, .....	34	19	53	75	22	97	187,104	84,775	8,452	6,173	14,626	249	113	325	281

TABLE C.—Ninth Anthracite District, 1903  
Classification of Fatal Accidents

	Inside of Mines										Outside of Mines						Grand total							
	By Falls of			By Falling Into			Total inside				Total outside													
	Coal	State	Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	Slopes	Manways, breasts, etc.	Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes	Total inside		By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside	
January	1			1					1								1				1			1
February																								
March	1	1						1																
April																								
May																								
June	1																							
July	1	1	1	1																				
August	1																							
September	1	1	1	1				2																
October																								
November																								
December		2																						
Totals	4	7	3	5			4	3	1	1				2	4	21	8	4				7	19	53

TABLE D.—Ninth Anthracite District, 1903  
Classification of Non-Fatal Accidents

	Inside of Mines										Outside of Mines					Grand total						
	By Falls of		By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	By Falling Into		Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes	Total inside		By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside
	Coal	State							Roof	Slopes												
January	2		1	1		2	1							6	1	1					4	9
February		1																				4
March		1	1	1			4															10
April	1	1									1											3
May	1			1																		3
June			2																			2
July		2		1			1															6
August			1	1		1	1															6
September	1			1																		3
October	2	1	1	1					1													7
November	1			4																		5
December	1	1					3															8
Totals	9	7	7	13	9	8	10		2		1		14	75	9	3					10	97

TABLE E.—Ninth Anthracite District, 1903  
Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines

	Inside											Outside								Grand total	
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total Inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes		Total outside
January, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
February, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
March, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
April, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
May, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
June, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
July, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
August, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
September, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
October, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
November, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
December, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....	1	1	1	23	5	3	1	1	1	1	34	1	1	1	1	2	1	15	15	19	53



TABLE G.—Ninth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	English	Irish	German	Polish	Hungarian	Italian	Slavonian	Lithuanian	Austrian	Russian	Tyrolian	Totals
January, .....				1	1								2
February, .....	2			1		1							4
March, .....						2					1		3
April, .....	3		1	1									5
May, .....						2			1				3
June, .....	6												6
July, .....			2	1	1		2						6
August, .....	1	1		1			1						4
September, .....		1	1		1					3			6
October, .....				1				1		1			3
November, .....	1					1							2
December, .....	2		1		1	1							5
Totals, .....	15	2	5	6	5	9	3	1	1	4	1	1	53

TABLE H.—Ninth Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Irish	German	Polish	Hungarian	Italian	Slavonian	Lithuanian	Austrian	Russian	Totals
January, .....	2			1	1	2	1	2				9
February, .....	1		1		1	1	1	1				10
March, .....	1					4	1	1				12
April, .....	1				1	1			1			10
May, .....	1				1	1						4
June, .....	1	1				1			1			10
July, .....	2			1	1	2						6
August, .....	1		1			1	1					6
September, .....	4					2		1			1	8
October, .....	1					2	1					4
November, .....	1		2			4					1	8
December, .....	1		1	1	1	1	2	2			1	9
Totals, .....	21	1	6	7	16	28	7	7	1	2	1	97

TABLE I.—Ninth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

Names of Operators and Mines	Kind of opening	Gascons or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
A. Pardee and Co.																
Cranberry No. 1 South, .....	Slope...	Non-gas.	Fan, ... (	16	4.10	4	72	9	Guibal, .....	Steam, ...	7	123,923	124,632	125,324	115	1,483
Cranberry No. 1 North, .....	Slope...	Non-gas.	Fan, .....	16	4.4	4	68	8	Guibal, .....	Steam, ...	8	117,027	121,435	133,243	106	1,145
Cranberry No. 4, .....	Slope...	Non-gas.	Fan, .....	16	4.9	4	60	8	Guibal, .....	Steam, ...	4	28,000	31,500	35,000	51	583
Cranberry No. 3, .....	Slope...	Non-gas.	Fan, .....	16	4.6	4	80	3	Guibal, .....	Steam, ...	10	13,500	19,725	25,950	78	253
East Crystal Ridge, .....	Slope...	Non-gas.	Fan, .....	16	4.6	4	60	8	Guibal, .....	Steam, ...	2	36,189	36,230	36,280	49	739
Coxe Brothers and Co., Inc.																
Drifton No. 1, .....	Slope...	Non-gas.	Fan, .....	20	6	5.6	45	.....	Guibal, .....	Steam, ...	4	40,600	38,000	41,000	72	521
Drifton No. 2 East, .....	Slope...	Gaseous,	Fan, .....	17	4.5	4.3	82	.....	Guibal, .....	Steam, ...	13	35,200	37,300	41,000	78	2,305
Drifton No. 2 West, .....	Slope...	Gaseous,	Fan, .....	20	6	5.6	80	.....	Guibal, .....	Steam, ...	3	93,500	92,100	97,000	237	639
Eckley No. 1, .....	Slope...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	8,000	8,000	8,000	13	611
Eckley No. 2, .....	Slope...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	30,000	30,000	30,000	14	711
Eckley No. 6, .....	Slope...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	
Eckley No. 10, .....	Slope...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	43,000	20,000	43,000	47	426
Buck Mountain, .....	Tunnel,	Non-gas.	Natural,	16	5	4	60	.....	Guibal, .....	Steam, ...	3	35,000	28,200	36,000	33	855
Stockton, .....	Slope...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	6,000	4,000	7,900	25	160
Beaver Meadow No. 2, .....	Slope...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	19,500	12,450	23,000	40	311
Beaver Meadow No. 4, .....	Slope...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	27,000	27,750	21,700	65	427
Teahickler, .....	Drift...	Non-gas.	Fan, .....	12	5.8	3	65	.....	Guibal, .....	Steam, ...	2	10,200	4,000	10,550	15	206
Gowan No. 3, .....	Tunnel,	Non-gas.	Furnace,	18	5	4	100	.....	Guibal, .....	Steam, ...	1	71,256	31,631	74,136	87	364
Gowan No. 4, .....	Slope...	Gaseous,	Fan, .....	20	6.10	5.7	95	.....	Guibal, .....	Steam, ...	8	33,400	24,400	37,800	62	391
Derringer, .....	Drift...	Gaseous,	Fan, .....	20	6	5.6	90	.....	Guibal, .....	Steam, ...	8	63,420	54,170	70,020	76	713



Lehigh Coal and Navigation Co.															
Shaft...	Gaseous.	Fan...	24	8	6	63	5	Guibal...	Steam...	5	118,955	120,000	128,839	94	1,277
Tunnel	Non-gas.	Fan...	15	5	3.2	69	3	Guibal...	Steam...	3	49,530	42,510	50,480	85	500
Slope...	Non-gas.	Fan...	21	7	3.9	84	6	Guibal...	Steam...	3	43,000	38,000	48,000	34	382
Shaft...	Gaseous.	Fan...	16	4	12.9	4	12.9	Guibal...	Steam...	2	58,000	53,000	58,000	189	307
Shaft...	Gaseous.	Fan...	21	7	5.3	70	1.1	Guibal...	Steam...	3	62,400	62,400	67,488	91	789
Shaft...	Gaseous.	Fan...	12	8	6	82	1.2	Guibal...	Steam...	5	54,218	59,218	63,714	78	759
Tunnel	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	1	39,750	30,750	38,790	58	530
G. E. Markle and Co.															
Slope...	Gaseous.	Fan...	16	4.5	4.6	60	2.1	Guibal...	Steam...	8	116,600	116,600	137,670	314	371
Slope...	Gaseous.	Fan...	24	7.20	6.3	55	1.9	Guibal...	Steam...	.....	.....	.....	.....	.....	.....
Slope...	Gaseous.	Fan...	16	4.5	4.6	70	1.9	Guibal...	Steam...	9	94,280	94,280	94,280	373	253
Slope...	Gaseous.	Fan...	16	4.5	4.6	70	1.9	Guibal...	Steam...	.....	.....	.....	.....	.....	.....
Slope...	Non-gas.	Fan...	16	4.5	4.6	70	1.9	Guibal...	Steam...	.....	.....	.....	.....	.....	.....
Slope...	Non-gas.	Fan...	16	4.5	4.6	70	1.9	Guibal...	Steam...	.....	.....	.....	.....	.....	.....
Slope...	Non-gas.	Fan...	10	3	2.9	110	1.1	Guibal...	Steam...	.....	60,500	60,500	66,000	228	285
Slope...	Non-gas.	Fan...	10	3	2.9	80	5	Guibal...	Steam...	.....	64,000	64,000	76,000	169	378
Slope...	Non-gas.	Fan...	10	3	2.9	100	5	Guibal...	Steam...	.....	.....	.....	.....	.....	.....
Slope...	Non-gas.	Fan...	16	4.5	4.6	65	1.5	Guibal...	Steam...	.....	.....	.....	.....	.....	.....
Lehigh Valley Coal Co.															
Slope...	Non-gas.	Fan...	20	6	6	60	.....	Guibal...	Steam...	7	67,940	40,570	68,240	122	332
Slope...	Non-gas.	Fan...	16	4.11	5	60	.....	Guibal...	Steam...	4	52,345	20,610	42,445	70	943
Slope...	Non-gas.	Fan...	14	4.9	4	80	.....	Guibal...	Steam...	2	47,350	8,400	68,500	33	213
Slope...	Non-gas.	Fan...	16	4.9	5	70	.....	Guibal...	Steam...	2	58,400	58,400	61,500	918	273
Slope...	Non-gas.	Fan...	20	7	6	62	.....	Guibal...	Steam...	8	52,000	28,371	59,487	138	205
Shaft...	Non-gas.	Fan...	20	7	6	62	.....	Guibal...	Steam...	4	47,250	28,450	49,150	101	242
Shaft...	Non-gas.	Fan...	16	5	5	64	.....	Guibal...	Steam...	7	36,950	27,670	38,800	103	248
Shaft...	Non-gas.	Fan...	14	4	4	85	.....	Guibal...	Steam...	2	31,400	33,000	33,000	37	298
Shaft...	Non-gas.	Fan...	14	4	4	65	.....	Guibal...	Steam...	5	47,000	12,150	42,100	50	243
Slope...	Non-gas.	Fan...	14	3.8	4	85	.....	Guibal...	Steam...	4	46,200	29,300	47,000	58	350
Estate of A. S. Van Wickle															
Slope...	Gaseous.	Fan...	16	4	5	75	.....	Guibal...	Steam...	4	49,285	44,920	53,635	102	440
Slope...	Non-gas.	Fan...	4	2	2.6	259	.....	Guibal...	Steam...	1	8,610	7,025	9,470	31	212
Slope...	Non-gas.	Fan...	4	2	2.6	225	.....	Guibal...	Steam...	1	2,950	2,100	3,255	9	233
Calvin Pardee and Co.															
Slope...	Non-gas.	Fan...	.....	.....	.....	.....	.....	.....	.....	1	30,000	30,000	30,000	32	938
Slope...	Gaseous.	Fan...	16	4.6	4.3	55	2.20	Guibal...	Steam...	3	25,000	25,000	25,000	114	219
Slope...	Non-gas.	Fan...	16	4.6	4.3	25	1.5	Guibal...	Steam...	3	50,000	50,000	55,000	136	368
Slope...	Non-gas.	Fan...	16	4.6	4.3	60	1.20	Guibal...	Steam...	1	8,000	8,000	8,000	30	267
Slope...	Non-gas.	Fan...	16	4.6	4.3	60	1.20	Guibal...	Steam...	1	32,000	32,000	35,000	103	310
Pardee Brothers and Co.															
Slope...	Gaseous.	Fan...	16	4.6	4.3	55	1%	Guibal...	Steam...	2	58,000	58,000	63,000	52	1,115

TABLE I—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per person provided for each person
Upper Lehigh Coal Co	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Upper Lehigh,†	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
C. M. Dodson and Co.	Slope,.....	Non-gas.	Fan,.....	16	.....	.....	70	.....	Gubal,.....	Steam,.....	4	47,500	47,500	56,500	173	274
Beaver Brook No. 10,	Slope,.....	Non-gas.	Fan,.....	16	.....	.....	65	.....	Gubal,.....	Steam,.....	3	24,000	24,000	26,500	66	264
Beaver Brook No. 11,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
John S. Wentz and Co.	Slope,...	Gaseous,	Natural,	.....	.....	.....	.....	.....	.....	.....	6	75,000	75,000	80,000	187	401
Hazle Brook,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
M. S. Kemmerer and Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sandy Run,*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Black Creek Coal Co.	Drift,.....	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	1	6,200	4,500	6,400	21	229
Rome colliery,.....	Slope,...	Non-gas.	Fan,.....	4	2.6	1.3	275	.....	Dempeels,.....	Steam,.....	1	8,400	5,200	8,500	34	153
Hareigh colliery,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pond Creek Coal Co.	Shaft,...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	2	10,000	10,000	10,000	35	286
Pond Creek,.....	Slope,...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	1	4,000	4,000	4,000	14	286
Pond Creek No. 1,	Slope,...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	1	9,000	9,100	9,100	8	1,136
Pond Creek No. 2,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Thomas R. Reese and Son	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dusky Diamond,*	Slope,...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\*Numerous cave holes prevent measurement.  
†Robbing pillars; no air measurements taken.

TABLE 1.—Ninth Anthracite District, 1903  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Col- lieries	County	Name of General Su- perintendent	P. O. Address	Name of Super- intendent	P. O. Address	Railroad to Mine
A. Pardee and Co. Cranberry, East Crystal Ridge,	Luzerne, Luzerne,	Frank Pardee, Frank Pardee,	Hazleton, Hazleton,			Lehigh Valley Lehigh Valley
Coxe Brothers and Co., Inc. Driftton Nos. 1 and 2, Eckley and Buck Mountain, Stuckton, Beaver Meadow, Tomichien, Derringer and Gowan,	Luzerne, Luzerne, Luzerne, Carbon, Luzerne, Luzerne,	L. C. Smith, Manager, L. C. Smith, Manager, L. C. Smith, Manager, L. C. Smith, Manager, L. C. Smith, Manager, L. C. Smith, Manager,	Driftton, Driftton, Driftton, Driftton, Driftton, Driftton,			D., S. and S. D., S. and S. D., S. and S. D., S. and S. D., S. and S. D., S. and S.
Lehigh Coal and Navigation Co. Colliery No. 1, Colliery No. 4, Colliery No. 5, Colliery No. 6, Colliery No. 9, Screen building,	Carbon, Carbon, Carbon, Carbon, Carbon, Carbon,	W. D. Zehner, W. D. Zehner, W. D. Zehner, W. D. Zehner, W. D. Zehner, W. D. Zehner,	Lansford, Lansford, Lansford, Lansford, Lansford, Lansford,	Baird Snyder, Jr., Baird Snyder, Jr., Baird Snyder, Jr., Baird Snyder, Jr., Baird Snyder, Jr., Baird Snyder, Jr.,	Lansford, Lansford, Lansford, Lansford, Lansford, Lansford,	C. R. R. of N. J. C. R. R. of N. J. C. R. R. of N. J. C. R. R. of N. J. C. R. R. of N. J. C. R. R. of N. J.
G. B. Markle and Co. Jeddo No. 4, Highland No. 5, Highland No. 9,	Luzerne, Luzerne, Luzerne,	William H. Smith, Jr., William H. Smith, Jr., William H. Smith, Jr.,	Jeddo, Jeddo, Jeddo,	Samuel Dunkerly, inside supt.; Ar- thur Goedecke, outside supt.	Jeddo, Jeddo, Jeddo,	Lehigh Valley Lehigh Valley Lehigh Valley
Lehigh Valley Coal Co. Hazleton No. 1, Hazleton shaft, Spring Brook, Estate of A. S. Van Winkle Coleraine and Evans,	Luzerne, Luzerne, Carbon, Carbon,	S. D. Warriner, Mgr., S. D. Warriner, Mgr., S. D. Warriner, Mgr., John Harvey,	Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Hazleton,	W. H. Davies, W. H. Davies, W. H. Davies,	Hazleton, Hazleton, Hazleton, Hazleton,	Lehigh Valley Lehigh Valley Lehigh Valley L. V., C. R. R. of N. J. and P. & R.
Calvin Pardee and Co. Harwood,	Luzerne,	A. W. Drake,	Lattimer,	C. Pardee, Jr.,	Lattimer,	D., S. and S.
Pardee Brothers and Co. Lattimer,	Luzerne,	A. W. Drake,	Lattimer,	C. Pardee, Jr.,	Lattimer,	D., S. and S.
Upper Lehigh Coal Co. Upper Lehigh,	Luzerne,	A. C. Lelsensring,	Upper Lehigh,	George Wilmot, Jr.,	Upper Lehigh,	C. R. R. of N. J.

TABLE 1—Continued.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
C. M. Dodson and Co. Beaver Brook, .....	Luzerne,	E. L. Bullock, .....	Audenried, .....	R. G. Russel, .....	Audenried, .....	L. V. and C. R. R. of N. J.
John S. Wentz and Co. Hazle Brook, .....	Luzerne,	John L. Wentz, .....	1100 Girard Trust Bldg., Phila.	John Weber, .....	Hazle Brook, .....	Lehigh Valley
M. S. Kemmerer and Co. Sandy Run, .....	Luzerne,	M. S. Kemmerer, .....	Mauch Chunk, .....	George D. Kugler, .....	Sandy Run, .....	C. R. R. of N. J.
Rowe, Black Creek Coal Co. Harleigh, .....	Luzerne, Luzerne,	James Rowe, James Rowe, .....	Hazleton, Hazleton, .....	.....	.....	Lehigh Valley Lehigh Valley
Pond Creek Coal Co. Pond Creek, .....	Luzerne,	W. G. Thomas, .....	Pittston, .....	I. D. Thomas, .....	Zehner P. O., .....	Lehigh Valley
W. R. McTurk and Co. Star washery, .....	Carbon,	W. J. Heiser, .....	Mahanoy City, .....	.....	.....	L. V. and C. R. R. of N. J.
Thomas R. Reese and Son. Dusky Diamond, .....	Luzerne,	Thomas R. Reese, .....	Audenried, .....	.....	.....	Lehigh Valley

TABLE 2.—Ninth Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
<b>A. Pardee and Co.</b>												
Chamberly, .....	Luzerne, .....	333,461	66,691	3,573	404,125	247	1,089	3	12	6,300	119,675	134
East Crystal Ridge, .....	Luzerne, .....	66,578	7,664	774	75,021	247	135	.....	.....	300	.....	29
<b>Totals, .....</b>		<b>400,039</b>	<b>74,355</b>	<b>4,717</b>	<b>479,146</b>	<b>247</b>	<b>1,224</b>	<b>3</b>	<b>12</b>	<b>6,500</b>	<b>119,675</b>	<b>160</b>
<b>Coxe Brothers and Co., Inc.</b>												
Drifton Nos. 1 and 2, .....	Luzerne, .....	22,624	55,766	4,461	284,811	246	836	4	1	5,100	15,370	84
Eckley and Buck Mountain, .....	Luzerne, .....	152,853	24,196	828	177,977	193	2,616	3	.....	1,278	29,744	45
Stockton, .....	Luzerne, .....	.....	6,100	190	6,100	.....	57	.....	.....	415	1,963	11
Woodrow, .....	Carbon, .....	243,850	56,522	1,111	281,383	245	305	3	5	2,862	27,573	59
Worshipan, .....	Luzerne, .....	.....	.....	.....	.....	.....	21	.....	.....	479	90	6
Derringer and Gowan, .....	Luzerne, .....	294,826	24,079	2,612	236,347	186	469	1	3	4,349	13,940	78
<b>Totals, .....</b>		<b>831,183</b>	<b>151,563</b>	<b>9,042</b>	<b>991,788</b>	<b>210</b>	<b>2,134</b>	<b>11</b>	<b>9</b>	<b>14,443</b>	<b>88,727</b>	<b>263</b>
<b>Lehigh Coal and Navigation Co.</b>												
Colliery No. 1, .....	Carbon, .....	289,030	22,747	2,192	314,019	363	609	4	.....	1,560	60,000	104
Colliery No. 4, .....	Carbon, .....	197,296	59,285	6,157	232,738	249	380	5	.....	110	23,270	68
Colliery No. 5, .....	Carbon, .....	.....	.....	.....	.....	.....	145	1	.....	540	14,125	29
Colliery No. 6, .....	Carbon, .....	288,380	25,096	261	263,737	245	562	2	.....	540	23,500	58

<sup>1</sup>Production was included with Ferringer.  
<sup>2</sup>Production was included with Colliery No. 6.

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (not in- cluding washeries)	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Colliery No. 9, .....	Carbon, .....	250,009	14,529	10,070	274,608	263	419	2	.....	90	69,350	73
Screen building, .....	Carbon, .....	.....	.....	.....	.....	241	218	.....	.....	.....	.....	.....
Totals, .....	.....	974,715	91,707	18,680	1,083,102	255	2,333	14	5	2,840	226,225	332
G. B. Markle and Co. Jeddo No. 4 and Ebervale, .....	Luzerne, .....	429,849	42,599	1,090	473,533	236	1,041	2	13	8,289	114,392	176
Highland No. 5, .....	Luzerne, .....	342,542	46,758	.....	389,301	221	615	2	6	8,654	8,423	61
Highland No. 2, .....	Luzerne, .....	188,227	35,114	5,287	228,653	226	530	2	16	6,144	13,810	74
Totals, .....	.....	969,608	124,528	6,377	1,011,513	283	2,186	6	29	23,087	136,555	316
Lehigh Valley Coal Co. Hazleton No. 1, .....	Luzerne, .....	251,676	11,628	55,043	318,907	245	804	3	3	7,980	56,901	88
.....	Luzerne, .....	43,136	53,662	.....	494,798	255	1,172	5	10	12,002	118,840	108
.....	Carbon, .....	188,605	24,911	2,545	185,122	242	377	1	2	2,635	13,916	45
Spring Brook, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	848,838	91,801	58,188	998,827	247	2,349	9	15	22,617	189,657	241
Estate A. S. Van Winkle Coleraine and Evans, .....	Carbon, .....	297,533	53,332	2,560	353,426	294	814	2	5	3,700	117,200	85
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Calvin Pardee and Co. Harwood, .....	Luzerne, .....	277,289	40,150	1,196	318,635	250	856	.....	4	5,560	81,800	84
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pardee Brothers and Co. Lattimer, .....	Luzerne, .....	289,058	46,850	4,076	340,085	253	817	4	3	7,800	169,950	90

†Totals in this column are averages.

Upper Lehigh Coal Co.	218,197	37,385	7,128	262,710	246	6:38	2	6	5,641	23,538	\$4
Upper Lehigh,											
C. M. Dodson and Co.	190,013	30,000	525	220,538	226	4:33	1	2	5,186	14,188	58
Beaver Brook,											
John S. Wentz and Co.	91,306	20,000	928	112,324	180	3:49	.....	4	6:00	21,650	26
Hazle Brook,											
M. S. Kemmerer and Co.	26,339	7,339	1,891	35,569	129	1:36	1	1	2:87	22,600	21
Sandy Run,											
Black Creek Coal Co.	11,741	1,250	3,325	16,316	299	4:9	.....	.....	5:46	500	10
Rowe colliery,											
Hartigh colliery,	7,270	2,375	3,312	12,887	216	8:6	.....	1	2:94	2,000	7
Totals,	19,011	3,625	6,567	29,293	248	1:5	.....	1	6:40	2,564	17
Pond Creek Coal Co.	14,556	1,479	108	16,134	78	9:7	.....	.....	1:88	5,290	4
Pond Creek,											
W. R. McTurk and Co.	14,479	150	.....	14,629	57	1:36	.....	1	.....	50	7
Star washery,											
Thomas R. Reese and Son.	3,150	685	4,713	8,408	282	9	.....	.....	1:59	725	5
Dusky Diamond,											
Grand totals,	5,456,405	774,996	126,726	6,358,127	.....	14,626	53	97	99,108	1,220,540	1,793

TABLE 2—Recapitulation

A. Farlee and Co.,	400,089	74,360	4,747	479,146	247	1:294	3	12	6,500	119,675	160
Coxe Brothers and Co.,	851,183	151,563	9,032	991,788	210	2:134	11	9	14,413	288,721	263
Lehigh Coal and Navigation Co.,	564,715	13,067	18,069	1,085,192	438	2:333	14	26	27,867	138,555	352
G. B. Markle and Co.,	800,828	121,538	29,818	1,051,184	297	2:46	6	15	22,617	189,052	216
Lehigh A. S. Van Winkle,	297,333	53,333	5,569	353,426	217	2:34	.....	.....	3:70	117,260	85
Calvin Farlee and Co.,	277,289	40,150	1,196	318,635	250	8:56	2	4	5,500	81,800	84
Farlee Brothers and Co.,	289,659	46,910	4,076	340,655	253	8:17	4	3	7,800	169,500	90
Upper Lehigh,	218,197	37,385	7,128	262,710	246	6:8	2	6	5,641	23,838	84
C. M. Dodson and Co.,	190,013	30,000	525	220,538	226	4:73	1	2	5,186	14,188	58
John S. Wentz and Co.,	91,306	20,000	928	112,324	180	3:49	.....	4	6:00	21,650	26
M. S. Kemmerer and Co.,	26,339	7,339	1,891	35,569	129	1:36	1	1	2:87	22,600	21
Black Creek Coal Co.,	19,011	3,625	6,567	29,293	248	1:5	.....	1	6:40	2,500	17
Pond Creek Coal Co.,	14,556	1,479	108	16,134	78	9:7	.....	.....	1:88	5,200	4
W. R. McTurk and Co.,	14,479	150	.....	14,629	57	1:36	.....	1	.....	50	7
Thomas R. Reese and Son,	3,150	685	4,713	8,408	282	9	.....	.....	1:59	725	5
Totals,	5,456,405	774,996	126,726	6,358,127	.....	14,626	53	97	99,108	1,220,540	1,793

†Not including washeries.

TABLE 2—Continued

Names of Operators and Collieries	County	Number of Boilers			Total horse power	Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—Gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Tubular	Horse power		Steam	Air	Electric							
A. Par-de and Co.															
Cranberry, .....	Luzerne, .....	25	1,053	15	3,035	4,085	10	.....	39	4,435	15	23,100	7,600	.....	1
East Crystal Ridge, .....	Luzerne, .....	16	480	.....	480	480	1	.....	.....	510	.....	.....	.....	.....	.....
Totals, .....	.....	61	1,530	15	3,035	4,565	11	.....	39	4,945	15	23,100	7,600	.....	1
Coxe Brothers and Co., Inc.															
Duffton Nos. 1 and 2, .....	Luzerne, .....	6	320	18	4,500	4,820	6	3	30	1,410	6	7,000	5,700	.....	2
Jockey and Buck Mountain, .....	Luzerne, .....	6	220	10	1,525	1,745	2	.....	23	1,613	3	2,500	1,500	.....	.....
Stockton, .....	Luzerne, .....	.....	.....	9	200	200	1	.....	2	150	.....	300	250	.....	.....
Boxton Meadow, .....	Carbon, .....	9	330	11	1,825	2,255	3	2	25	1,425	4	4,700	3,200	.....	1
Tomblick, .....	Luzerne, .....	.....	.....	1	110	110	1	.....	.....	.....	.....	.....	.....	.....	.....
Derringer and Gowan, .....	Luzerne, .....	9	330	13	2,500	2,820	5	1	18	1,060	7	6,000	4,000	.....	2
Totals, .....	.....	32	1,219	55	10,760	11,970	19	6	98	5,658	21	20,500	14,650	.....	3
Lehigh Coal and Navigation Co.															
Colliery No. 1, .....	Carbon, .....	19	326	15	2,674	3,000	9	.....	23	532	4	7,318	4,507	.....	.....
Colliery No. 4, .....	Carbon, .....	13	208	8	2,022	2,240	1	.....	8	467	3	6,245	2,740	.....	1
Colliery No. 5, .....	Carbon, .....	5	.....	3	550	550	.....	.....	6	.....	.....	.....	.....	.....	.....
Colliery No. 6, .....	Carbon, .....	14	3,200	4	3,200	3,200	4	.....	16	1,327	.....	.....	.....	.....	.....
Colliery No. 8, .....	Carbon, .....	19	208	17	1,725	1,725	5	.....	17	725	2	2,080	940	.....	1
Screen building, .....	Carbon, .....	12	1,822	12	1,822	1,822	.....	.....	49	815	.....	.....	.....	.....	.....
Totals, .....	.....	47	742	69	11,688	12,433	23	.....	119	3,886	9	15,643	8,187	.....	2
G. B. Markle and Co.															
Jeddo No. 4 and Ebervale, .....	Luzerne, .....	18	3,140	8	3,140	3,140	8	.....	39	2,416	1	1,350	1,350	.....	3



Highland No. 3, 1,000,000	15	900	5	1,250	2,150	1	6	26	1,746	1	1,600	1,000	2	3
Hughland No. 2, 1,000,000			25	2,500	2,500	2		16	966	5	4,700	4,700		1
Totals, .....	15	900	48	6,890	7,790	11	6	81	5,098	7	7,050	7,050	2	7
Lehigh Valley Coal Co.														
Hazleton No. 1, .....			14	2,000	2,000	2		13	1,670	3	3,660	2,900		
Hazleton shaft, .....			20	3,200	2,400	2		18	2,730	6	6,000	3,000	1	
Spring Brook, .....	46	1,000			1,000	4		11	855	5	3,000	1,500		
Totals, .....	46	1,000	34	5,200	6,200	12		45	5,155	14	12,660	6,700	1	
Estate A. S. Van Wickle.														
Colerain and Evans, .....	27	405	27	3,070	3,475	5		42	1,334	7	6,112	4,434	1	
Calvin Pardee and Co.														
Harwood, .....			12	1,800	1,800	3		23	1,130	6	7,556	8,778	1	1
Pardee Brothers and Co.														
Lattimer, .....	15	300	11	2,000	2,300	10		25	2,143	6				3
Upper Lehigh Coal Co.														
Upper Lehigh, .....	70	2,210	15	845	3,055	7		41	1,485	15	17,370	6,900		
C. M. Dodson and Co.														
Beaver Brook, .....	41	900	10	2,010	2,910	1		19	800	9	9,000	4,000	1	
John S. Wentz and Co.														
Hazle Brook, .....	4	160	7	880	1,040	2		10	450	3	1,900	1,900		
M. S. Kemmerer and Co.														
Sandy Run, .....	8	320	2	200	520	1		6	175	2	850	600		1
Black Creek Coal Co.														
Rowe colliery, .....			2	108	108			2	64					
Harleigh colliery, .....			3	180	180			3	161	1	320	190		
Totals, .....			5	288	288			5	225	1	320	190		
Pond Creek Coal Co.														
Pond Creek, .....			4	415	415	1		6	156	6	1,115	400		
W. R. McTurk and Co.														
Star washery, .....	4	250			250			8	250	4				
Thomas R. Reese and Son														
Dusky Diamond, .....			1	90	90			2	60					
Grand totals, .....	364	9,927	315	49,171	59,098	166	12	569	32,950	115	123,256	66,449	13	28

\*Jeddo tunnel drainage.  
 †Destroyed by fire May 1, 1903.

TABLE 2—Recapitulation

Names of Operators and Collieries	County	Number of Boilers			Total horse power	Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors	
		Cylindrical	Horse power	Tubular		Horse power	Steam	Air								Electric
A. Pardee and Co., .....	Luzerne, .....	15	3,025	15	4,555	11	6	39	4,945	15	23,100	7,600	1	1		
Coxe Brothers and Co., Inc., .....	Luzerne, .....	55	10,730	55	11,970	19	6	98	5,658	21	20,500	14,630	3	1		
Lehigh Coal and Navigation Co., .....	Carbon, .....	47	712	69	11,688	23	6	119	3,836	9	15,643	8,187	2	2		
G. B. Markle and Co., .....	Luzerne, .....	15	900	48	6,800	11	6	81	5,068	7	7,050	7,050	1	7		
Estate A. S. Van Winkle, .....	Carbon, .....	46	1,000	34	5,200	12	6	45	5,155	14	12,660	6,700	1	1		
Lehigh Valley Coal Co., .....	Carbon, .....	27	405	31	3,070	5	6	42	1,334	7	6,112	4,454	1	1		
Calvin Pardee and Co., .....	Luzerne, .....	12	1,800	12	1,800	3	6	23	1,120	6	7,556	3,718	1	1		
Pardee Brothers and Co., .....	Luzerne, .....	15	300	11	2,000	10	6	25	2,113	15	17,370	6,900	1	3		
Papier Lehigh Coal Co., .....	Luzerne, .....	70	2,210	15	845	7	6	41	1,485	9	9,000	4,000	1	1		
C. M. Pischel and Co., .....	Luzerne, .....	44	900	10	2,010	1	6	19	800	9	1,900	1,900	1	1		
John S. Wertz and Co., .....	Luzerne, .....	4	160	7	880	2	6	10	450	2	950	600	1	1		
M. S. Kemmerer and Co., .....	Luzerne, .....	8	320	2	200	1	6	6	175	2	320	130	1	1		
Black Creek Coal Co., .....	Luzerne, .....	5	288	5	288	1	6	5	225	1	320	130	1	1		
Pond Creek Coal Co., .....	Luzerne, .....	4	415	4	415	1	6	6	256	1	1,115	400	1	1		
W. R. McTurk and Co., .....	Carbon, .....	4	250	1	20	1	6	3	250	†	.....	.....	1	1		
Thomas R. Reese and Son, .....	Luzerne, .....	1	90	1	90	.....	.....	.....	00	.....	.....	.....	.....	.....		
Totals, .....	.....	364	9,927	315	49,171	59,098	106	12	569	32,950	115	123,256	66,409	10	22	



TABLE 3--Continued

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside						Grand total, inside and outside				
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Orde foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)		State pickers (men)	Book-keepers and clerks	All other employes	Total outside
G. B. Mankie and Co.	Luzerne	2	5	1	292	233	60	40	1	115	23	752	1	2	18	28	43	59	10	281	289	1,041
Jeddo No. 4 and Ebervale,	Luzerne	1	3	3	140	122	41	54	3	46	19	412	1	1	10	18	46	37	10	79	203	615
Highland No. 5,	Luzerne	1	1	1	113	130	35	25	11	13	17	317	1	2	12	23	37	25	9	74	183	530
Totals,		4	9	6	515	485	136	108	15	174	59	1,711	3	6	40	69	126	121	29	281	675	2,186
Lehigh Valley Coal Co.	Luzerne	1	2	4	271	155	30	15	8	.....	140	585	.....	1	16	8	53	8	3	129	218	804
Hagdon Shaft,	Luzerne	3	1	5	408	180	49	9	7	.....	155	808	.....	1	24	34	44	22	3	236	364	1,172
Spring Brook,	Carbon	1	2	1	71	46	13	.....	8	.....	43	185	.....	1	12	23	33	20	2	97	188	373
Totals,		5	5	10	710	381	83	24	23	.....	338	1,579	.....	3	52	63	130	50	8	462	770	2,349
Estate A. S. Van Wickle	Carbon	4	1	2	156	182	36	1	12	59	.....	453	1	1	24	59	52	19	8	196	361	814
Colerain and Evans,		1	5	1	180	167	43	2	10	41	14	464	1	7	22	31	42	50	5	234	392	856
Calvin Pardee and Co.	Luzerne	1	6	1	140	146	34	4	.....	46	6	384	1	7	5	46	36	20	6	312	432	817
Harwood,		1	1	.....	105	109	35	19	11	14	.....	295	.....	2	14	53	54	27	6	187	343	638
Pardee Brothers and Co.	Luzerne	1	1	.....	105	109	35	19	11	14	.....	295	.....	2	14	53	54	27	6	187	343	638
Lattimer,		1	1	.....	105	109	35	19	11	14	.....	295	.....	2	14	53	54	27	6	187	343	638
Upper Lehigh Coal Co.		1	1	.....	105	109	35	19	11	14	.....	295	.....	2	14	53	54	27	6	187	343	638
Upper Lehigh,		1	1	.....	105	109	35	19	11	14	.....	295	.....	2	14	53	54	27	6	187	343	638
C. M. Dodson and Co.		1	2	1	87	98	25	8	8	13	10	258	1	1	13	25	28	28	4	85	150	423
Beaver Brook,		1	2	1	87	98	25	8	8	13	10	258	1	1	13	25	28	28	4	85	150	423

John S. Wentz and Co.	1	1	1	90	25	110	4	7	.....	37	188	1	2	.....	24	29	40	3	62	161	249
Maize Brook, .....	1	1	1	20	28	4	.....	.....	.....	1	55	1	1	4	14	7	20	2	32	81	136
Sandy Run, .....	1	1	1	9	.....	3	.....	.....	.....	8	21	.....	1	1	2	12	.....	.....	.....	12	28
Black Creek Coal Co.	1	1	1	13	.....	2	.....	.....	.....	19	35	1	1	3	4	19	.....	.....	.....	22	51
Rowe colliery, .....	1	1	1	22	.....	5	.....	.....	.....	27	56	1	2	4	6	31	.....	.....	.....	34	79
Hartigh colliery, .....	2	1	1	19	.....	3	1	2	12	.....	57	1	.....	2	10	10	6	1	10	40	97
Totals, .....	1	1	1	19	.....	3	1	2	12	.....	57	1	.....	2	10	10	6	1	10	40	97
Pond Creek Coal Co.	1	1	1	19	.....	3	1	2	12	.....	57	1	.....	2	10	10	6	1	10	40	97
Star washery, .....	1	1	1	2	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	58	136
W. R. McTurk and Co.	1	1	1	2	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	58	136
Dusky Diamond, .....	1	1	1	2	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	3
Thomas R. Reese and Son.	1	1	1	2	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	3
Grand totals, .....	44	41	49	3,250	2,068	755	298	128	666	1,151	8,453	13	41	331	746	930	667	90	3,352	6,173	14,636

TABLE 3--Recapitulation

A. Lardlee and Co., .....	5	3	5	329	132	76	40	13	43	50	756	1	2	38	61	52	52	3	239	448	1,204
Coxe Brothers and Co., Inc., .....	8	5	4	529	80	110	41	19	23	280	1,129	1	4	79	135	51	132	12	611	1,005	2,154
Lehigh Coal and Navigation Co., .....	8	5	18	316	153	143	46	8	240	320	1,267	.....	5	31	113	263	116	1	597	1,066	2,323
G. B. Markle and Co., .....	1	9	6	515	485	136	108	15	174	338	1,573	.....	3	6	69	136	121	29	281	625	2,156
Lehigh Valley Coal Co., .....	5	5	19	719	381	83	24	23	.....	338	1,573	.....	3	52	69	139	50	8	462	770	2,349
Estate A. S. Van Winkle, .....	4	1	2	156	182	26	1	12	59	.....	453	.....	1	21	59	53	19	8	196	361	814
Cobbin Brothers and Co., .....	1	5	1	180	117	43	2	10	41	14	464	.....	1	7	22	31	42	50	5	231	292
Pardee Brothers and Co., .....	1	6	1	140	146	34	4	.....	46	6	384	.....	1	7	5	46	26	20	6	312	433
Upper Lehigh Coal Co., .....	1	1	1	165	109	35	19	11	14	.....	295	.....	2	14	53	54	27	6	187	343	688
C. M. Dodson and Co., .....	1	2	1	87	98	25	8	8	13	10	233	.....	1	13	25	23	28	4	85	189	433
John S. Wentz and Co., .....	1	1	1	20	25	22	4	7	.....	37	188	.....	1	2	.....	24	29	40	3	62	161
M. S. Kemmerer and Co., .....	1	1	1	9	.....	4	.....	.....	.....	.....	.....	.....	1	1	4	7	20	2	22	51	85
Black Creek Coal Co., .....	2	2	2	.....	.....	5	.....	.....	.....	.....	.....	.....	1	2	4	6	31	.....	.....	34	79
Pond Creek Coal Co., .....	1	1	1	19	.....	3	1	2	12	.....	57	1	.....	2	10	10	6	1	10	40	97
W. R. McTurk and Co., .....	1	1	1	2	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	3
Thomas R. Reese and Son, .....	1	1	1	2	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	3
Totals, .....	14	41	49	3,250	2,068	755	298	128	666	1,151	8,453	13	41	331	746	930	667	90	3,352	6,173	14,636

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
A. Pardee and Co.		25.6	21.8	22.8	21.7	19.9	22.9	22.5	21.5	19	17.1	14.2	17.9	247
Cranberry, .....		25.6	21.8	22.8	21.7	19.9	22.9	22.5	21.5	19	17.1	14.2	17.9	247
East Crystal Ridge, .....		25.6	21.8	22.8	21.7	19.9	22.9	22.5	21.5	19	17.1	14.2	17.9	247
Averages, .....		25.6	21.8	22.8	21.7	19.9	22.9	22.5	21.5	19	17.1	14.2	17.9	247
Coxe Brothers and Co., Inc.		23	17	25	23	23	23	22	20	20	17	14	14	246
Drifton Nos. 1 and 2, .....		23	17	25	23	23	23	22	20	20	17	14	14	246
Eckley and Buck Mountain, .....		20	18	20	17	18	18	18	18	17	12	9	13	233
Stockton, .....		20	18	20	20	20	23	20	20	19	14	10	11	215
Beaver Meadow, .....		16	17	16	16	18	18	19	18	16	11	10	11	186
Tonhicken, .....		16	17	16	16	18	18	19	18	16	11	10	11	186
Derringer and Gowan, .....		16	17	16	16	18	18	19	18	16	11	10	11	186
Averages, .....		19	18.8	19.8	19	19.8	20.5	19.8	19	18	13.5	10.8	12.3	210
Lehigh Coal and Navigation Co.		26.5	20.1	21.1	23.4	21.2	22.1	23.4	23.4	21.6	21.6	19.2	19.6	263
Colliery No. 1, .....		24.2	21.5	19.1	23.4	22.5	18.3	22.5	22.4	21.6	18.4	18.9	18.4	249
Colliery No. 4, .....		23.9	21.6	22.8	23	21.5	20.1	22.8	22.2	12.4	17.6	18	19.2	245
Colliery No. 5, .....		27	21.7	23.4	23.4	21.5	22.6	23.2	21.7	21.3	19.2	18.9	19.5	263
Colliery No. 6, .....		27	21.7	23.4	23.4	21.5	22.6	23.2	21.7	21.3	19.2	18.9	19.5	263
Colliery No. 9, .....		27	21.7	23.4	23.4	21.5	22.6	23.2	21.7	21.3	19.2	18.9	19.5	263
Screen building, .....		27	21.7	23.4	23.4	21.5	22.6	23.2	21.7	21.3	19.2	18.9	19.5	263
Averages, .....		25.4	21.2	21.6	22.8	21.7	20.8	23	22.3	19.2	19.2	18.8	19.2	255
G. B. Markle and Co.		21.4	20.3	22.5	22.6	20	21	20	20.6	19	16	16.3	16.8	236
Ledge No. 4 and Ebervale, .....		22	20.7	22.6	22.9	20.3	21	18.8	16	17.3	13.5	14	13.6	221
Highland No. 3, .....		22	19.9	21.3	21	19.1	19.7	18.4	19.2	18.5	14.7	15.4	16.8	226
Highland No. 2, .....		22	19.9	21.3	21	19.1	19.7	18.4	19.2	18.5	14.7	15.4	16.8	226
Averages, .....		21.5	20.3	22.1	21.9	19.8	20.6	19.1	18.6	18.3	14.7	15.2	15.7	228

Lehigh Valley Coal Co.													
Hazleton No. 1, .....	23	20.4	22.9	22.8	20.6	22.9	23	20.9	10.5	16.8	14.9	17	245
Hazleton shaft, .....	24.7	23	25.4	23.3	21.1	23.2	23.3	22.3	19.7	17.6	13.2	17.9	255
Spring Brook, .....	22.5	21.5	23.6	23.3	20.4	22.6	23.4	21.6	19.4	15.4	12.6	16.1	242
Averages, .....	23.4	21.6	24	23.1	20.7	22.9	23.2	21.6	19.5	16.6	13.6	17	247
Estate A. S. Van Wickle													
Colerain and Evans, .....	26	23	22.9	26	21.3	26	24	25.5	25	23.7	22.2	25	284
Harwood, .....													
Calvin Pardee and Co. ....	24.7	22.7	21.8	22.5	21.4	23.1	23	22.3	22.4	15.5	14.1	16.2	250
Lattimer, .....													
Pardee Brothers and Co. ....	26.2	22.4	24.5	23.2	22.5	21.3	21.9	21.2	22	16.6	16.2	15.3	253
Upper Lehigh Coal Co.													
Upper Lehigh, .....	22.4	22	20	20.9	22.3	21	20.6	19.2	18	19.2	21	19	246
Beaver Brook, .....													
C. M. Dodson and Co. ....	20.4	18.4	15.9	20	19.4	20.4	20	17.7	18.9	17.5	17.2	20	226
Hazle Brook, .....													
John S. Wentz and Co. ....	21.6	15.4	14.3	14.2	14.3	16	18.6	8.2	11.3	16.2	15.3	15	180
Sandy Run, .....													
M. S. Kemmerer and Co. ....	13	11.7	11.8	10.1	13.3	12.6	11.7	9.6	10.6	6.8	7.5	10.1	129
Rowe colliery, .....													
Black Creek Coal Co. ....	26	24	26	25	25	24	25	26	25	26	23	24	249
Hartleigh colliery, .....	26	23	26	26	25	26	25	24	24	22	24	25	246
Averages, .....	26	23.5	26	25.5	25	25	25	25	24.5	24	23.5	24.5	288
Pond Creek, .....													
Pond Creek Coal Co. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dusky Diamond, .....													
Thomas R. Reese and Son. ....	27	24	21.3	26	25	20	21	23	23	22	24	23	282
Averages, .....													
.....	23	20.5	20.8	21.2	20.7	20.1	20.4	19.3	18.6	16.8	16.2	17.4	228

TABLE 3—Recapitulation

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Totals
A. Pardee and Co., .....	Luzerne, .....	25.6	21.8	22.8	21.7	19.9	22.9	22.5	21.5	19	17.1	14.2	17.9	247
Coxe Brothers and Co., Inc., .....	Luz. and Car., .....	15.8	19.8	19.8	19.7	19.8	20.5	19.8	21.5	18	13.5	10.8	15.3	210
Lehigh Coal and Navigation Co., .....	Carbon, .....	25.4	21.9	21.6	22.8	21.7	20.8	22.3	22.3	19.2	19.2	18.8	19.2	255
G. B. Markle and Co., .....	Luzerne, .....	21.5	20.3	22.1	21.9	19.8	20.6	19.1	18.6	18.3	14.7	15.2	15.7	228
Lehigh Valley Coal Co., .....	Luzerne, .....	23.4	21.6	23.1	23.1	20.7	22.9	23.2	21.6	19.5	16.6	13.6	17	247
Lehigh Valley Coal Co., .....	Carbon and Car., .....	26.4	23.7	24	23.1	20.7	24.3	24	25.5	25.5	23.7	22.2	25	294
Pardee Brothers and Co., .....	Luzerne, .....	24.7	22.7	22.9	26	24.3	26.1	23	22.3	22.4	15.5	14.1	16.2	250
Pardee Brothers and Co., .....	Luzerne, .....	26.2	22.4	21.8	22.5	21.4	23.1	23	21.2	22	16.6	16.2	15.3	253
Pardee Brothers and Co., .....	Luzerne, .....	22.4	22	24.5	23.2	22.5	21.3	21.9	19.2	18	19.2	21	19	246
C. M. Dodson and Co., .....	Luzerne, .....	20.4	18.4	15.9	20	19.4	20.4	20.6	17.7	18.9	17.5	17.2	20	226
John S. Wentz and Co., .....	Luzerne, .....	21.6	15.4	11.3	11.2	14.3	15	18.6	8.2	11.3	16.2	15.3	15	180
M. S. Kemmerer and Co., .....	Luzerne, .....	13	11.7	11.8	10.1	13.3	12.6	11.7	9.6	10.6	6.8	7.5	10.1	123
Black Creek Coal Co., .....	Luzerne, .....	25	23.5	26	25.5	25	25	25	25	24.5	24	23.5	24.5	248
Fond Creek Coal Co., .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Thomas R. Reese and Son, .....	Luzerne, .....	27	24	24.3	26	.....	9	13	15	10	19	24	23	282
Averages, .....	.....	23	20.5	20.8	21.2	20.7	20.1	20.4	19.3	18.6	16.8	16.2	17.4	228



TABLE 4.—Ninth Anthracite District, 1903  
Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 10	John Kusch, .....	Polish, .....	Laborer, .....	27	M. 1	1	1	Spring Brook, .....	Carbon, .....	Instantly killed by falling down shaft.
12	Otto Collier, .....	German, .....	Miner, .....	33	M. 1	3	3	Upper Lehigh, .....	Luzerne, .....	Instantly killed by a fall of top rock.
10	Jerry Worley, .....	American, .....	Car runner, .....	31	M. 1	1	1	Lansford No. 6, .....	Carbon, .....	Fatally injured; run over by cars.
Feb. 21	August Bachtel, .....	American, .....	Top man, .....	47	S. 1	1	1	No. 1 tunnel, Nesquehoning, .....	Carbon, .....	Fatally injured by falling down plane.
23	John Cimbaski, .....	Hungarian, .....	Bottom man, .....	45	M. 1	1	1	Beaver Meadow, .....	Carbon, .....	Fatally injured; crushed by cage at bottom of shaft.
25	Albert Stehert, .....	German, .....	Driver, .....	24	S. 1	1	1	Hazleton No. 1, .....	Luzerne, .....	Instantly killed by fall of top rock.
March 3	Mike Dunko, .....	Hungarian, .....	Miner, .....	43	S. 1	1	1	Beaver Meadow, .....	Carbon, .....	Fatally injured by fall of top rock.
25	Adam Maczek, .....	Russian, .....	Miner, .....	35	M. 1	3	3	Sandy Run, .....	Luzerne, .....	Instantly killed by returning to what he supposed to be a missed shot.
28	George Peckar, .....	Hungarian, .....	Miner, .....	42	M. 1	7	7	Eckley No. 10, .....	Luzerne, .....	Fatally injured by fall of coal in robbing.
April 1	August Platt, .....	German, .....	Ohler, .....	38	M. 1	4	4	Hazleton shaft, .....	Luzerne, .....	Instantly killed by a locomotive truck thrown on him.
27	Patrick Bunke, .....	Irish, .....	Miner, .....	41	M. 1	5	5	Hazleton shaft, .....	Luzerne, .....	Instantly killed by an explosion of powder.
May 1	Joseph Christ, .....	Hungarian, .....	Laborer, .....	36	M. 1	1	1	Hazleton No. 1 stripping breaker, .....	Luzerne, .....	Fatally injured; run over by loaded stripping car.
4	Andrew Lapinski, .....	Lithuanian, .....	Miner, .....	17	M. 1	1	1	Hazleton No. 1, .....	Luzerne, .....	Instantly killed by fall of bone in breast breaker.
5	Wash Theat, .....	American, .....	Roll tender, .....	17	M. 1	1	1	No. 1 Meadow stripping breaker, .....	Carbon, .....	Fatally injured; crushed between bumpers of stripping cars.
9	Frank Petro, .....	Hungarian, .....	Laborer, .....	29	M. 1	1	1	Jeddo No. 4, .....	Luzerne, .....	Fatally injured; squeezed by stock which rolled on him.
11	Clinton Williams, .....	American, .....	Repair man, .....	26	S. 1	1	1	Drifton No. 1 stripping, .....	Luzerne, .....	Fatally injured; run over by loaded stripping trucks.
22	James McNealis, .....	American, .....	Top man, .....	19	S. 1	1	1	Drifton No. 1 stripping, .....	Luzerne, .....	Instantly killed by fall of clay on stripping.
June 6	James Patton, .....	American, .....	Strip foreman, .....	29	M. 1	1	1	No. 1 breaker, Nesquehoning, .....	Carbon, .....	Instantly killed; whirled around a shaft on breaker.
13	Foster Smith, .....	American, .....	jig runner, .....	16	S. 1	1	1	Gowan Nos. 1 and 3, .....	Luzerne, .....	Fatally injured by fall of coal in gangway.
12	Charles Rupert, .....	American, .....	Miner, .....	31	S. 1	1	1			

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief.
June	21 Richard West, .....	American...	Asst. Supt., .....	42	M.	1	6	Lansford No. 4, .....	Carbon..	Fatally scalded by steam and water while fighting a mine fire.
	21 John Black, .....	American...	Asst. foreman	48	M.	1	6	Lansford No. 4, .....	Carbon..	Fatally injured by steam and water while fighting a mine fire.
	21 Daniel Lewis, .....	American...	Miner, .....	38	M.	1	6	Lansford No. 4, .....	Carbon..	Fatally scalded by steam and water while fighting a mine fire.
July	21 John Fornagle, .....	Polish, .....	Miner, .....	30	S.	.....	.....	Lansford No. 4, .....	Carbon..	Fatally scalded by steam and water while fighting a mine fire.
	1 John Krutal, .....	Polish, .....	Laborer, .....	29	S.	.....	.....	Highland No. 5, .....	Luzerne,	Fatally injured by fall of coal from rib in gangway.
	6 John Markovish, .....	Hungarian...	Miner, .....	30	M.	1	1	Coleraine, .....	Carbon..	Fatally injured by flying coal from shot in gangway.
	7 Joseph Mishko, .....	Hungarian...	Platform man	38	M.	1	2	Jeddo breaker No. 4, .....	Luzerne,	Instantly killed; struck on head by fast revolving belt coupling.
	8 Joseph Ruff, .....	Italian, .....	Miner, .....	42	M.	1	3	Cranberry No. 1, .....	Luzerne,	Instantly killed by fall of bone in breast.
10	August Wetterad, .....	German, .....	Miner, .....	64	M.	1	.....	Lansford No. 9, Shepp's	Carbon..	Instantly killed by rush of coal on stripping.
	11 Thomas Clemmens, ..	Irish, .....	Miner, .....	58	M.	1	.....	Lansford No. 9, Shepp's	Carbon..	Smothered by rush of coal in chute.
19	Leonard Santucci, ...	Italian, .....	Miner, .....	28	M.	1	4	Lattimer, .....	Luzerne,	Fatally injured by flying coal from shot in breast.
	20 John Corraza, .....	Tyrollian, ..	Laborer, .....	22	S.	.....	.....	Highland No. 5, .....	Luzerne,	Instantly killed by fall of rock in airway.
23	Peter Shovlin, .....	Irish, .....	Miner, .....	49	.....	.....	.....	Drliton No. 2, .....	Luzerne,	Fatally injured; run down by a loaded trip of mine cars.
	3 David Williams, .....	English, ....	Laborer, .....	45	M.	1	1	Hazleton shaft, .....	Luzerne,	Instantly killed; crushed between gondolas under breaker.
6	John Krasch, .....	German, ....	Miner, .....	34	M.	1	5	Cranberry No. 1, .....	Luzerne,	Fatally injured by an explosion of dynamite in gangway.
	25 Vincent McGorry, ...	American...	Door-boy, ....	16	S.	.....	.....	Nesquehoning shaft,	Carbon..	Fatally injured by being run over by a loaded trip.
28	Neal Tram, .....	Italian, ....	Coal loader, ...	25	S.	.....	.....	Lattimer, .....	Luzerne,	Fatally injured by being squeezed between gondola and breaker wall.
	8 Frank Kluck, .....	Polish, .....	Laborer, .....	33	M.	1	3	Highland No. 5, .....	Luzerne,	Fatally injured by fall of slate in breast.
17	James Quinn, .....	Irish, .....	Miner, .....	30	S.	.....	.....	Highland No. 1, .....	Luzerne,	Instantly killed by fall of top coal while robbing pillars.

18	Ferdinand Bonnan, ...	Austrian, ..	Miner, .....	34	S. ....	Buck Mt. tunnel No. 2.	Luzerne, ..	Suffocated by rush of coal in chute of breast.
19	Joseph Ponce, .....	Austrian, ..	Miner, .....	24	S. ....	Hazleton No. 5, .....	Luzerne, ..	Fatally injured by accidental discharge of a rock shot in gangway.
19	August Clemente, ..	Austrian, ..	Laborer, .....	27	S. ....	Hazleton No. 5, .....	Luzerne, ..	Fatally injured by accidental discharge of a rock shot in gangway.
24	Thomas Bowden, .....	English, ...	Miner, .....	57	M. 1	Coleraine, .....	Carbon, ..	Fatally injured by being squeezed between mine car and prop.
Oct.	John Guffler, .....	Austrian, ..	Miner, .....	64	M. 1	Lattimer, .....	Luzerne, ..	Fatally injured by fall of rock from top of gangway.
25	August Horn, .....	German, ...	Miner, .....	69	M. 1	Upper Lehigh No. 5, .....	Luzerne, ..	Fatally injured by a premature explosion of a blast on stripping.
31	Metro Stevorick, .....	Slavonian, ...	Laborer, .....	37	M. 1	Cranberry, .....	Luzerne, ..	Fatally injured by fall of clay in stripping.
Nov.	John McLaughlin, .....	American, ...	Bottom man, ..	19	S. ....	No. 5 shaft, Lausford, ...	Carbon, ..	Instantly killed; crushed between rib and head car which left the track.
28	Paul Colleser, .....	Hungarian, ...	Miner, .....	26	M. 1	1 Beaver Brook, .....	Luzerne, ..	Instantly killed by fall of bone in breast.
U	Mannus McHugh, ...	American, ...	Other, .....	17	S. ....	No. 4 Lausford, .....	Carbon, ..	Fatally injured by being caught in cogs on breaker.
14	John Binkowski, .....	Polish, .....	Miner, .....	26	M. 1	3 No. 2 Drilton, .....	Luzerne, ..	Fatally injured by fall of top slate in breast.
14	Patrick Burke, .....	American, ...	Loco patcher, ..	16	S. ....	Lattimer, .....	Luzerne, ..	Fatally injured; run over by car of timber.
18	Michael Telschoko, ...	Hungarian, ...	Laborer, .....	35	M. 1	1 Eckley, .....	Luzerne, ..	Fatally injured by lumps of frozen clay falling from edge of stripping, striking car which was thrown over on him.
22	Neal Gallagher, ....	Irish, .....	Miner, .....	42	M. 1	4 Lansford No. 6, .....	Carbon, ..	Instantly killed by fall of dividing slate.

TABLE 5.—Ninth Anthracite District, 1903  
Non-Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or Single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 2	Martin Christian, .....	Hungarian, .....	Miner, .....	45 M.		Harwood, .....	Luzerne, .....	Back bruised by fall of clod in breast.
3	Andrew Makuta, .....	Slavonian, .....	Pumpman, .....	17 S.		Upper Lehigh, .....	Luzerne, .....	Knee injured by having it caught between locomotive and dirt car.
5	Mike Mikula, .....	Slavonian, .....	Miner, .....	29 M.		Jeddo No. 4, .....	Luzerne, .....	Face, neck and hands burned by small body of gas in breast.
9	Charles Delaus, .....	American, .....	Elevator boy, .....	14 S.		Star washery, .....	Carbon, .....	Leg fractured and hand bruised by falling from platform in breast.
10	Albert Ruszkowski, .....	Polish, .....	Laborer, .....	26 S.		Lehigh Valley No. 5, .....	Luzerne, .....	Leg fractured by slide of coal from side of gangway.
19	John Gallagher, .....	American, .....	Driver, .....	26 S.		Drift-n No. 1, .....	Luzerne, .....	Small bone in leg broken by mule jumping on him.
19	James Bassil, .....	Italian, .....	Laborer, .....	28 M.		Hazleton No. 1, .....	Luzerne, .....	Arm fractured by having it caught in force fan in boiler house.
22	Andrew Tillinget, .....	Hungarian, .....	Laborer, .....	33 S.		Sandy Run, .....	Luzerne, .....	Collar bone fractured while assisting to load coal.
26	Herman Grossman, .....	German, .....	Miner, .....	41 M.		Highland No. 2, .....	Luzerne, .....	Dislocation of bones of sternum by fall of slate and coal in breast.
Feb. 2	John Swetz, .....	Slavonian, .....	Laborer, .....	30 M.		Upper Lehigh, .....	Luzerne, .....	Toes mashed by a fall of slate in gangway.
4	Egnott Nawalski, .....	Polish, .....	Miner, .....	29 S.		Highland No. 2, .....	Luzerne, .....	Face, neck and hands burned by an explosion of powder.
4	Mattis Nawalski, .....	Polish, .....	Laborer, .....	22 S.		Highland No. 2, .....	Luzerne, .....	Ribs fractured by a piece of coal sliding down chute, striking him.
14	William Krugst, .....	German, .....	Miner, .....	56 M.		Cranberry No. 1, .....	Luzerne, .....	Skull fractured by a flying piece of slate thrown by blast.
14	John Dugan, .....	American, .....	Slate picker, .....	15 S.		Coleraine, .....	Carbon, .....	Scalped by steam by turning valve too quick, causing a connection to break.
15	August Klinge, .....	German, .....	Fireman, .....	36 M.		Cranberry No. 1, .....	Luzerne, .....	Fracture of pelvis by collar, which they were wearing, falling on him.
16	Cornelius Rodden, .....	Irish, .....	Miner, .....	58 S.		Cranberry No. 1, .....	Luzerne, .....	Two ribs fractured and one cut over left eye by flying coal from a shot.
24	Mike Cundra, .....	Hungarian, .....	Miner, .....	41 M.		Deaver Meadow, .....	Carbon, .....	Body bruised by being caught between cars at bottom of plane.
24	Pasco Larock, .....	Italian, .....	Hitcher, .....	26 S.		Hazle Brook, .....	Luzerne, .....	Leg fractured by being thrown by trip of cars which he attempted to board.
27	Harry McCurley, .....	American, .....	Motor watchman, .....	19 S.		Beaver Meadow, .....	Carbon, .....	

March	3	Albert Hunsinger, .....	American, .....	Miner, .....	28	S.	Hazle Brook, .....	Luzerne, .....	Squeezed between car and door frame on gangway while on his way home. Face and hands burned by small body of gas in chute.
	7	Joseph Koiko, .....	Hungarian, .....	Miner, .....	.....	M.	Lansford No. 4, .....	Carbon, .....	Face and hands burned by small body of gas in chute.
	7	Paul Kozick, .....	Hungarian, .....	Laborer, .....	.....	S.	Lansford No. 4, .....	Carbon, .....	Face and hands burned by small body of gas in chute.
	10	Andrew Topko, .....	Hungarian, .....	Slate picker, .....	41	S.	Harwood, .....	Luzerne, .....	Leg fractured by falling from breaker to ground, 31 feet.
	12	John Sunarek, .....	German, .....	Miner, .....	38	M.	Hazleton No. 3, .....	Luzerne, .....	Skull fractured by a flying piece of coal from shot.
	13	Daniel Rupert, .....	German, .....	Miner, .....	53	M.	East Crystal Ridge, ..	Luzerne, .....	Compound fracture of femur by flying coal from a shot.
	13	Albert Wiegans, .....	Hungarian, .....	Miner, .....	23	S.	Jeddo No. 4, .....	Luzerne, .....	Head cut by a fall of top slate at face of breast.
	18	John Yankovish, .....	Polish, .....	Miner, .....	25	S.	Hazleton shaft, .....	Luzerne, .....	Leg fractured by flying coal from a shot in breast.
	18	Antonio Crocetto, .....	Italian, .....	Laborer, .....	23	S.	Harwood, .....	Luzerne, .....	Leg fractured by a stick of timber breaking, sawing cut to fall on him.
	18	George J throusd, .....	Polish, .....	Miner, .....	28	S.	Highland No. 2, .....	Luzerne, .....	Leg fractured by a fall of timber, top of shot gauge, off right leg.
	23	Samuel Woodring, .....	American, .....	Hitcher, .....	19	S.	Jeddo No. 4, .....	Luzerne, .....	Leg fractured by plank on plane becoming loose, falling and striking him.
	28	John J. Gallagher, .....	Irish, .....	Miner, .....	30	S.	Highland No. 2, .....	Luzerne, .....	Leg fractured by fall of cled at face of breast.
April	3	John Mattola, .....	Hungarian, .....	Laborer, .....	37	M.	Highland No. 3, .....	Luzerne, .....	Leg fractured by fall of coal in gangway.
	4	Thomas C. Tillson, Jr., .....	American, .....	Locomotive patcher, ..	17	S.	Beaver Meadow, .....	Carbon, .....	Small bone in right leg broken, 1 ft. leg badly bruised by being thrown under car.
	5	John F. Cole, .....	American, .....	Runner, .....	27	M.	Evans colliery, .....	Carbon, .....	Arm fractured by being thrown from mule.
	5	George Gmska, .....	Polish, .....	Laborer, .....	28	S.	Canberry, .....	Luzerne, .....	Two toes cut off by fall of rock in breast.
	10	Frank Barn, .....	Hungarian, .....	Jig tender, .....	32	M.	Leaver Meadow, .....	Carbon, .....	Jaw bone broken by a bar which he was using to stir engine off vent fan.
	11	Charles Marceavish, .....	Polish, .....	Laborer, .....	29	S.	Hazleton shaft, .....	Luzerne, .....	Leg fractured by striking against coal while running in shot gauge.
	17	John Martineavish, .....	Lithuanian, .....	Miner, .....	28	M.	Crancherry No. 4, .....	Luzerne, .....	Face bruised by a fall of bone in breast.
	18	Mike Ossafat, .....	Hungarian, .....	Laborer, .....	38	M.	Spring Brook, .....	Carbon, .....	Collar bone broken by falling while going down manway.
	25	John Kincaavish, .....	Hungarian, .....	Laborer, .....	42	M.	Spring Brook, .....	Carbon, .....	Leg fractured by rush of coal in a breast manway.
	30	John Stracka, .....	Hungarian, .....	Laborer, .....	21	M.	Highland No. 3, .....	Luzerne, .....	Leg fractured by a lump of coal at breast while starting it.
May	4	Jacob H. Linderemuth, .....	American, .....	Office boy, .....	16	S.	Lehigh, .....	Luzerne, .....	Dislocation of left leg, right leg bruised, by falling under a trip which he attempted to jump on.
	19	George Yurko, .....	Hungarian, .....	Dump man, .....	21	M.	Jeddo No. 4, .....	Luzerne, .....	Foot crushed by having it caught by a car in breaker dump.
	20	George Gasha, .....	Polish, .....	Miner, .....	32	M.	Highland No. 5, .....	Luzerne, .....	Hand fractured by a fall of coal in breast.
	22	John Gallagher, .....	American, .....	Driver, .....	16	S.	Beaver Brook, .....	Luzerne, .....	Hand fractured by being run over by a timber truck.
June	1	Steve Lawrence, .....	Hungarian, .....	Miner, .....	30	S.	Highland No. 2, .....	Luzerne, .....	Back and chest bruised by a car axle when he fell in middle of track.
	4	Samuel Dunkerly, .....	English, .....	General inside for man, .....	58	M.	Jeddo No. 4, .....	Luzerne, .....	Nose fractured and face cut by a piece of coal rolling down slope, striking him.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Area	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
11	Andrew Skuntz, .....	Slavonian, ..	Bottom man, ....	24	S.	Hazle Brook, .....	Luzerne, ..	Arm and ribs fractured by a car sent down slope without the rope striking him, crushed by having it caught between two gondolas.
11	Andrew Goodlick, .....	Hungarian, ..	Slate picker, .....	14	S.	Upper Lehigh, .....	Luzerne, ..	Forearm fractured and contusion of left foot by a fall of slate.
16	Matt Takites, .....	Hungarian, ..	Miner, .....	35	M.	Highland No. 2, .....	Luzerne, ..	Severe contusions of left foot by fall of slate.
16	Martin Wargo, .....	Hungarian, ..	Laborer, .....	32	S.	Highland No. 2, .....	Luzerne, ..	Leg crushed; caught in pinions on breaker, necessitating amputation.
20	Mike Mattie, .....	Hungarian, ..	Slate picker, .....	17	S.	Beaver Meadow, .....	Carbon, ...	Slightly scalded while fighting a mine fire.
22	Joseph Pasko, .....	Polish, .....	Laborer, .....	.....	S.	Lansford No. 4, .....	Carbon, ...	Foot crushed. Run over by empty car.
22	John Vittek, .....	Polish, .....	Laborer, .....	.....	S.	Lansford No. 4, .....	Carbon, ...	Leg cut by piece of coal from shot, which blew through millstone.
22	Fritz Laubach, .....	Polish, .....	Laborer, .....	.....	S.	Lansford No. 4, .....	Carbon, ...	Hand and breaker wall lacerated; caught between car and breaker.
3	William Kothe, .....	German, .....	Driver, .....	17	S.	Cranberry, .....	Luzerne, ..	Arm fractured by fall of slate.
7	Edward Dominick, ..	Hungarian, ..	Laborer, .....	32	S.	Highland No. 2, .....	Luzerne, ..	Leg fractured by fall of slate in breast.
21	William Hill, Jr., .....	American, ..	Spragger, .....	15	S.	Lattimer, .....	Luzerne, ..	Ribs fractured and head cut by fall of bone in breast.
27	John Erehme, .....	American, ..	Miner, .....	21	M.	Upper Lehigh, .....	Luzerne, ..	Fracture of pelvis; struck by mine locomotive on gangway.
27	Thomas Chinoek, .....	Hungarian, ..	Laborer, .....	40	M.	East Crystal Ridge, ..	Luzerne, ..	Skull fractured, jaw bone broken and one eye blown out by explosion of dynamite.
29	John Brezin, .....	Polish, .....	Miner, .....	29	M.	Hazleton shaft, .....	Luzerne, ..	Hip dislocated. Fell in attempting to jump on loaded car.
3	John McGeehan, .....	Irish, .....	Miner, .....	23	S.	Hazleton shaft, .....	Luzerne, ..	Face and hands burned by powder while picking and face burned by an explosion of gas in breast.
4	Joseph Selwell, .....	American, ..	Laborer, .....	54	M.	Jeddo No. 4, .....	Luzerne, ..	Back and foot injured; caught by descending car on slope.
6	Samuel Hodgson, .....	American, ..	Driver, .....	17	S.	Cranberry No. 1, .....	Luzerne, ..	
10	Charles Gillespie, .....	American, ..	Driver, .....	19	S.	Highland No. 5, .....	Luzerne, ..	
27	Lewis Delmonica, .....	Italian, .....	Laborer, .....	23	M.	Ebervale, .....	Luzerne, ..	
31	Biasius Hinko, .....	Hungarian, ..	Laborer, .....	25	M.	Highland No. 5, .....	Luzerne, ..	
4	Weston Minnich, .....	American, ..	Repairman, .....	33	M.	Upper Lehigh, .....	Luzerne, ..	

11	Albert Kochshayv,	Russian,	Laborer,	35	S.	Cranberry No. 4,	Luzerne,	Leg fractured by fall of coal in breast.
12	Jonathan Slauch,	American,	Miner,	35	M.	Gowan No. 4,	Luzerne,	Face and hands slightly burned by an explosion of gas.
22	Martin Radishevski,	Slavonian,	Laborer,	23	S.	Hazleton shaft,	Luzerne,	Ankle fractured; struck by sheet iron which slid down pitch.
24	Harry Bugraff,	American,	Machinist,	19	S.	Hazleton shaft,	Luzerne,	Leg fractured by piece of machinery falling on him.
29	Joseph Pull,	American,	Miner,	24	S.	Ebervale,	Luzerne,	Head cut by piece of coal falling, striking him, knocking him down breast.
6	Joseph Gober,	Polish,	Miner,	37	S.	Hazleton No. 1,	Luzerne,	Leg fractured by fall of elod in breast.
19	Vincent Witkavish,	Polish,	Laborer,	22	S.	East Crystal Ridge,	Luzerne,	Arm fractured; fell and was caught by cars.
20	George Stausiski,	Hungarian,	Miner,	27	M.	Coleraine,	Carbon,	Leg fractured by fall of rock while robbing pillars.
20	Andrew Boshik,	Hungarian,	Driver,	22	S.	Lattimer,	Luzerne,	Both legs fractured. Tumbled over by a falling striking car.
26	James Gallagher,	American,	Laborer,	24	S.	Spring Brook,	Carbon,	Leg fractured by fall of coal in gangway.
28	John Mesik,	Polish,	Laborer,	30	S.	Coleraine,	Carbon,	Leg fractured by a rush of coal in gangway.
31	Frank Rovet,	Italian,	Laborer,	34	M.	Hazle Brook,	Luzerne,	Breast and shoulder bruised; caught between rib and car.
5	Hugh McGeehan,	Irish,	Engineer,	39	M.	Upper Lehigh,	Luzerne,	Leg fractured. Caught between bumpers of mine cars.
10	James Milford,	American,	Bottom man,	22	S.	Jeddo No. 4,	Luzerne,	Leg fractured. Struck by piece of coal which rolled down slope.
10	Mike Tomko,	Hungarian,	Laborer,	30	M.	Highland No. 2,	Luzerne,	Arm severed. Caught between lump of coal and tattery props.
11	Joseph Duffer,	Hungarian,	Miner,	46	M.	Harleigh,	Luzerne,	Back bruised. Caught between car and collar on slope.
17	Daniel Sullivan,	Irish,	Miner,	30	M.	Jeddo No. 4,	Luzerne,	Face and hands burned by gas in tunnel.
17	Charles Sedon,	Hungarian,	Laborer,	22	S.	Jeddo No. 4,	Luzerne,	Face and hand burned by small body of gas in breast.
17	Joseph Barkovik,	Hungarian,	Miner,	23	S.	Jeddo No. 4,	Luzerne,	Fractured ribs. Struck by flying coal from shot.
26	Joseph Ecker,	Austrian,	Miner,	26	S.	Gowan No. 4,	Luzerne,	Contusion of back and laceration of scalp by fall of top slate.
3	George Yeager,	Slavonian,	Miner,	48	M.	Hazle in shaft,	Luzerne,	Leg fractured. Run over by loaded car. Manway by piece of coal.
4	Henry Rose,	German,	Miner,	42	M.	East Crystal Ridge,	Luzerne,	Ribs fractured. Struck by flying coal from shot.
5	Charles Cowash,	Polish,	Miner,	36	M.	Hazleton shaft,	Luzerne,	Fracture of spine by a fall of coal in breast.
14	Thomas Rachifskt,	Slavonian,	Miner,	26	M.	Beaver Brook,	Luzerne,	Leg crushed, necessitating amputation. Caught between two gondolas.
14	Sylvester Toresena,	Austrian,	Miner,	30	M.	Harwood,	Luzerne,	Eye blown out and face lacerated by flying coal from shot.
14	Frank Kalatch,	Italian,	Slate picker,	45	M.	Jeddo No. 4,	Luzerne,	
18	Joseph Camerane,	Italian,	Miner,	33	M.	Lattimer,	Luzerne,	
24	John O'Donnell,	Irish,	Coal loader,	19	S.	Jeddo No. 4,	Luzerne,	
28	Joseph Perwasnlek,	Hungarian,	Miner,	30	M.	Coleraine,	Carbon,	

Nov

Dec.

Oct.

### Fatal Accidents—By Falls of Coal, Slate and Roof.

By consulting Table IV, it will be seen that during the year 1903 fourteen employes lost their lives through falls of coal, slate and roof. Some of these accidents occur not through ignorance of the victims, but rather through recklessness on their part. They may know that the top is unsafe, but instead of leaving all other work and taking it down, they trust that it will stay there a little longer, until they load a car or drill a hole. They may go right under it, start to drill the hole, when down it comes, fatally injuring or perhaps killing them instantly. Miners should stop to consider that the most important part of their duty is to take care of themselves and their laborers, who are under their charge, and when they find that the roof under which they are working is unsafe, they should stop all other work and take it down at once. If this was done we would have fewer accidents of this kind to record.

Another very important matter I desire to impress on the mind of the miner is the fact that when he discovers that his roof is bad and he tries to take it down, he should not leave it again until he has it down or a set of timber or a prop put under it to make it secure. On this point I would say that during the year it has come under my observation, when investigating accidents, that a person has been killed under a piece of top which he knew to be bad and earlier in the day had tried to take it down and failed. He left it and went about other work, forgetting that during the time he was engaged doing other work the piece over his head was working all the time and becoming weaker the longer it was allowed to stay there, and when not expecting it, down it comes, instantly killing or fatally injuring the person who happens to be under it. The expression that they are very ready to make is—"that the piece fell without any warning." Now this is not the case, as I claim that the piece had been giving warning ever since it was first discovered unsafe and if they had put a prop under it, or taken it down at the time, the accident would have been avoided. One instance of this kind occurred at Drifton No. 2, where John Binkopski, a Polish miner, lost his life by a fall of slate in his breast or chamber. He and another miner were working "partners," and when they went in to their work in the morning they discovered that there was a crack in the top slate. Binkopski tried to pull it down and not being able to do so he called his partner, telling him to bring another bar, to see if both of them together could not pull it down. This also failed and feeling secure they started to make coal for the day. One hole was drilled and fired and the surviving partner said that after firing this shot they again tried the top and found no difference in the condition of the roof. He then started to drill another hole and deceased was



shoveling coal back when this piece fell, killing him instantly. It can readily be seen that had these men persisted in getting it down when they knew it to be bad, even if they had to put a shot in it, this accident would have been avoided.

Accident No. 39, which occurred at Eckley, is another instance which proves that when a person starts to take a piece down he should not leave it until he has it down. In this case George Peckar, a miner, was engaged in robbing pillars. He discovered a bad piece of coal hanging over a pillar (according to the testimony of his partner) he took a drill and tried to bar it down. It did not come down as readily as he thought it would and he decided to drill a hole in it and blow it down. About that time an empty car was run into their branch and Peckar left the hole and went to assist his partner to load same, and shortly after the piece which he had tried to get down fell of its own accord, instantly killing him. Had he left the car stand on the branch, or told the driver that he did not want a car that trip, and continued drilling his hole and fired it, this accident could have been avoided. A very strange thing about these accidents by falls is that so many of them occur in small seams, where a man can put one hand on the piece which he is sounding while he holds the drill or bar in the other and taps the top. In this manner it is easily detected if there is any movement in the piece which he is sounding, yet all the accidents which occurred in the district by falls, occurred in small seams, where it would be easy for them to carry out the above precautions, and I am satisfied if they were carried out that the accidents by falls would be greatly lessened.

Another strange thing about these accidents is that they occur where the roof is not considered very bad, but a fairly good roof, and from this fact I would say that the roof not being so bad the miner takes chances which he ought not to take. If the roof is bad he will not take any chances at all, but will put up a set of timber, a prop, or he will take the bad roof down at once, because he knows that it is not to be trusted.

#### By Mine Cars

Five persons met their death by mine cars underground. The first, a young man by the name of Albert Stabert, lost his life by being run over by a trip of empty mine cars at Hazleton No. 1. He was driving a four mule team and was leaving the bottom of the slope with a trip. The team was not going as fast as he thought they should go. He placed his lamp on the spreader and ran up alongside of the leader to give her a few cuts with the whip. When he had them going fast enough he stepped to the side to wait until

cars came up to him. His lamp had been thrown off the spreader and there was no light except what was thrown from the lamp on the lead mule. He attempted to jump on the front end of the rapidly moving trip, slipped and fell under, and was instantly killed. When he saw that his lamp was gone he should have stepped to one side, as there was plenty of room to let the trip pass, and he could have easily caught the team after he had picked up his lamp. I have often seen drivers place their lamps on front end of car and run up alongside of the mules in the dark to stir them up, but I never saw any one put his lamp on the spreader for this purpose. He might have known that the jerking of the spreader would throw his lamp off.

Peter Shovlin, an old miner, while on his way home out the gangway at No. 2 Drifton was fatally injured, he being run down by a loaded trip of mine cars. Deceased and his partner were on their way out when they encountered a motor trip of twenty-three loaded cars which had stopped to push four cars into a branch (the turnout being only able to hold nineteen cars), and were stopped by the motor patcher, who had placed sprags in the trip from the fifth car back. The patcher after uncoupling the four cars gave the engineer the signal to pull down and as soon as there was a little space between the trip that was moving and the nineteen cars standing, Shovlin and his partner stepped out into the road and continued their way out. Just then the patcher noticed the nineteen cars moving and shouted to them to look out, that the trip was coming. Shovlin's partner stepped to the side where he was walking and saved himself. Shovlin, who was walking on the other side, attempted to get to the side where his partner was and was knocked down by the trip and fatally injured, as stated above. I am of the opinion that Shovlin got confused when he heard the patcher shout to him, as there was no necessity for him to run across the track, he could have stepped to the side which he was on and saved himself.

Vincent McGlorry, a young door-boy, lost his life in No. 1 shaft, Nesquehoning, by being run down by a trip of loaded cars which was being pulled out to top of balance shaft. His duty was to tend a door which was on this gangway, but at the time of accident he had gone in with the driver to assist him, this being the last trip for the day. When nearly out to his door he ran ahead, but when passing the mules he was pushed by one of them, causing him to fall. He hung on to the trace for some distance and was dragged along, but the driver was not able to stop the trip in time to save him. His hold on the trace slipped and he fell to the side of the road and was fatally injured. He was removed to St. Luke's Hospital at Bethlehem, where he died thirty-six hours after the accident.

Thomas Bowden, an old English miner, was injured between an

empty car and rib at the bottom of No. 9 slope, Coleraine. He and two other men came out to the bottom of slope to be hoisted up. Bowden stood on the side of rapper and through some cause the car jumped the track, catching him as above stated. The injury was considered nothing more than a fractured leg at the time, but resulted in his death a few days later.

John McLaughlin met instant death at No. 4 Lansford. A locomotive was pushing a loaded trip into bottom of shaft and deceased was walking on the side of the front car of trip for the purpose of spragging trip, the car jumped the track, caught his head between car and side, killing him instantly.

#### By Explosion of Dynamite and Powder

Four men lost their lives by the reckless handling of dynamite and black powder. One of these, Patrick Burke, an old experienced miner, lost his life by a spark from his lamp flying into a cartridge of powder, which he was filling. He had placed two sticks of dynamite into the cartridge and was filling it up with black powder when the spark flew into it, causing all the dynamite and powder which he had in to explode, killing him instantly.

John Krasch, a German miner, lost his life by ramming dynamite into a hole that was too small to receive it. The hole was drilled in the bottom slate and was started by a rock machine. When the hole was in about two feet it struck a sulphur ball, which the machine would not drill and they took the machine off and drilled the balance of the hole with hammer and steel. The drill which they used to finish the hole with had been used for some time and the bit was worn smaller than the dynamite and in charging the hole he removed the paper from around the sticks of dynamite and rammed them into the bottom of hole. In this manner he had placed five sticks in the hole, using a heavy scraper, and while ramming the sixth stick it exploded the charge, injuring him so badly that he died before reaching home. A driver-boy, by the name of Samuel Hodgson, was also injured very severely at the same time. He had gone into the gangway to see how many cars they wanted for the night and was sitting down watching Krasch when the dynamite exploded. The laborer, who was back on the gangway gathering tamping, escaped with a few slight scratches.

The other two men who lost their lives by dynamite were Joseph Poncare and August Clemmente. These men were working on the night shift, also in a gangway, in No. 5 slope, Hazleton shaft colliery, and in some unknown manner, while charging a hole it exploded. I was unable to determine exactly how this accident occurred and referred the matter to a coroner's jury, who also failed

to find out the cause of the explosion, they rendering a verdict—"That they came to their death in some manner unknown to the jury."

#### By Blasts, Etc.

Three men lost their lives by blasts during the year. Adam Maczek, a Russian miner, lost his life at Sandy Run. He with several others were engaged in opening up an old gangway which had caved. In doing this work they encountered large rocks, which to break them into pieces small enough to handle required drilling holes in them. Deceased and his partner had drilled four holes in these rocks and had charged them ready to fire. Maczek was to light two of the holes and his partner the other two (they were using fuse). The partner ignited his two shots and ran back to a place of safety. Maczek succeeded in lighting one shot and went to the other to light it, but this shot did not spit and Maczek waited at the shot trying to light it as long as he thought it was safe (the other three fuses burning) and then he ran back to where the other men were, thinking that he did not light this last shot. He waited there until they heard three reports and then he started back to light the hole which he thought he had failed to light. The men told him that he had better wait awhile to see whether it would not go off, but he would not listen and rushed back and got there in time to receive the full contents about the head and body, killing him instantly.

John Markovish, a Hungarian miner, was fatally injured at Coleraine by a blast which blew through a pillar. I could readily excuse the men in the breast below for this accident. They were working a breast from a gangway below the one that the victim and his partner were walking out on their way home, and under the instructions of the foreman had drilled a hole eleven and a half feet ahead of them and did not strike the gangway. They then drilled a four foot hole in another part of the breast, which they thought would be perfectly safe in firing, and did so, with the result that the whole load of this shot was thrown to the gangway above, fatally injuring Markovish, who was nearly opposite the place where it broke through. (The test hole did not go through owing to an abrupt curve in the gangway above).

The most fool-hardy act that ever came under my observation was accident No. 88, which occurred at Lattimer, when Leonard Santucci met his death through a rash act of his own, he trying to fire a four foot hole with two feet of fuse that he might save a penny. He ignited the fuse before inserting it into the hole, then ramming five cartridges of tamping in after it, and before he left the place the charge went off, fatally injuring him. How to prevent accidents when men will take chances of this kind is beyond my comprehen-

sion. This was indeed a very fortunate accident, if it can be called an accident, for his laborer had only got below the check battery or he would have received the same fate. A driver who was passing at the time had a very narrow escape from being injured by flying coal. The men working close by ran up into the breast, expecting to find his lifeless body, but it was not to be found up in the breast. They then looked on the gangway and could not find it there. The driver then went out and found him on a track, where he had been thrown from the breast when the shot went off while the trip was passing. He died on the way to the hospital.

### By Falling into Shafts and Slopes

Two men lost their lives under the above heading. John Kosh, a Polish laborer, lost his life by a flagrant violation of the mine law, in attempting to get on a cage in excess of the lawful number at the counter of the underground shaft of the Spring Brook colliery. Deceased, with two others, had come out to the shaft and was waiting to be hoisted up. A cage load of men came up the shaft and the engineer had a signal to go all the way through. One of these men gave the signal to stop the cage at the counter and when the cage arrived at that point the men standing there were told by the men on the cage "to let it go up, that there was a load on," meaning ten men, but notwithstanding this the two men on the other side from the bell wire attempted to get on, but Kosh, not being properly on the cage when it started up, was caught by the first set of timber above the counter and pulled off, falling to the bottom. When picked up he was dead.

The other victim was a young man by the name of August Bechtel, Jr., who fell down a balance plane in No. 1 tunnel, Nesquehoning. His duties were on the side where the loaded car is run on to cage to bump the empty car off, but just prior to the accident he was called to the other side to assist a driver to push some empty cars which were blocked. When going over to the empty car side he used the regularly traveled way, but when returning he walked into the plane. How he came to do this is a mystery. The only way that I can account for his doing this is that he must have forgotten himself. The foreman had placed a man with him to acquaint him with the work that he was expected to do and was to remain a few days with him, but, unfortunately, he met his death the second day. The plane has a pitch of 65 degrees and is two hundred and ten feet long. He struck the cage, which was at the bottom, and was injured so badly that he died shortly after the accident.

### Suffocated by Coal

Two men lost their lives by being suffocated by coal underground, one an old miner by the name of Thomas Clemmens. He and his boy were engaged mining coal in a stripping at Lansford No. 9. A side chute was driven off of main chute, which was also driven through to the stripping, and it was while going up this side chute that a rush of coal came down, caused by a heavy down pour of rain on the outside. Had they known how much coal was coming they could have stood where they were and would have been safe, but they made an effort to get into the main chute and were caught in the rush, the father going down into the chute, covered with coal and suffocated. The boy threw his arm around a prop and saved himself.

Another miner, by the name of Ferdinand Bonnan, met his death by a rush of coal which caught him by starting a battery in a breast in East Buck Mountain tunnel, and before he could be rescued life was extinct. This life could have been saved had one of the men had presence of mind and kept the coal from his face to allow him to breathe.

### By Mine Fires

Lansford No. 4 Fire.—On June 17th fire was discovered in No. 8 breast, curve gangway from east gangway of No. 4 slope. A party of men were at once put to work to try and extinguish it—one party to carry water up in buckets while the other party put the water on the fire. This was done to stop the progress of the fire until the men who were engaged laying a pipe line would reach the seat of the fire with water from the pumps, which are located near the bottom of the slope. This work was accomplished on Sunday the 21st. A line of pipe was run up in No. 8 breast and another up No. 7 breast. The line in No. 7 breast was to put water on the fire from above and the line in No. 8 was to extinguish the fire after it was pulled down to the battery. On Sunday night a party of men, composed of Richard West, assistant general inside foreman (who had charge of the party); John Black, assistant mine foreman; Daniel Lewis, a miner; John Fornagle, a miner, and several others, were engaged fighting the fire from No. 8 breast. Between nine and ten o'clock, through an oversight of some member of the party, the force of water from the hose was turned on to a large body of raging fire and immediately an explosion of some kind occurred, fatally scalding West, Black, Lewis and Fornagle, and seriously scalding Joseph Pasco, John Vitiek and Fritz Laubach. This accident could have been avoided had these men continued to pull the fire down to the battery and cooling it off, or if they wanted to direct the water on to the

body of the fire, they should have turned the water off, pointed the nozzle where they wanted, fastened it there, and gone down to the gangway and turned on the water, remaining on the gangway until they were satisfied that the water was not reaching the fire. They could then have gone up and pointed the nozzle in another direction and done the same thing over. If this had been done I am satisfied that the accident would not have occurred. This was the method adopted after the accident and it worked successfully, but these things show themselves very plainly after the accident has occurred.

#### By Cars Outside of Mines

Jerry Werley lost his life at Lansford No. 6. His duty was to run the cars after being loaded to the bottom of the refuse plane. One car had been run out from under the rock chute until the other car would be loaded and when he ran the second car out he bumped it against the first car. He then started both cars toward the bottom of the plane and shortly after starting them he discovered that he had not coupled them together. He got between the cars, placing a knee on each bumper, and reached down to try and catch the coupling, which was dragging. The front car reached a heavier grade and gained on the second car, causing the space to become too large for him to reach in the position in which he was, and before he could get a hold with his hand he fell in between the cars, the second car pushing him ahead until he reached a switch, where he became fast and the car ran upon him, injuring him so badly that he died the next day.

August Platt was instantly killed on April 1st by a small locomotive truck, on which he was riding to his work from No. 5 slope over to Hazleton shaft breaker, colliding with a Lehigh Valley Railroad Company train of cars being pushed into the breaker siding at about 6.30 A. M. At a point near the breaker the small locomotive track crosses the L. V. R. R. track to the breaker on grade. The first car of the railroad train was a large fifty-ton capacity car, and had the engineer of the small locomotive been looking ahead I think he could have easily seen the cars being pushed up into the siding. Again, it was an unusually early hour for the railroad people to send a train into the breaker, and from this fact I think they should have sent a flagman to watch the crossing when they were pushing their train up, as they knew this was done during the day, and as this train was being pushed up before the men of the coal company were on duty. They should have looked to this. In the collision the small truck on which Platt and others were riding was thrown over, killing Platt, as above stated. Notices are posted in all the locomotives of the Lehigh Valley Coal Company prohibiting the rid-

ing of any person, other than those whose duty calls them to do so, and had this notice been obeyed, the accident would not have happened.

Joseph Christ, a laborer on stripping, was fatally injured in attempting to cross a track in front of a loaded stripping car which was being pulled out from the steam shovel. He alone could have avoided the accident. This occurred at the stripping of N. J. Cuyler & Son, No. 6, Hazleton.

Frank Petro, another laborer on stripping at Beaver Meadow, whose duties were to run cars into steam shovel, was fatally injured by stepping to the middle of the track to apply the brake on a car which was moving before he was ready. Two other cars followed in, which he did not notice, and he was caught between the bumpers and fatally injured as above stated.

James McNealis, a young man engaged as topman at one of the planes of the stripping operations of T. A. Gillespie & Co., met an untimely death by being crushed under cars, and was so badly injured that he died four hours later at the hospital. On this plane a locomotive and three loaded stripping cars were being hoisted, the locomotive being in the rear, so as to be ready to keep the cars going after reaching the top of the plane. The deceased jumped on front end of the train when it came to top of plane and rode for some distance, until the locomotive reached the apex, then threw the rope to one side and jumped off. In jumping he landed on a piece of coal (which was allowed to remain too close to the track), which threw him back against the cars, which knocked him down and injured him as above stated. The matter was referred to a coroner's inquest, who censured the company for not having more light on top of plane, so the boy could see where he was jumping in alighting from the car after throwing the chain. The accident occurred at night time.

David Williams, a laborer, was instantly killed by being crushed between two gondolas under the Hazleton shaft breaker. Deceased and a man by the name of Henry Blackwell were trying to bar an empty gondola from over the condemned coal pit. Williams had been using the bar and was unable to move the car and Blackwell told him to give him the bar, which Williams did. Blackwell stood at the side of the track barring, the deceased standing in the middle of the track watching him. The car runner (who did not know that they intended to bar the car off the pit) had gone up to run a loaded car of condemned coal down to be placed on the pit, and the brake being on the back end of car, he was unable to see the men who were trying to bar the other car away. Williams, as mentioned before was standing in the centre of track watching Blackwell, and was caught between the two draw-heads, crushing out his life in an



instant. The car was run down quicker than they expected, or else they forgot that the car runner had gone up to run a car down. It was an unusual thing for them to bar a car off of the pit, as it was their custom to bump them off, but owing to another car standing a short distance below which they thought would be disturbed by the bump, they were trying to bar it off. Therefore it is readily seen how this accident occurred.

Neal Tram, an Italian coal loader, was fatally injured by being squeezed between a gondola and a platform which ran along side of track under Lattimer breaker. He had gone up to run a car down and after starting the car he ran alongside of it until close to the breaker, when he attempted to jump on. He was caught between the platform and gondola with the above result. He did not give himself time when he jumped on to get in between cars to get at the brake.

Patrick Burke, a young Locie patcher, was fatally injured at the same colliery by being run over by a mine car partly loaded with timber. They were going to make a "flying switch" to send the car into No. 8 slope. The boy had uncoupled the car from the locie and was crossing from one side of the locie to the other side to get at the switch and in some manner he slipped his hold and fell in front of the car, the car running over his legs and injuring him so badly that he died at the Hazleton Hospital about five hours after the accident.

It seems very strange that more accidents occurred during the year by cars on the surface, where they have day-light to do their work by, than underground, where they have nothing more than the light given by an ordinary miner's lamp. It is evident that the men and boys handling cars inside exercise more care than those handling cars on the surface.

#### By Breaker Machinery

I regret very much to say that during the year three breaker boys lost their lives on the breakers by going into places where they had no business. One of these boys, Wash Thear, was ground up by the rolls. His duty was to see that a chute leading into the rolls did not get blocked, and to do this he was provided with a scraper and shovel, but instead of using either of these tools he got into the chute and was pushing the coal down with his feet, taking hold of side of chute with his hands. In some manner his hold slipped and before he could secure himself he slid into the rolls and was instantly killed.

Another boy, a jig tender on the same breaker, Foster Smith, went to put some tar on a belt to prevent it from slipping. This he

tried to do when the machinery was in motion and in some manner his clothing got caught and he was whirled around by the shaft running the jigs. The machinery was stopped and when he was taken off life was extinct. He had only been away from his companions a few minutes when the errand boy saw him going around and gave the alarm.

The other, an oiler, by the name of Manus McHugh, was fatally injured by having his clothing caught in the cogs which run the screen. The boy in order that he might be able to play with his companions during the dinner hour started to oil the machinery of the breaker about eleven o'clock, so that he would be finished before the noon hour. This work he had nearly completed and when getting down from the plank walk, which ran along in front of the screen, his clothing caught as stated above, and he was drawn into the cogs and injured so seriously that he died the following day. There was no one to blame for the accident but himself, as he had no business oiling the machinery while it was in motion, but boys will be boys and must play, and unless they are held under by strict discipline and prevented from doing things which are against the law, accidents of this kind will happen no matter how much we deplore them. It is indeed sad when we are called upon to record accidents of this nature.

Another accident by machinery occurred at No. 4 Jeddo breaker of G. B. Markle & Co., on July 8. Joe Mishko, a Slavonian platform-man, lost his life in the following manner. The rock chute became blocked and Mishko went down to start it. On the other side of the chute, at the place where he intended to start the chute, was a fast moving belt and why he went over to that side is a mystery, as he could have started the chute from the nearest side better than from where he stood. He must have put his head up and a coupling on the belt struck him on the head, knocking him down into the rock chute and he went down with the rock which he had just started.

#### Miscellaneous Causes Outside

It is to be noticed that under this head seven accidents occurred in this district. The first, John Clemkaski, employed at bottom of breaker shaft at the Beaver Meadow colliery of Coxe Bros. & Co., was fatally injured in attempting to cross from the east side of shaft to west side while the cages were in motion, the descending cage not more than twenty feet above him when he made the attempt. He took hold of the guide of the shaft and intended to swing himself across to the other side, but before he accomplished this the cage was upon him, crushing him down into the cage pit,

injuring him so badly that he died the next day. This accident was nothing less than suicidal on the part of the victim, as under no circumstance should he have used that way to get across the shaft, for by taking a few steps more he could have crossed by the regular way, provided for that purpose, in safety. The victim while on the way to the hospital stated to the attendants who were with him that he had a premonition that something was going to happen that day.

Clinton Williams, a young man, met his death in a peculiar manner at Jeddo No. 4, G. B. Markle & Co. Deceased, with several others, were engaged in raising a stack. The stack gave a lunge and caught Williams' hand between stack and the wall. The accident was considered of a trivial nature, as the boy was able to go to the doctor's and have the injured hand attended to, but in a few days lock-jaw set in and he died a week later.

A very sad accident occurred at Thomas Crawford's stripping when James Patton, a foreman, met an untimely death by a fall of clay from the edge of a bank. He, with some of the men under his charge, had been engaged in laying a track along side of the steam shovel and had nearly completed the extension of this track. Deceased was tightening a fish-plate bolt on one of the joints when a large mass of clay fell, catching him in a stooping position, killing him instantly. What makes this accident doubly sad is the fact that his brother was the engineer on the shovel and an eye witness to the sad occurrence. It was said that the attention of the deceased had been called to the unsafe condition of the clay some time before the accident, but evidently he did not think it was so bad or he would have had it taken down before starting to put in the track.

August Wetteran, an old German miner, lost his life by a rush of coal in Shepps stripping at Lansford. He had fastened a rope, which he had for the purpose of going down into the hole, when he got down and was putting coal into the chute. He must have laid the rope to one side and was using a drill to start the coal and more came down than he expected and he could not catch hold of his rope, he going down with the rush of coal. His body was not recovered for thirteen hours after the accident. The matter was referred to a coroner's jury, who rendered a verdict of accidental death.

August Horn, another old German miner, lost his life by a premature explosion of a blast in clay. Deceased was a foreman of a gang of men removing clay from a pillar of coal at Upper Lehigh No. 5 stripping. They had drilled a hole in the clay and had fired a few sticks of dynamite to spring it to make room for black powder.

He then poured about half a keg into the hole and instead of using enough fuse to reach outside the hole he cut a piece about three feet long, which he attached to a stick of dynamite with a cap in it. He dropped this into the hole and ran a tamping stick down immediately after. The stick evidently took the lighted end of the fuse down into the powder, which caused the shot to go off while he was standing over it, injuring him so seriously that he died the next day. There was no one to blame for this accident but himself, as under no circumstances should a person light a fuse before inserting it in the hole.

Metro Stevorick, a Slavonian laborer, was fatally injured by a fall of clay on the stripping of A. Pardee & Co., at Cranberry. The victim of this accident is again partly responsible for his own death, as it was part of his duty to trim down the loose clay in front of the steam shovel. This he, and others who were with him, failed to do and a piece of clay fell, with result as above stated.

Mike Telshoko, a Hungarian laborer, was fatally injured at the Eckley stripping by a large mass of clay which fell from the edge of the bank, striking a car and turning it over upon the victim. He was at once removed to the hospital, where he died shortly after reaching there.

I might say in conclusion of the remarks on fatal accidents, that during the year 1903, six of the fatal accidents occurred on the stripings of the district, to men not actually engaged in the mining or preparing of coal, but in removing clay and rock from the top of coal seams, and employed by men who have the removing of this material contracted from the coal companies, and it is a question whether these accidents should be charged to the mining and preparation of coal, but at present we have no other place to charge them other than to the coal companies who have engaged these contractors to do the work for them. These accidents are charged up as follows:

Coxe Brothers & Co., Incorporated, .....	4
Lehigh Valley Coal Company, .....	1
A. Pardee & Co., .....	1

If these accidents could be charged against the removing of clay and rock there would be only forty-seven accidents to charge to the mining of coal.

#### Improvements During the Year

COXE BROTHERS AND CO., INC.

#### Drifton

New Boiler Plant.—The completion of a boiler plant of 4,500 H. P. capacity, Babcock & Wilcox boilers. This plant is a central one,

supplying steam for the operation of Drifton Nos. 1 and 2 collieries and other operations, such as Drifton shops, office heating, etc. The old boiler plant at Drifton No. 1 will be dismantled. The old boiler plant at Drifton No. 2 will be kept in proper repair as a matter of emergency.

Air Pipe Line.—The location of 5,500 feet air line, or from Drifton shops to their artesian well, for the purpose of hoisting water by air instead of steam.

New Water Supply.—The location of a new 100,000 gallon tank and 2,600 feet of six inch pipe line for the purpose of bettering fire service inside and outside of the mines.

Stripping Operations.—The stripping operations at the west end of the property have been continued during 1903. During this year 562,073 cubic yards were removed, making the total quantity removed up to January 1, 1904, 1,046,963 cubic yards. At this work seven steam shovels are employed and the material handled on seven independent planes. The mine track over which the coal is to be conveyed from the strippings has been extended to within 800 feet of the end of the stripping.

New Fan.—A large Clark fan, Guibal pattern, with 20 foot diameter plate 6 feet by 5 feet 6 inches, has been erected on the north crop of Drifton No. 2, Buck Mountain vein, about 6,700 feet west of the slope, which greatly improves the ventilation of the west end workings.

### Eckley

New Boilers.—At No. 11 slope, a boiler and hoisting house have been erected, equipped with two 100 H. P. Erie economic boilers, one pair double engines and drum, with one 50,000 gallon tank for water supply purposes. The location of one new 100 H. P. Erie economic boiler on Buck Mountain water line, which replaces two old locomotive boilers.

New Water Supply.—The location of 7,000 feet new water line from Porter House reservoir to the location of No. 11 slope (new).

Stripping Operations.—Stripping work has been continued in Eckley No. 1 back basin and Buck Mountain slope No. 2 Spoon end. At Eckley up to January 1, 1904, 512,445 cubic yards have been removed, of which 107,315 cubic yards were removed during 1903—one shovel being employed. Buck Mountain has removed 402,627 cubic yards, of which 58,237 cubic yards were removed during 1903.

New Slopes.—The water lying in Buck Mountain tunnel No. 2 works has been successfully tapped and lowered to the water level of the No. 2 tunnel. A slope, Buck Mountain No. 11, is being sunk to the old workings. Another slope, No. 12, is projected, which

will be sunk on the East Spoon end of old No. 6 slope workings, where again a large amount of coal is to be stripped.

### Beaver Meadow

New Dwelling Houses.—Erection of three two-family blocks and eight four-family blocks of houses for the use of their employes.

Air Compressor.—The location of an air compressor at No. 4 slope for the purpose of furnishing air for pumping and hoisting at No. 5 inside slope.

Stripping Operations.—Greenfield stripping has been continued, with two shovels employed, and 349,942 cubic yards have been removed up to January 1, 1904. Of this amount 149,000 cubic yards were removed during 1903. Hand stripping in the extension of No. 8 stripping was started in month of May, 1903, and up to January 1, 1904, 44,310 cubic yards were removed. The dams which were erected during the 1902 strike are still in, and prevent them at the present time from working the Temperance south crop strippings.

New Slope.—At Beaver Meadow slope No. 4, a slope was sunk inside to work the Wharton vein between the old No. 3 Wharton slope and the Coleraine property. Three levels will be driven to the west and two levels to the east of that slope.

Drainage Tunnel.—From the face of the Gamma gangway a second section of the drainage tunnel was started, which is calculated to be driven across to No. 2 slope, a distance of about 2,300 feet, and will tap the Wharton about 70 feet below the present working level. The second sections of drainage tunnel will be continued through a saddle into the old Temperance basin, and will develop the Wharton vein and the remaining Mammoth vein, which has not been worked below the old Temperance gangways.

### Stockton

No Improvements.—Has been abandoned, and only coal in the upper levels is worked and taken to Beaver Meadow for preparation.

### Tomhicken

No Improvements.—Coal is still taken to Derringer breaker for preparation.

### Derringer and Gowan

Additional Boilers at Derringer.—The addition of 500 H. P. Babcock & Wilcox boilers to their present boiler plant at Derringer breaker, giving it a capacity of 2,000 H. P.

**New Dwelling Houses.**—The erection of four four-family blocks of houses is in progress, increasing the accommodations to their employes to the extent of 16 families.

**Additional Boilers at Gowan.**—Reinforcement of Gowan No. 4 boiler plant by an addition of two Erie economic boilers, 100 H. P. each.

**Mine Fire.**—The fire which was discovered on October 22, 1902, in the second lift east end, Derringer, has been extinguished, but has been a source of expense right along, as it was considered necessary and a matter of precaution to load out the two breasts affected by the fire, as the only means to reduce the temperature, which continued excessively high after they had once stopped flushing.

**Air Motor.**—An air motor was put into service in the upper level to bring the coal from the east end, and it renders good service.

#### LEHIGH COAL AND NAVIGATION COMPANY

The old No. 5 breaker at Lansford was abandoned May 12, 1902. The coal that was formerly prepared at this breaker is taken over to No. 6, where two new breakers have been constructed—one for the preparation of White Ash coal and the other for the preparation of Red Ash coal.

At No. 6 colliery, in addition to the breakers above noted, there were added two batteries of boilers, increasing the capacity of this plant by 600 horse-power, making a total of 3,000 horse-power.

A pair of 42 inch by 60 inch hoisting engines have been erected at Water shaft and 2,500 gallon tanks are used for hoisting water.

#### G. B. MARKLE AND COMPANY

##### Jeddo No. 4

All revolving screens replaced by shaking screens. Four 300 H. P. Babcock & Wilcox boilers have been installed. Erie City boilers removed. Compound Jeanesville pump, size 17 and 28x12x48, has been placed in the Wharton tunnel to deliver water to the surface. Pump house 32x16x14 feet constructed for this pump, together with a shaft, column way and column pipe line to the surface. Addition made to the boiler house to accommodate Babcock & Wilcox boilers. New steam pipe lines constructed and covered. A 6½ inch bore hole was sunk on the south side near the present pumping station to supply additional fresh water.

##### Highland No. 5

All revolving screens replaced by shaker screens. Breaker engine converted into a double engine. The compressed air haulage system extended a distance of 4,700 feet. A compressed air loco-

motive of same size and style as those already in service added. Airway driven in the West Pink ash workings to the surface and a 16 foot Guibal fan installed. A tunnel has been driven from Buck Mountain vein to Buck Mountain vein through the overlap, West gangway A, Highland 5 slope A. Highland 5 slope A, West gangway A, connected to tunnel B for drainage. The following planes constructed: Plane F from East gangway A to East gangway C, slope A; plane G from West gangway A to Second lift pink ash; plane H from West gangway A to slope A, first level at west end.

#### Highland No. 2

Cylinder boilers removed and replaced by 14 100 H. P. Erie City boilers. Boiler house changed to accommodate new plant. Steam pipe lines constructed and covered. A Cameron-Goyne pump, size 20x10x36 inches has been placed on Highland No. 2 main bottom and independent column connected to surface. Sturtevant fan and engine added to boiler plant.

#### Highland No. 1

Old cylinder boiler plant has been abandoned and a new boiler plant consisting of 8 100 H. P. Erie City boilers installed. New boiler house erected. New steam pipe line constructed and covered.

Sturtevant fan and engine placed in boiler house. Coal trestling built for boiler house coal.

#### Ebervale

No. 4 slope opened up and mining begun.

#### Highland No. 6

A slope in the Keiper basin, Buck Mountain vein, which is known as Highland No. 6, has been sunk 94 yards in length and an 8x8 foot airway driven.

### LEHIGH VALLEY COAL COMPANY

#### Hazleton No. 1 Colliery

A flume 4 feet deep, 7 feet wide and 960 feet long was constructed across the No. 6 stripping for the purpose of taking care of the surface drainage, also to replace a flume which obstructed a large area of stripping, which will in time enable them to mine an equal area of coal.

A 20x30 foot three compartment office was erected for the convenience of the foremen and clerks.



### Hazleton Shaft Colliery

The Hazle Creek channel, which had been filled with culm, etc., was reopened and the sides sheet-piled, giving an average channel of 8 feet in depth and 16 feet wide for a distance of two and one-half miles. This channel was opened for the purpose of taking care of the surface drainage along the entire length of the property.

A conveyor line and settling tanks were constructed for the purpose of taking care of the ashes made at the boiler plant. The settling tanks are connected to the boiler plant by a line of terra cotta pipe and the ashes are conveyed through this pipe by water to the conveyor line, then elevated to a bank.

Four return tubular boilers of Vulcan Iron Works make, of 600 horse power, were added to the boiler plant, and boiler house extended 49 feet to shelter the same.

A 12x48 inch Thatcher pump was installed in pump room on second level and connected with the surface by 335 feet of 16 inch column pipe.

A stable with a capacity of twenty mules was made in the Buck Mountain vein, North tunnel, second level, 50 feet above the level of the gangway and connected with the return airway.

A skip was taken off the north side of pump room at bottom of No. 40 slope for the purpose of making room for the installation of more pumps. Two 10x26x36 inch Goynes pumps, together with 665 feet of 10 inch column line, were installed and put in operation.

### Spring Brook Colliery

A tunnel 360 feet long was driven from the Mammoth to the Wharton vein on the No. 1 slope level.

### ESTATE A. S. VAN WICKLE

#### Coleraine Colliery

Installed electric light plant complete and one 150 H. P. return tubular boiler.

Drove a tunnel 180 feet long, from the Buck Mountain to the Gamma vein. Made a pump house in rock at the bottom of the Buck Mountain slope and put in a 24x12x24 inch Cameron pump.

#### Evans Colliery

Installed one 100 H. P. return tubular boiler and a four foot blast fan to supply air for the boilers.

A rock shaft was put down 123 feet from the surface to the Buck Mountain vein to make a second opening for, and to ventilate the Buck Mountain slope.

## PARDEE BROTHERS AND COMPANY

## Lattimer

This company commenced the erection of a new wooden breaker in July, 1903, and completed same so as to be ready for operation in January, 1904. This breaker will have a capacity of from twelve to fifteen hundred tons per day.

A new boiler plant was also erected, having at the present time six Heine safety boilers installed, aggregating 1,560 H. P. This plant will do the work of two old cylinder boiler plants, one of which was located at No. 2 and the other at No. 3. A new steam pipe line, which was erected during the year, will distribute the steam to all parts of the colliery.

A new steel plate ventilating fan is being constructed, which, when completed, will have a capacity of two hundred and fifty thousand feet of air per minute, with a water gauge of three inches.

## CALVIN PARDEE AND COMPANY

## Harwood

This firm increased the capacity of their central plant by adding two 150 H. P. each horizontal return tubular boilers, which makes the total capacity at their central plant 1,800 horse power.

## UPPER LEHIGH COAL COMPANY

No. 2 Breaker.—Installed three anthracite coal spiral separators, one new set large steel rolls and two shakers.

No. 1 Stripping.—Installed one "Little Giant" steam shovel, one pair hoisting engines and vertical boiler.

No. 3 Stripping.—One 10x12 inch locomotive.

No. 1 Slope.—Installed 8x12x16 Jeanesville pump; drove rock tunnel (50) feet in length from Buck Mountain to underlying seam.

No. 2. Slope.—Installed 12x36x28 inch Jeanesville duplex pump; put in 10 inch exhaust line from pumps to surface; drove short tunnel from Buck Mountain to underlying seam.

No. 3 Slope.—Drove short tunnel from Buck Mountain to underlying seam.

No. 5 Slope.—One new ventilating fan and engine erected.

No. 6 Slope.—March 26 No. 6 engine and boiler house burned down and have since been replaced by new ones.

No. 10 Slope.—This slope was sunk on the (A) seam south of No. 2 basin; a tippie, hoisting engine, locomotive, boiler and ventilating fan installed, gangways have been started and second opening completed; 2,000 feet of water main laid to furnish water for boilers.

## CHAS. M. DODSON AND COMPANY

## Beaver Brook

Set up during the year two tubular boilers, and now have five more on hand, by which they expect to be able to do away with all the old style cylinder boilers, twenty-eight in number.

Drove a tunnel 150 feet long from the Buck Mountain to the Gamma vein. This vein has not been worked heretofore in this colliery and they are now turning gangways with the intention of working it extensively.

A new Jeanesville compound duplex pump, 38x23x14x48 inches, was placed in No. 11 slope.

## J. S. WENTZ AND COMPANY

## Hazel Brook Colliery

Built a new breaker of 800 tons capacity and abandoned old breaker that has been in operation since the colliery has been started.

Installed four 150 horse power return tubular boilers, built by the Vulcan Iron Works of Wilkes-Barre, Pa., to take the place of fifteen 36 inch by 36 feet cylinder boilers.

Sank a slope in the overlying measures, 3,000 feet east of breaker and installed a 13x14 hoisting engine at this slope.

## M. S. KEMMERER AND COMPANY

## Sandy Run

This company has commenced the driving of a drainage tunnel to drain the water from their lower levels, which have been under water since the strike of 1902.

## BLACK CREEK COAL COMPANY

## Harleigh

Drove a tunnel 60 feet long from the Mammoth to the Wharton. A slope was sunk at the foot of the breaker plane into the Wharton 150 feet long to the level of tunnel, this slope, and will be continued 150 feet farther to the basin of the Wharton. When this slope is finished they will hoist all their coal from the Mammoth and Wharton direct into the breaker.

A breaker was erected with a capacity of 500 tons per day, equipped with modern machinery, and same has been running for the past three months.

They have installed a pair of 76 H. P. hoisting engines; one 69

H. P. breaker engine; erected two 125 H. P. each return tubular boilers and are at present erecting another of 125 H. P.

### Rowe Colliery

Placed one 50 H. P. tubular boiler and one pair of 34 H. P. hoisting engines.

#### W. R. McTURK & COMPANY

The Star washery of W. R. McTurk and Company, located at Trescow, was destroyed by fire on May 1, 1903. The fire, as near as could be ascertained, originated in the boiler house, from some unknown cause.

### Fire at No. 6 Lansford

On August 26 it was suspected that a fire existed on the west side of No. 6 shaft, from the fact that for several days men working in the No. 6 water level tunnel found themselves becoming sick. It was thought, and rightly too, that the fire must be in one of the lower levels. It was decided to drive holes from side of water level gangway back to the top rock. Several holes were driven and water turned into them, but it was found that this came out cold from breast 3, 4 and 5, West Crack vein gangway, shaft level. Work was suspended in shaft and the air current reversed and they finally found the fire in the battery of No. 7 breast, lower West Mammoth, on September 24, having been unable up to that time to examine this breast on account of the large quantity of carbonic acid gas that was present. They worked at trying to load the coal in No. 7 breast, putting out strong fire in coal at the battery, and at times putting water in gob above No. 7 from water level, until October 8, by which time the fire had gone through into No. 8 and it was clearly shown that it was impossible to load out the burning coal in the gobs as fast as the fire spread. Pumping and hoisting of water was stopped. A dam was put across the Panther creek and a flume built to carry all the water of the Panther creek into the mine through the water level tunnel. A pump and column were also placed at north end of Lansford tunnel and water from Nesquehoning Valley pumped into Mammoth vein gangway, which was connected with the No. 6 workings. A dam East of Lansford tunnel, which is fifty-six feet lower vertically than No. 6 water level, was closed and a dam built in pillar between No. 6 and Nesquehoning, in a gangway thirty-five feet lower than No. 6 water level. The water raised to No. 6 water level on October 22, and on October 24 the valve was opened in Lansford tunnel and water lowered to that level to allow the resumption of work at No. 3, Nesquehoning, which

was stopped while the water was above the level of old gangway through the pillar. On November 12 they started to hoist water with the coal engines and on November 22, started with large pair of water engines, just installed. The water was all removed by December 9, and they resumed hoisting coal in No. 6 shaft on December 14. Holes have been driven and the region where the fire existed thoroughly explored. High temperature, from 105 to 120 degrees, is found in the old Mammoth gob but no sulphur or sign of fire, and the holes cool off very rapidly when opened. Indications are that the fire has been extinguished.

### Mine Foremen's Examinations

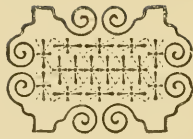
The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in the Green Street School Building, at Hazleton, on August 18 and 19, 1903. The Board of Examiners was composed of D. J. Roderick, Inspector; A. W. Drake, superintendent; George McGee, miner; James Harkins, miner. The following named persons, having passed a satisfactory examination, were recommended and received certificates:

#### Mine Foremen

George Kirschner, Lattimer Mines; Frank Ward, Drifton; Levi Mumie, Lattimer Mines; James Bonner, Freeland; David H. Williams, Lattimer Mines; William Purdy, Hazleton; Harry Polgrean, Hazleton; Alonzo Dodson, Hazleton; William Frey, Oneida; William Job, Sandy Run; David M. Emanuel, Nesquehoning.

#### Assistant Mine Foremen

John Yeager, Hazleton; John D. Davies, Audenried; Richard Morris, Coleraine; David H. Griffith, Lansford; John L. Richards, Summit Hill; David H. Davies, Lansford; Robert L. Sinyard, Summit Hill; Sylvester Weaver, Sandy Run; John J. Gallagher, Jeddo; William B. Cunning, Lansford; John Mitchell, Lansford; Lawrence Donelly, Nesquehoning; John E. Shinton, Lansford; John M. Gallagher, Freeland.



# Tenth Anthracite District

SCHUYLKILL COUNTY

---

Shenandoah, Pa., February 23, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of submitting to you my annual report as Inspector of Mines for the Tenth Anthracite District for the year ending December 31, 1903.

Respectfully submitted,

WILLIAM STEIN,  
Inspector.

## Tenth Anthracite District, 1903

## SUMMARY OF STATISTICS

Number of mines in district, .....	22
Number of mines in operation, .....	20
Number of tons of coal produced, .....	3,680,600
Number of tons shipped to market, .....	3,199,261
Number of tons sold at mines to local trade, .....	63,992
Number of tons consumed at mines in generating steam and heat, .....	417,347
Number of persons employed inside the mines, .....	5,052
Number of persons employed outside the mines, .....	3,818
Number of fatal accidents inside the mines, .....	13
Number of tons produced for each fatal accident inside, .....	283,123
Number of persons employed per fatal accident inside, .....	389
Number of fatal accidents outside, .....	7
Number of persons employed per fatal accident outside, .....	545
Number of wives made widows by fatal accidents, .....	7
Number of children orphaned by fatal accidents, .....	26
Number of non-fatal accidents inside the mines, .....	48
Number of persons employed per non-fatal accident in- side, .....	105
Number of non-fatal accidents outside, .....	12
Number of persons employed per non-fatal accident out- side, .....	318
Number of steam locomotives used inside, .....	2
Number of compressed air locomotives used inside, .....	3
Number of fans used for ventilation, .....	33
Number of gaseous mines in operation, .....	18
Number of non-gaseous mines in operation, .....	4
Number of old mines abandoned, .....	1



TABLE A.—Tenth Anthracite District, 1903

PRODUCTION OF COAL	
Names of Companies	Tons
Philadelphia and Reading Coal and Iron Company, . . . . .	2,093,042
Lehigh Valley Coal Company, . . . . .	682,627
Susquehanna Coal Company, . . . . .	199,393
Cambridge Coal Company, . . . . .	85,115
Thomas Coal Company, . . . . .	61,879
W. R. McTurk and Co., . . . . .	91,112
M. A. Gerber and S. A. Seaman, . . . . .	30,304
Lawrence Coal Company, . . . . .	5,691
North American Coal Company, . . . . .	175,573
Stoddart Coal Company, . . . . .	64,012
Brookwood Coal Company, . . . . .	191,852
Total, . . . . .	<u>3,680,600</u>
Production by Counties	
Schuykill, . . . . .	<u>3,680,600</u>

TABLE B.—Tenth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number of persons employed; number of persons employed per accident

Names of Companies	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,...	7	5	12	25	8	33	299,006	83,722	3,100	2,406	5,506	451	126	577	301
Lehigh Valley Coal Co., .....	4	2	6	17	2	19	170,637	40,134	1,157	589	1,746	289	68	294	294
Susquehanna Coal Co., .....	2	.....	2	2	.....	2	99,095	91,496	1,402	27	609	201	201	.....	.....
Cambridge Coal Co., .....	.....	.....	.....	1	.....	1	.....	85,115	85	56	141	.....	85	.....	.....
W. A. Gerhart and Co., .....	.....	.....	.....	1	1	2	.....	91,112	64	125	189	.....	94	.....	125
W. A. Gerhart and S. A. Seaman, .....	.....	.....	.....	2	.....	2	.....	15,132	54	55	109	.....	27	.....	85
North American Coal Co., .....	.....	.....	.....	1	.....	1	.....	.....	.....	85	85	.....	.....	.....	.....
Totals and averages for district, .....	13	7	20	48	12	60	283,123	76,679	5,052	2,818	8,870	889	105	545	318

TABLE C.—Tenth Anthracite District, 1903  
Classification of Fatal Accidents

	Inside of Mines										Outside of Mines						Grand total						
	By Falls of		By Falling Into				Total inside				Total outside												
	Coal	State	Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	Stops	Manways, breast, etc.	Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes	Total inside		By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside
January			1					1								4		1					1
February			1													1							1
March									1							1							1
April																1							1
May	1															1							1
June	1															1							1
July																1							1
August																1							1
September																1							1
October																1							1
November																1							1
December																1							1
Totals	2	1	2	1	2		1	2	1	1					1	13	3	3				2	20

TABLE D.—Tenth Anthracite District, 1903  
Classification of Non-Fatal Accidents

	By Falls of				Inside of Mines										Outside of Mines					Grand total				
	Coal	State	Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	Slopes	Manways, breasts, etc.	Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes	Total inside *	By cars	By machinery	By suffocation		By boiler explosions	Miscellaneous causes	Total outside	
January, .....	3			1												6		1					1	7
February, .....	1						1									3								3
March, .....	1			3												4								4
April, .....	1			1			1									3								3
May, .....	1			1			1									4								4
June, .....	1			1			1									4								4
July, .....	1			3			1									6								6
August, .....	1			1			1									4								4
September, .....	2			1			1									5								5
October, .....	1			1			1									4								4
November, .....	1			1			1									4								4
December, .....	1			1			1									4								4
Totals, .....	9	2		9	9		1	5							13	45	2	3			7	12	60	



TABLE F.—Tenth Anthracite District, 1903  
Occupations of Persons Injured Inside and Outside the Mines

	Inside										Outside								Grand total		
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks		All other employes	Total outside
January, .....				5	1								1								1
February, .....				2	1				1												1
March, .....				1	3																3
April, .....			1	1	1																1
May, .....				1	1																1
June, .....				1	1																1
July, .....				2	1											2					1
August, .....				2	1										1						1
September, .....				1	1																1
October, .....				4	1																1
November, .....				1	1																1
December, .....				1	1																1
Totals, .....			1	28	8	3				8	48		1	1	2				3	17	60

TABLE G.—Tenth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	Welsh	German	Polish	Hungarian	Lithuanian	Austrian	Assyrian	Totals
January, .....	1			3					4
February, .....	1					1			2
March, .....			1						1
April, .....									1
May, .....						1			1
June, .....		1		1		1			3
July, .....	1		1						2
August, .....				1					1
September, .....	1			1				1	3
October, .....							1		1
November, .....	1				1				2
December, .....									
Totals, .....	5	1	2	6	1	3	1	1	20

TABLE H.—Tenth Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Irish	German	Polish	Hungarian	Italian	Lithuanian	Russian	Greek	Tyrolian	Totals
January, .....	1				2		1	2		1		7
February, .....												
March, .....			1					1	1			3
April, .....	1						1					2
May, .....	4		1					1	1			7
June, .....	1	1			3							5
July, .....	2							3				5
August, .....	2		1		1			1				5
September, .....	2		1		2							5
October, .....	1							2				3
November, .....	2			1			1	1			1	6
December, .....	1		1		1	1		1				6
Totals, .....	17	1	5	1	11	1	3	17	2	1	1	60

TABLE I.—Tenth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

Names of Operators and Mines	Kind of openings	Gaseous or non-Gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
Philadelphia and Reading Coal and Iron Co.																
Indian Ridge	Shaft	Gaseous	Fan	18	6	4½	55	1.5	Guibal	Steam	10	77,600	68,900	87,600	121	569
Indian Ridge	Shaft	Gaseous	Fan	18	6	4½	60	1.1	Guibal	Steam	8	90,748	88,317	95,352	214	412
Shenandoah City	Shaft	Gaseous	Fan	18	6	4½	135	1.3	C. & J. Co.	Conn. air	1	137,410	8,855	159,020	303	273
West Shenandoah	Slope	Gaseous	Fan	18	6	4½	90	1	Guibal	Steam	9	84,745	49,021	94,745	213	230
Turkey Run	Slope	Gaseous	Fan	12	4	4	70	1	Guibal	Steam	7	134,170	133,655	139,543	290	460
Turkey Run	Shaft	Gaseous	Fan	12	4	3-8	70	1	Guibal	Steam	6	64,980	42,600	64,980	183	342
K. hinoor	Slope	Gaseous	Fan	18	6	4½	80	1.3	Guibal	Steam	6	60,600	61,250	64,985	153	409
Hamm'nd	Slope	Gaseous	Fan	12	4	4	70	.5	Guibal	Steam	11	60,600	61,250	64,985	153	409
Hamm'nd	Slope	Gaseous	Fan	12	4	4	80	.5	Guibal	Steam	11	60,600	61,250	64,985	153	409
Hamm'nd	Slope	Gaseous	Fan	12	4	4	80	.5	Guibal	Steam	11	60,600	61,250	64,985	153	409
Hamon No. 3*	Slope	Gaseous	Fan	20	5	5	70	1	Guibal	Steam	6	75,495	72,941	68,650	168	434
Bast	Slope	Gaseous	Fan	21	7	5	61	1.4	Guibal	Steam	6	69,730	58,960	62,000	127	463
Bast	Slope	Gaseous	Fan	21	7	5	61	1.4	Guibal	Steam	6	69,730	58,960	62,000	127	463
Bear Ridge	Slope	Gaseous	Fan	18	6	4½	80	1.8	Guibal	Steam	9	72,900	53,814	73,000	175	307
Gilberton	Slope	Gaseous	Fan	18	6	4½	75	1.8	Guibal	Steam	9	72,900	53,814	73,000	175	307
Draper	Slope	Gaseous	Fan	18	6	4½	70	1.4	Guibal	Steam	10	55,960	55,960	58,260	172	325
Draper	Slope	Gaseous	Fan	12	4	4	70	1.4	Guibal	Steam	10	55,960	55,960	58,260	172	325
Draper	Slope	Gaseous	Fan	12	4	4	70	.5	Guibal	Steam	10	55,960	55,960	58,260	172	325
Grand Mammoth	Slope	Gaseous	Fan	12	4	4	70	.5	Guibal	Steam	10	55,960	55,960	58,260	172	325
Lehigh Valley Coal Co.																
Packet No. 2	Slope	Gaseous	Fan	12	4	4	80	.5	Guibal	Steam	6	86,600	88,600	94,000	86	1,023
Packet No. 3	Slope	Gaseous	Fan	12	4	4	80	.5	Guibal	Steam	9	97,600	88,600	97,000	104	851

\*Permanently abandoned





TABLE 1.—Tenth Anthracite District, 1903  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Indian Ridge	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Shenandoah City	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
West Shenandoah	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Thomas Run	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Kohlsaar	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Hammond	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Preston No. 3	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
East	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Bear Ridge	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Gibberton	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Draper	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Girard Mammoth	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Plank Ridge washery	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Girard Mammoth washery	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Lehigh Valley Coal Co.	Schuylkill	S. D. Warriner	Wilkes-Barre	J. M. Humphreys	Centralla	Lehigh Valley
Packer No. 2	Schuylkill	S. D. Warriner	Wilkes-Barre	J. M. Humphreys	Centralla	Lehigh Valley
Packer No. 3	Schuylkill	S. D. Warriner	Wilkes-Barre	J. M. Humphreys	Centralla	Lehigh Valley
Packer No. 4	Schuylkill	S. D. Warriner	Wilkes-Barre	J. M. Humphreys	Centralla	Lehigh Valley
Packer No. 5	Schuylkill	S. D. Warriner	Wilkes-Barre	J. M. Humphreys	Centralla	Lehigh Valley
Susquehanna Coal Co.	Schuylkill	Robert A. Quin	Wilkes-Barre	William Auman	Shaft	Pennsylvania
William Penn	Schuylkill	Robert A. Quin	Wilkes-Barre	William Auman	Shaft	Pennsylvania
Cambridge Coal Co.	Schuylkill	David R. James	Shenandoah	David R. James	Shenandoah	Philadelphia and Reading
Cambridge	Schuylkill	David R. James	Shenandoah	David R. James	Shenandoah	Philadelphia and Reading
Thomas Coal Co.	Schuylkill	Thomas Baird	Shenandoah	Thomas Baird	Shenandoah	Philadelphia and Reading
Kehley's Run	Schuylkill	Thomas Baird	Shenandoah	Thomas Baird	Shenandoah	Philadelphia and Reading
W. R. McTurk and Co.	Schuylkill	W. R. McTurk	220 Walnut street, Philadelphia	W. J. Heiser	Girardville	Philadelphia and Reading
Girard	Schuylkill	W. R. McTurk	220 Walnut street, Philadelphia	W. J. Heiser	Girardville	Philadelphia and Reading
M. A. Gerber and S. A. Seaman Furnace	Schuylkill	M. A. Gerber	Tamaqua	M. A. Gerber	Tamaqua	Philadelphia and Reading
Lawrence Coal Co.	Schuylkill	W. S. Shearer	Pottsville	Wm. J. Miller	Frackville	Philadelphia and Reading

North American Coal Co. No. 1 Schuylkill washery, .....	Schuylkill, .....	H. W. Saums, ....	Wilkes-Barre, ....	.....	.....	Philadelphia and Reading
Stoddart Coal Co. Stoddart washery, .....	Schuylkill, .....	.....	.....	D. H. McGee, ....	Minersville, .....	Philadelphia and Reading
Brookwood Coal Co. Stanton colliery, .....	Schuylkill, .....	Henry Meyers, ...	Minersville, .....	Henry Meyers, ...	Minersville, .....	Philadelphia and Reading
Brookwood washery, .....	Schuylkill, .....	Henry Meyers, ..	Minersville, .....	Henry Meyers, ...	Minersville, .....	Philadelphia and Reading
Raven Run washery, .....	Schuylkill, .....	Henry Meyers, ..	Minersville, .....	Henry Meyers, ...	Minersville, .....	Philadelphia and Reading

TABLE 2.—Tenth Anthracite District, 1903  
 Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Name of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number and used by employes sold to local	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.	Schuylkill, . . . . .	195,701	21,523	13,876	231,260	261	656	2	4	6,351	8,299	74
Indian Ridge, . . . . .	Schuylkill, . . . . .	236,222	38,749	16,681	291,503	739	739	2	6	7,115	10,767	61
Shenandoah City, . . . . .	Schuylkill, . . . . .	513,425	60,107	29	573,561	274	727	2	3	7,048	11,256	60
West Shenandoah, . . . . .	Schuylkill, . . . . .	†	†	†	†	†	†	†	†	3,370	11,233	43
Turkey Run, . . . . .	Schuylkill, . . . . .	†	†	†	†	†	251	1	1	915	959	25
Kohinor, . . . . .	Schuylkill, . . . . .	113,812	24,243	1,588	138,143	178	371	10	10	1,740	16,889	62
Hammond, . . . . .	Schuylkill, . . . . .	181,444	36,326	3,172	223,942	272	379	3	1	230	56,382	71
Breston No. 3, . . . . .	Schuylkill, . . . . .	225,724	16,073	3,007	244,804	306	306	1	1	1,062	11,131	57
East Ridge, . . . . .	Schuylkill, . . . . .	228,588	13,953	1,907	244,448	306	306	1	1	8,091	42,018	59
Shenandoah, . . . . .	Schuylkill, . . . . .	163,697	14,684	9	178,390	217	458	2	2	33	42,924	30
Draper, . . . . .	Schuylkill, . . . . .	177	14,684	58	113,919	7	83	1	1	33	33	30
Girard Mammoth, . . . . .	Schuylkill, . . . . .	1,716,287	239,961	40,343	2,056,554	218	5,479	11	33	31,705	217,873	567
Plank Ridge washery, . . . . .	Schuylkill, . . . . .	36,698	†	†	36,698	195	57	†	†	†	†	†
Girard Mammoth washery, . . . . .	Schuylkill, . . . . .	29,849	†	†	29,849	143	30	†	†	†	†	†
Totals, . . . . .		66,448	66,448	40,343	2,692,612	†	87	†	†	†	†	†
		1,782,735	219,961	40,343	2,062,612	†	5,565	11	31	31,705	217,873	567

† This is not an average.

† Production included in West Shenandoah



TABLE 2—Recapitulation

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Not including washeries)	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co., . . .	Schuylkill	1,782,735	269,964	40,343	2,093,042	218	5,566	11	32	31,705	217,873	567
Lehigh Valley Coal Co., . . .	Schuylkill	608,093	73,495	1,093	682,677	256	1,746	6	18	8,514	49,329	186
Susquehanna Coal Co., . . .	Schuylkill	161,354	36,596	1,243	199,393	205	609	2	3	6,355	15,640	60
Cambridge Coal Co., . . .	Schuylkill	51,384	2,420	1,311	55,115	262	141	2	1	1,611	6,670	10
Thomas Coal Co., . . .	Schuylkill	54,785	7,294	1,335	61,879	198	141	1	1	55	600	14
W. R. McTurk and Co., . . .	Schuylkill	75,421	1,673	14,010	91,112	216	189	1	2	165	5,800	20
M. A. Gerber and S. A. Seaman, . . .	Schuylkill	26,357	3,947	30,304	30,304	173	119	2	2	550	6,100	8
Lawrence Coal Co., . . .	Schuylkill	5,180	330	181	5,691	111	21	1	1	5	2,300	2
North American Coal Co., . . .	Schuylkill	166,410	8,842	191	175,573	85	52	1	1	120	3,900	16
Stoddart Coal Co., . . .	Schuylkill	58,472	5,500	61,012	61,012	280	214	2	2	120	3,900	16
Brookwood Coal Co., . . .	Schuylkill	179,112	7,126	5,614	191,852	280	214	2	2	120	3,900	16
Totals, . . .		3,199,261	417,347	63,932	3,680,600	213	8,870	20	60	48,360	311,152	836







Brookwood Coal Co.	3	375	375	1	13	516								
Stanton Colliery	2	250	250		11	352								
Brookwood washery	2	250	250		9	368								
Leavenworth washery	4	500	500		20	720								
Totals	7	875	875	1	33	1,236								
Grand totals	14	1,361	294	25,265	29,626	18	3	334	47,773	47	44,327	34,385	1	10

TABLE 2 - Recapitulation

Philadelphia and Reading Coal and Iron Co.	54	2,000	115	11,850	16,689	8	3	144	29,182	31	34,180	27,950	9	
Lehigh Valley Coal Co.	35	1,066	42	4,690	5,956	8		83	22,433	9	7,467	5,415	1	
Schenck Coal Co.	2	50	10	1,550	1,250	1		14	1,450	1	1,500	89	1	
Thomas Coal Co.	24	1,200	4	600	1,800	0		5	570	2	250	250		
W. R. McTeark and Co.	6	680	6	680	680	0		14	640					
M. A. Gerber and S. A. Saman	1	15	4	220	335	0		8	126	1	250	200		
Lawrence Coal Co.	2	300	2	300	300	0		2	160					
North American Coal Co.	7	1,000	7	1,000	1,000	0		11	475					
Stoddart Coal Co.	3	460	3	460	460	0		9	200					
Brookwood Coal Co.	7	875	7	875	875	1		33	1,236					
Totals	134	4,361	24	25,265	29,626	18	3	334	47,773	47	44,327	34,385	1	10





TABLE 3—Recapitulation

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside							Grand total, inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Book-keepers and clerks	All other employes	Total outside
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	13	6	48	730	981	209	68	13	330	762	3,160	4	12	65	234	550	231	26	1,224	2,406	5,566
Lehigh Valley Coal Co.,	Schuylkill,	4	2	15	346	234	88	16	21	48	383	1,157	...	4	53	75	50	18	10	373	539	1,646
Susquehanna Coal Co.,	Schuylkill,	1	1	4	154	81	17	2	...	17	125	402	1	1	26	30	40	15	6	86	257	661
Cambridge Coal Co.,	Schuylkill,	1	2	...	34	37	5	1	...	5	...	35	1	1	3	8	46	3	1	23	56	131
Thomas Coal Co.,	Schuylkill,	1	1	1	14	...	...	...	3	24	...	44	1	1	4	12	42	...	1	63	94	138
W. R. McTurk and Co.,	Schuylkill,	1	1	1	23	14	6	1	...	2	16	64	1	1	1	1	4	...	1	63	125	189
M. A. Gerber and S. A. Seaman,	Schuylkill,	1	1	1	18	10	5	...	1	8	3	34	1	1	1	1	24	...	1	21	45	109
Lawrence Coal Co.,	Schuylkill,	1	...	...	7	3	...	...	...	...	...	12	1	1	1	1	2	...	...	...	...	21
North American Coal Co.,	Schuylkill,	1	...	...	...	...	...	...	...	...	...	...	1	1	1	1	2	...	...	...	...	85
Stoddart Coal Co.,	Schuylkill,	1	...	...	...	...	...	...	...	...	...	...	1	1	1	1	2	...	...	...	...	52
Brookwood Coal Co.,	Schuylkill,	1	...	...	14	25	3	2	...	24	5	74	2	2	7	19	22	...	3	82	140	214
Totals,	.....	24	13	70	1,340	1,355	333	91	38	458	1,300	5,052	12	27	175	412	798	335	51	2,008	3,818	8,870

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Philadelphia and Reading Coal and Iron Co.	Schuykill,.....	24.8	22.5	25	17.1	23.4	25.5	25.2	17.4	23.8	20.1	17.6	18.2	261
Indian Ridge Co.	Schuykill,.....	25	23.8	25.6	19.6	24	23.6	25	23	20.6	18.8	18	18.7	259
Shenandoah	Schuykill,.....	21.5	23.3	25	17.4	24	25.3	25.5	24.9	21	23	17.9	19	274
West Shenandoah	Schuykill,.....													
Turkey Run	Schuykill,.....													
Kohinoor	Schuykill,.....													
Hammond	Schuykill,.....				3.1	18.6	21.7	26	24.2	23.9	23	18	19	178
Bast	Schuykill,.....	26	22.2	24	19.3	21	25	26	23.9	23	23	17.6	18.2	272
Bear Ridge	Schuykill,.....	19.5	17.8	18.7	16	18.7	21.2	20.2	19.5	18.7	17.9	14	14.8	216
Gilberton	Schuykill,.....	19.7	19.8	23.4	19.3	24	25	25	24	23	18	19	19	268
Draper	Schuykill,.....	19.5	15	19.5	19.3	18.7	20	20.2	19.5	18.7	17.9	14	14.8	217
Girard Mammoth	Schuykill,.....													7
Averages		22.9	20.6	23	16	21.9	23.5	24.4	22.4	22.1	20.8	16.9	16.5	218
Lehigh Valley Coal Co.	Schuykill,.....													
Packer No. 1	Schuykill,.....	24.7	21.5	24.4	22.4	20.7	23.7	23.7	22.6	20.7	17.4	16	18.4	256
Packer No. 2	Schuykill,.....													
Packer No. 3	Schuykill,.....													
Packer No. 4	Schuykill,.....													
Packer No. 5	Schuykill,.....													
Susquehanna Coal Co.	Schuykill,.....	15.4	15.2	16.4	18.1	17.1	20.2	19.9	18.7	16.3	14	16.8	17.1	205
William Penn	Schuykill,.....													
Cambridge Coal Co.	Schuykill,.....	25.4	23	23.3	16.9	23.9	23.7	24.8	21.4	22.9	21.3	16.5	19	262
Thomas Coal Co.	Schuykill,.....													
Kehley's Run	Schuykill,.....			8	7.2	21.3	24.7	25.2	24	25	18.6	21	22.6	198
Girard	Schuykill,.....	18	17.4	3.5	21.2	23.8	19.7	17.9	19.2	21.8	18.1	16.5	18.7	216

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
M. A. Gerber and S. A. Seaman Furnace, .....	Schuylkill,.....			6.7	22.1	21	20	16	18.7	16.7	17.1	17.8	16.8	17.3
Lawrence Coal Co. Lawrence, .....	Schuylkill,.....		10	12	12	14.2	8	9	7	7.2	9.3	9.2	12.7	111
Brookwood Coal Co. Stanton colliery, .....	Schuylkill,.....	21	22	24	25	25	26	23	25	25	22.5	19	22	280
Averages, .....		21.2	18.5	15.7	17.9	21	21.1	20.4	19.9	19.7	17.7	16.6	18.2	213

TABLE 3—Recapitulation.

Philadelphia and Reading Coal and Iron Co., ..	Schuylkill,.....	22.9	20.6	23	16	21.9	23.5	24.4	22.4	22.1	20.8	16.9	16.5	218
Lehigh Valley Coal Co., .....	Schuylkill,.....	24.7	21.5	24.4	22.4	20.7	23.7	21.7	22.6	20.7	17.4	16	18.4	256
Luzerne County Coal Co., .....	Schuylkill,.....	15.4	15.2	16.4	18.1	17.1	20.2	19.9	18.7	16.3	14	16.8	17.1	205
Camden Coal Co., .....	Schuylkill,.....	25.4	23	23.3	16.9	23.9	23.7	24.8	21.4	22.9	21.3	16.5	19	262
Thames Coal Co., .....	Schuylkill,.....			8	7.3	21.3	24.7	25.2	24	25	18.6	21	22.6	188
W. F. McCunk and Co., .....	Schuylkill,.....	18	17.4	3.5	21.2	23.8	19.7	17.9	19.2	16.8	18.1	16.5	18.7	246
M. A. Gerber and S. A. Seaman, .....	Schuylkill,.....			6.7	22.1	21	20	16	18.7	16.7	17.1	17.8	16.8	173
Lawrence Coal Co., .....	Schuylkill,.....	21	22	24	25	25	26	23	25	25	22.5	19	22	280
Brookwood Coal Co., .....	Schuylkill,.....													
Averages, .....		21.2	18.5	15.7	17.9	21	21.1	20.4	19.9	19.7	17.7	16.6	18.2	213



TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
18	Fred. Hart, .....	Assyrian, ..	Laborer, ..	50	M.	1	.....	Packer No. 4, .....	Schuylkill,	Fatally injured; squeezed between cars.
24	Luke Garpey, .....	American, ..	Laborer, ..	20	S.	.....	.....	East, .....	Schuylkill,	Died on the 20th. Smothered. Was engaged filling up a breach-hole, when the loose material struck and killed him down.
Oct. 17	Frank Clouser, .....	Austrian,....	Rock miner,....	45	S.	.....	.....	East, .....	Schuylkill,	Fatally injured on the 23d. While riding into his work he leaned over top rail of car and was caught between chute and car.
Nov. 11	Frank Fisher, .....	American, ..	Spragger, ..	19	S.	.....	.....	William Penn. ....	Schuylkill,	Killed; fell down shaft. While in the act of caging a car, he neglected to sprag the rear car, which followed him, pushing him down the shaft.
16	Vastil Roberto, .....	Hungarian, .	T i m b e r loader.	25	S.	.....	.....	West Shenandoah, ...	Schuylkill,	Fatally injured. Died on the 24th. A car of cumin was being hoisted up plane, when the hook broke, car descended to foot of plane, striking Roberto. He was not engaged at the place where he lost his life, but inadvertently went there.



TABLE 5.—Tenth Anthracite District, 1903  
Non-Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan.	7 Simon Wagner, .....	American, .....	Miner, .....	37 M.	M.	Packer No. 2, .....	Schuylkill,	Leg broken; fell off truck coming up slope.
	8 Joseph Zuboy, .....	Lithuanian, .....	Miner, .....	22 M.	M.	Drapet, .....	Schuylkill,	Leg broken by fall of coal.
	9 Sunday Nebo, .....	Polish, .....	Carpenter, .....	38 M.	M.	Packer No. 4, .....	Schuylkill,	Finger cut off by circular saw.
	14 Lemuir Bosavage, ....	Polish, .....	Miner, .....	37 M.	M.	Packer No. 4, .....	Schuylkill,	Hands and face burned by an explosion of gas.
March	19 John Krillacofside, ....	Greek, .....	Miner, .....	40 M.	M.	Turkey Run, .....	Schuylkill,	Both legs broken by a fall of coal.
	23 Frank Meiscavage, .....	Polish, .....	Laborer, .....	23 M.	M.	West Shenandoah, .....	Schuylkill,	Spine injured; fell off breast platform.
	24 William Fogel, .....	Lithuanian, .....	Miner, .....	32 M.	M.	William Penn, .....	Schuylkill,	Compound fracture of leg; fall of coal.
	3 John Mardnskie, .....	Lithuanian, .....	Miner, .....	30 M.	M.	Shenandoah City, .....	Schuylkill,	Face and body injured by a blast.
April	4 John Fahy, .....	Irish, .....	Timberman, .....	45 S.	S.	Packer No. 2, .....	Schuylkill,	Leg broken; piece of coal rolled against it.
	31 Andy Orfshaney, .....	Russian, .....	Miner, .....	31 M.	M.	Packer No. 5, .....	Schuylkill,	Leg broken by fall of coal.
	10 Isaac Pifer, .....	Lithuanian, .....	Miner, .....	27 S.	S.	Shenandoah City, .....	Schuylkill,	Face and hands burned by an explosion of gas.
	10 Bob Mulychitus, .....	Lithuanian, ....	Laborer, .....	26 M.	M.	Shenandoah City, .....	Schuylkill,	Face and hands burned by an explosion of gas.
May	7 Peter Madalls, .....	Russian, .....	Laborer, .....	42 M.	M.	Packer No. 3, .....	Schuylkill,	Leg broken; piece of rock rolled down culm bank on him.
	15 Thomas McGuire, .....	Irish, .....	Oiler, .....	16 S.	S.	Hammond, .....	Schuylkill,	Arm broken; sprag flew out of car wheel, striking him.
May	16 Pat. McGee, .....	American, ....	Laborer, .....	41 S.	S.	Gilberton, .....	Schuylkill,	Leg broken; kicked by a mule.
	27 Domenick Razaavage, ....	Lithuanian, ....	Laborer, .....	29 S.	S.	Packer No. 3, .....	Schuylkill,	Fracture of pelvis and ribs, caught between mule and car.
	29 Henry Gotshall, .....	American, ....	Fire boss, ....	32 M.	M.	Gilberton, .....	Schuylkill,	Arm broken; fell from chute to gangway.
	29 Low Howels, .....	American, ....	Miner, .....	34 M.	M.	Gilberton, .....	Schuylkill,	Face and hands slightly burned by an explosion of gas.
29 Thomas Evans, .....	American, ....	Miner, .....	36 M.	M.	Gilberton, .....	Schuylkill,	Face and hands slightly burned by an explosion of gas.	

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
June	2 James Taylor, .....	American, .....	Repairman, ..	30	M.	Hammond, .....	Schuylkill,	Collar bone broken; gangway door fell on him.
	13 Adam Woodske, .....	Polish, .....	Laborer, .....	35	S.	Packer No. 5, .....	Schuylkill,	Arm broken by fall of clay at strippings.
	16 Edward Williams, .....	English, .....	Disc. suppl., ..	51	M.	Packer No. 4, .....	Schuylkill,	Rib and small bone of foot broken; struck by a car.
	22 Adam Vitlip, .....	Polish, .....	Miner, .....	29	M.	Packer No. 5, .....	Schuylkill,	Leg and ribs broken by coal from a blast.
	23 Anthony Carpowskie, .....	Polish, .....	Miner, .....	30	M.	Packer No. 3, .....	Schuylkill,	Slightly burned on hands and face by an explosion of gas.
July	6 Jacob Mitchell, .....	Lithuanian, ...	Miner, .....	38	M.	Indian Ridge, .....	Schuylkill,	Body severely squeezed between leg and coal.
	6 Joseph Rakus, .....	Polish, .....	Laborer, .....	19	S.	Packer No. 4, .....	Schuylkill,	Arm broken; caught between car and stone wall.
	15 Joseph Hinks, .....	American, .....	Message boy, ..	14	....	West Shenandoah, .....	Schuylkill,	Foot badly smashed trying to get on dirt dumper.
	15 William Maronskie, ....	Polish, .....	Platform man, ..	32	S.	West Shenandoah, .....	Schuylkill,	Body injured by a rush of coal in dump chute.
	16 Martin Zelinskie, .....	Lithuanian, ...	Miner, .....	38	M.	Shenandoah City, .....	Schuylkill,	Hands and face burned slightly by an explosion of gas.
	16 Anthony Dogillas, .....	Lithuanian, ...	Miner, .....	27	S.	Shenandoah City, .....	Schuylkill,	Hands and face burned slightly by an explosion of gas.
	18 Anthony Maloney, .....	American, .....	Driver, .....	22	S.	Hammond, .....	Schuylkill,	Body bruised; caught between moving cars.
Aug.	3 James Gaughan, .....	Irish, .....	Starter, .....	29	M.	Packer No. 5, .....	Schuylkill,	Arm blown off by explosion of dynamite.
	8 William Demery, .....	American, .....	Slate picker, ..	16	....	Hammond, .....	Schuylkill,	Arm broken; starting breaker chute, material rushed on him.
	11 Patrick Gbbons, .....	American, .....	Miner, .....	51	M.	Indian Ridge, .....	Schuylkill,	Collar bone broken; fell off car.
	21 Michael Schitzer, .....	Polish, .....	Slate picker, ..	16	....	Indian Ridge, .....	Schuylkill,	Arm taken off; caught in breaker belt; was romping about.
Sept.	31 Andy Andies, .....	Lithuanian, ...	Miner, .....	25	S.	Packer No. 5, .....	Schuylkill,	Head and hip injured by fall of coal.
	9 Dace Horemis, .....	Polish, .....	Laborer, .....	35	S.	Packer No. 2, .....	Schuylkill,	Leg broken; piece of coal rolled on him.
	9 John Rice, .....	Lithuanian, ...	Miner, .....	31	M.	Furnace, .....	Schuylkill,	Leg broken by fall of coal.
	12 William McKeon, .....	American, .....	Starter, .....	31	S.	Hammond, .....	Schuylkill,	Three fingers blown off by a dynamite blast.
	12 John Myusky, .....	Lithuanian, ...	Miner, .....	36	M.	Furnace, .....	Schuylkill,	Leg severely bruised by fall of coal.

16	Alexander Ruff, .....	Polish, .....	Engineer, .....	18	S.	Schuykill No. 1 wash- ery.	Schuykill.	Bruised about legs and feet; caught in machinery.
26	John Burke, .....	Irish, .....	Miner, .....	33	S.	Hammond, .....	Schuykill.	Leg broken; pipe slipped down on him in pumpway.
26	Thomas Moran, .....	American, .....	Laborer, .....	21	S.	Hammond, .....	Schuykill.	Leg amputated; pipe slipped down on him in pumpway.
5	Pat. Holden, .....	American, .....	Driver, .....	17	S.	Gilberton, .....	Schuykill.	Leg amputated; car ran over his leg.
8	Joseph Kankus, .....	Lithuanian, .....	Miner, .....	52	M.	Packer No. 3, .....	Schuykill.	Head, neck and back lacerated by coal from a blast.
16	Charles Hosselskide, .....	Lithuanian, .....	Miner, .....	33	M.	Packer No. 5, .....	Schuykill.	Head and arms cut and leg bruised by fall of coal.
10	William Delchanty, .....	American, .....	Loader, .....	19	S.	Packer No. 5, .....	Schuykill.	Pelvis bone broken; caught between "buggy" and rib.
10	John Link, .....	German, .....	Miner, .....	28	M.	Packer No. 5, .....	Schuykill.	Leg fractured; collar fell on him.
20	Joseph Beaul, .....	Tyrolian, .....	Miner, .....	25	S.	Indian Ridge, .....	Schuykill.	Arm broken; stuck his arm outside of cage while descending shaft.
20	William Czewinskie, .....	Lithuanian, .....	Miner, .....	50	M.	William Penn, .....	Schuykill.	Arm broken; struck by a bar while starting battery.
27	Michael Gabriel, .....	Italian, .....	Driver, .....	20	S.	Girard, .....	Schuykill.	Ribs broken and body bruised; squeezed between car and side of mine.
28	James Dowers, .....	American, .....	Miner, .....	24	M.	Cambridge, .....	Schuykill.	Severely lacerated back; fall of top slate.
12	James Ryan, .....	Irish, .....	Loader, .....	26	M.	Hammond, .....	Schuykill.	Knee cap broken; fell from platform to gangway.
22	Samuel Kale, .....	American, .....	Spragger, .....	18	S.	Turkey Run, .....	Schuykill.	Arm and leg broken; caught between car and gangway collar.
23	William Allabodd, .....	Polish, .....	Miner, .....	38	M.	Gilberton, .....	Schuykill.	Several bones of foot broken. A piece of slate fell on him.
29	Washington Keysock, .....	Hungarian, .....	Ash-man, .....	41	M.	Bear Ridge, .....	Schuykill.	Several ribs broken; mule ran away and knocked him down.
30	Alexander Litkowski, .....	Lithuanian, .....	Miner, .....	46	M.	William Penn, .....	Schuykill.	Fracture of hip joint; struck by coal from a blast.

### Fatal Accidents by Falls of Coal, Slate and Roof

January 29. John Fogel, killed at William Penn Colliery by a fall of top rock at face of breast. Carelessness of victim not timbering.

February 17. Simon Galonis, killed at Packer No. 3 Colliery by a fall of top slate. Unforeseen accident.

May 13. Anthony Mushlofski, killed at Turkey Run Colliery by a fall of coal. Unforeseen accident.

June 2. John Crauge, fatally injured at West Shenandoah Colliery by a fall of slate. Died on the 5th. Carelessness of victim.

June 24. Stiney Stoko, killed at Shenandoah City Colliery by a fall of coal. Carelessness of the miner not timbering his place of working.

### By Explosion of Gas

January 14. John Silinski, killed by an explosion of gas at Packer No. 4 Colliery. Used a naked lamp to explode an old breast.

January 14. Peter Youst, fatally burned by an explosion of gas at Packer No. 4 Colliery; died on the 17th. Was working with Silinski.

### By Mine Cars

October 17. Frank Clouser, fatally injured at Bast Colliery; died on the 23rd. Was riding in a car and leaned over the side, and was squeezed by timber.

### By Falling Down Shafts

January 14. Michael Flaherty, killed by falling down Indian Ridge No. 2 Shaft. Was lowering timber after quitting time, and in some way stepped into the shaft.

November 11. Frank Fisher, killed by falling down William Penn No. 2 Shaft. Was caging a car and forgot to sprag the car behind him, which ran down pushing him down the shaft.

### By Falling Down Slope

March 4. Frank Meyers, killed by falling down the Bast Slope. He stepped off car to repair a pulley, and overbalanced himself.

### By Blasts

September 18. Michael Krick, fatally injured at Packer No. 2 Colliery. Died on the 19th. Struck by coal flying from a blast. Did not retreat to a place of safety.

## Miscellaneous

July 3. William Koch, killed by being squeezed between cage and shaft timber. He attempted to get on cage after signal was given engineer to hoist.

## Outside—By Mine Cars

July 24. Martin Dolan, fatally injured at West Shenandoah Colliery. Died on the 25th. Run over by mine cars. Carelessness on the part of victim.

September 18. Fred Hart, fatally injured at Packer No. 4 Colliery. Died on the 20th. Squeezed between two cars.

November 16. Vastil Roberto, fatally injured at West Shenandoah Colliery. Died on the 24th. Struck by car breaking loose on plane.

## By Breaker Machinery

August 4. Andy Shumansky, killed at Indian Ridge Colliery by being caught in elevator. Climbed over the fence.

February 20. Thomas Love, killed at Girard Colliery. Was caught by a revolving shaft; was 105 feet away from his place of work.

## Miscellaneous

June 13. William Actsus, fatally injured at Packer No. 5 strip-pings. Died on the 20th. Struck by clay rolling down stripping bank.

September 24. Luke Garpey, smothered in mine breach of Bast Colliery. He was filling up this crop fall. He got on the loose material when suddenly a subsidence took place taking him down. Body recovered 20 hours afterward.

## Condition of Collieries

There are 23 collieries and 6 washeries in the district. Preston No. 3 colliery, however, is now permanently abandoned, and all the surface improvements have been removed to other collieries.

During the year no coal has been mined from the Kehley's Run and Girard Mammoth collieries. Any coal that has been shipped from these two collieries has been produced from the culm banks. Lawrence colliery has produced very little coal during the year, only operating two water level drifts in the Buck Mountain seam and employing from 18 to 20 persons. The colliery is flooded from the fourth level up to water level.

Table No. 2 shows that all the coal produced from West Shenandoah, Kohinoor and Turkey Run collieries, operated by the Philadel-

phia and Reading Coal and Iron Company is prepared at the West Shenandoah Mammoth breaker, and all the coal produced from Packers 2, 3, 4 and 5 collieries, operated by the Lehigh Valley Coal Company is prepared at Packer No. 4 Mammoth breaker.

It is gratifying to note that during the year there has been a very noticeable increase in the volume of air in circulation in the different collieries of the district, especially those of the Philadelphia and Reading Coal and Iron Company and the Lehigh Valley Coal Company.

In addition to good ventilation these companies maintain good dry road beds, good drainage and keep their collieries practically safe.

I cannot say that any colliery is exceptionally bad with regard to ventilation, drainage and general safety, but there is room for improvement at three of them, and every effort is being made to bring these improvements about, as suggested by me.

At Kohinoor and Gilberton and Draper collieries the water is hoisted, no pumps in use. Water from Draper colliery drains through a tunnel across the basin to Gilberton. At William Penn colliery the water is hoisted in No. 2 shaft.

### Improvements During the Year

#### PHILADELPHIA AND READING COAL AND IRON COMPANY

Indian Ridge Colliery.—A new pump room has been constructed north and level with bottom of shaft in which will be placed an 18x48 inch pump; an additional ventilating fan has been erected.

Shenandoah City Colliery.—A tunnel is in course of construction from bottom to top member of Mammoth seam, first level east of Buck Mountain underground slope, dimensions 12x8 feet and is now driven 163 feet.

West Shenandoah Colliery.—A new pump room has been constructed at bottom of slope in which will be placed an 18x48 inch pump. A new tender slope is in course of construction through which all the workmen and mine supplies will be lowered.

Hammond Colliery.—A tunnel from Mammoth to Buck Mountain seam has been driven on third level connecting with the sump gangways of these two seams. A new column way and a new steamway are in course of construction in Buck Mountain seam west of No. 2 slope.

Bast Colliery.—An additional ventilating fan has been constructed at the extreme eastern limit of the colliery, which is giving excellent results, and two tubular boilers added to steam plant.

Draper Colliery.—A tunnel has been driven from the Orchard to Diamond seam, second level; also tunnel from Mammoth to Buck

Mountain, fourth level, and one from Mammoth to Holms, fourth level.

### Lehigh Valley Coal Company

#### Packer No. 2 Colliery

A new Knowles and Goyne pump, 20x10x24 inches has been put in place on second level, and concrete floors put in pump rooms, and a new column line to surface, diameter 10 inches. A new pump room on fourth level with stone walls on side and concrete floor, in which is placed a Goyne pump, 24x10x36 inches, also a new 10 inch column line from fourth to second level in Tender slope. A new 8 inch steam line from boilers to second level, and a 6 inch line from second level to fourth level, doing away with all other small steam lines. Completed Tender slope to fourth level and started to sink this slope another lift. A tunnel has been driven from the Holms to Orchard seam on the second level. Orchard seam is 11 feet thick and good coal; gangways are now driven east and west 300 feet from turn-out. A tunnel is being driven in West Buck Mountain gangway, fourth lift.

#### Packer No. 3 Colliery

A new fanway completed in the seven foot seam, and erected on this opening a new fan 18 feet in diameter, blades  $4\frac{1}{2}$ x6 feet, size of engine 16x18 inches. Built a new pump room 24x36 feet, stone walls on sides, concrete floor and roof secured with wrought iron beams. Put in place a Stroh duplex pump 26x8x36 feet on second level, and a new 10 inch column line to surface from 24x10x36 feet Jeanesville duplex pump, and have completed a new column way in the Mammoth seam from second level in which these columns are placed to surface. On the seventh level, Mammoth seam, all the timber has been taken out near the pump room and sides secured with stone walls and roof secured with trails and brick.

#### Packer No. 4 Colliery

On the third level, Mammoth seam a new pump room has been built, sides secured with stone walls and concrete floor, in which is placed a new Goyne duplex pump 26x10x36 inches. On the fifth level, Mammoth seam, a new pump room has been built. From the Buck Mountain slope, third level, a new 8 inch steam line has been put in place through the tunnel to Mammoth engine and pumps.

#### Packer No. 5 Colliery

The fan on top of shaft has been remodeled and can be changed into a force fan in a very short time. It is now called a combination fan. The air compartment of shaft has been lined from top to bottom with double tongued floor-boards  $1\frac{1}{4}$  inches thick. A fan has

been built at No. 1 slope similar to that at the shaft. Have driven a tunnel on slope level from Holms to Orchard seam, a distance of 239 feet; vein in good condition and 9 feet thick. A new tubular boiler plant 1,200 horse power has been erected, and a new steam line, diameter 6 inches, has been put in place from this steam plant to No. 1 slope, a distance of 4,000 feet.

### Susquehanna Coal Company

William Penn Colliery.—Have built new supply store, carpenter and blacksmith shops, new stables, pipe and sheet iron house, new Babcock & Wilcox boiler, water hoisting engines 32x48 inches on No. 2 shaft; two water tanks, capacity 1,500 gallons each, can hoist 60 to 70 an hour or 107,500 gallons an hour; all the pumps have been stopped; telephone line in No. 2 shaft.

### Mine Foremen's Examinations

The following is a list of the persons who successfully passed the examinations:

#### Assistant Mine Foremen

David W. Price, Shenandoah; Andrew Bishop, Shenandoah; Daniel Lafferty, Shenandoah; William Leary, Shenandoah; Peter J. Harkins, Shenandoah; James McAtee, Shenandoah; John Casenskil, Shenandoah; John Rearden, Shenandoah; Michael J. Brennan, Shenandoah; George Oates, Shenandoah; Adam Kantner, Shenandoah; James Powell, Shenandoah; John Hooper, Shenandoah; Nick Bayar, Shenandoah; Edward Whalen, Shenandoah; Richard K. Boelcke, Shenandoah; William C. Collins, Shenandoah; James Mitchell, Shenandoah; Thomas Stack, Shenandoah; Samuel Powell, Shenandoah; Arthur Dixon, Shenandoah; John White, Shenandoah; John H. Roberts, Shenandoah; Charles I. Eisenhower, Shenandoah; Matthew Fahey, Shenandoah; Patrick McManus, Shenandoah; Thomas O'Hearn, Shenandoah; Thomas Walsh, Shenandoah; Harry Reeves, Shenandoah; Robert Lord, Shenandoah; David McElhenny, Shenandoah; P. J. Conway, Shenandoah; James Rosewall, Shenandoah; Edmund J. Thomas, Shenandoah; John W. Reese, Shenandoah; James C. Kerwin, Shenandoah; Charles H. Zimmerman, Shenandoah; Peter Ringheiser, Shenandoah; Walter S. Johnson, Shenandoah; Patrick J. Coyle, Shenandoah; Thomas Tracey, Shenandoah; Thomas E. Edwards, Shenandoah; Edward Williams, Shenandoah; James J. Devitt, Shenandoah; George Hanna, Shenandoah; Michael Hurley, Shenandoah; Thomas E. Jones, Shenandoah; Frank Dove, Shenandoah; Archibald Hodgert, Shenandoah; Jonas Gilfillan.



Shenandoah; John Bordner, Shenandoah; William T. Needs, Jr., Shenandoah; Emil J. Bayar, Shenandoah; John Bunn, Shenandoah; Shem Evans, Shenandoah; Thomas J. McGeever, Shenandoah; James Moyer, Shenandoah; Idris Davis, Shenandoah; John Watson, Shenandoah; Jno. J. Lannon, Shenandoah; John Simmons, Shenandoah; Patrick Brennan, Shenandoah; Thomas E. Campbell, Shenandoah; Fred. Young, Ashland; Aaron Reese, Ashland; Evan W. Smith, Ashland; Michael Maddin, Ashland; Joseph Corbe, Ashland; Frank Dewey, Ashland; Thomas Ferguson, Lost Creek; Michael P. Neary, Lost Creek; Frank B. Garvey, Lost Creek; Thomas Jordan, Lost Creek; John Whalen, Lost Creek; John O'Brien, Lost Creek; Patrick Brennan, Lost Creek; Charles Klingerman, Girardville; William Taylor, Girardville; Harry Whittington, Girardville; Thos. Green, Girardville; Harry R. Shipp, Girardville; James Birmingham, Gilberton; Thomas V. Morgan, Gilberton; William Chappell, Gilberton; Edward Oakim, Gilberton; William Stanton, Gilberton; Thomas Barnett, Gilberton; Richard Jones, Gilberton; Isaac Purnell, Gilberton; Henry Gottschall, Gilberton; Albert Thomas, Gilberton; James Rafferty, Gilberton; Thomas J. Reese, William Penn; John Baskeyfield, William Penn; Joseph Peters, William Penn; Evan L. Jones, William Penn; Thomas Sweeney, William Penn; Charles Blonwerd, Mahanoy Plane.



# Eleventh Anthracite District

SCHUYLKILL COUNTY

---

Mahanoy City, Pa., February 23, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of submitting herewith my Annual Report as Inspector of Mines of the Eleventh Anthracite District for the year 1903.

The tables contain the statistics relative to production, number of employes, days worked, accidents, etc. A brief description of the condition of the collieries of the district is also given.

Respectfully submitted,

P. C. FENTON,  
Inspector.

## Eleventh Anthracite District, 1903

## SUMMARY OF STATISTICS

Number of mines in district, .....	13
Number of mines in operation, .....	13
Number of tons of coal produced, .....	3,978,269
Number of tons shipped to market, .....	3,511,378
Number of tons sold at mines to local trade, .....	39,688
Number of tons consumed at mines in generating steam and heat, .....	427,203
Number of persons employed inside the mines, .....	5,549
Number of persons employed outside, .....	3,272
Number of fatal accidents inside the mines, .....	30
Number of tons produced for each fatal accident, ....	132,609
Number of persons employed per fatal accident inside,	185
Number of fatal accidents outside, .....	4
Number of persons employed per fatal accident out- side, ..	818
Number of wives made widows by fatal accidents, .....	14
Number of children orphaned by fatal accidents, .....	25
Number of non-fatal accidents inside of mines, .....	74
Number of persons employed per non-fatal accident in- side, .....	75
Number of non-fatal accidents outside, .....	10
Number of persons employed per non-fatal accident out- side, .....	327
Number of steam locomotives used inside, .....	16
Number of compressed air locomotives used inside, ....	6
Number of fans used for ventilation, .....	24
Number of gaseous mines in operation, .....	13
Number of new mines opened, .....	1

TABLE A.—Eleventh Anthracite District, 1903

PRODUCTION OF COAL	
Names of Companies	Tons
Philadelphia and Reading Coal and Iron Company, ..	3,153,182
Crystal Run Coal Company, .....	45,304
Silver Brook Coal Company, .....	151,189
Lehigh Valley Coal Company, .....	242,047
Lentz and Company, .....	386,547
	<hr/>
Total, .....	3,978,269
	<hr/> <hr/>
Production by Counties	
Schuylkill, .....	3,978,269
	<hr/> <hr/>

TABLE B.—Eleventh Anthracite District, 1903  
 Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Companies	Fatal Accidents			Non-fatal Accidents			Total	Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total										
Philadelphia and Reading Coal and Iron Co., . . . . .	26	3	29	60	7	67	121,276	52,553	4,293	2,644	6,937	165	72	881	378	
Leniz and Co., . . . . .	2	1	3	12	12	24	1,889,134	331,522	575	224	799	287	45	224	342	
Lehigh Valley Coal Co., . . . . .	2	2	4	1	3	4	121,023	242,047	383	175	558	191	383	574	58	
Crystal Run Coal Co., . . . . .	1	1	2	1	1	2	117	15	117	15	132	15	15	15	15	
Silver Brook Coal Co., . . . . .	1	1	2	1	1	2	151,189	151,189	181	156	337	181	181	181	181	
Totals and averages for district, . . . . .	30	4	34	74	10	84	132,009	53,760	5,549	3,272	8,821	185	75	318	327	

TABLE C.—Eleventh Anthracite District, 1903  
Classification of Fatal Accidents

	Inside of Mines											Outside of Mines						Grand total							
	Coal	State	Roof	By mine cars	By explosion of Gas	Smothered by Gas	Powder and dynamite	By blasts, etc.	Shafts	Slopes	Manways, breasts, etc.	By Falling into	Crushed at batteries	By mules	Suffocated by coal, etc	Miscellaneous causes	Total inside		By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside	
January	1			1														2						2	
February					1																				
March	1																								
April					1																				
May																									
June				2								1													
July																									
August	2																								
September																									
October	1																								
November	3																								
December				2																					
Totals	9	4		15	12							2			1		30	1	2				1	4	34

TABLE D.—Eleventh Anthracite District, 1903  
Classification of Non-Fatal Accidents

	Inside of Mines										Outside of Mines						Grand total							
	Coal	State	Roof	By falls of	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	Slopes	Manways, breasts, etc.	Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes		Total inside	By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside
January	3				1	2		1									1						2	9
February	1				1	4		1															1	7
March	1				2	3		1															1	7
April					2	2		1															1	6
May	1				3	1		3															2	11
June	1		1		1	1																	1	11
July	2							2											1				1	11
August	1				1			2															1	11
September	2				1	1		2															1	10
October	1				2			2															1	6
November	1		1		1	1		1			1												4	6
December	1		1		1	2		1															4	7
Totals	14	3	1		13	21	1	4	11		1					5	74	4	1			5	10	84



TABLE E.—Eleventh Anthracite District, 1903  
Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines

	Inside										Outside								Grand total		
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks		All other employes	Total outside
January, .....				1					1												1
February, .....				1																	1
March, .....				1																	1
April, .....				1																	1
May, .....				1	1																2
June, .....				1	1	1			1												4
July, .....				4	3									1						1	6
August, .....				1																	1
September, .....				1						1											2
October, .....				1	2																3
November, .....				1	2																3
December, .....				1																	1
Totals, .....				14	10	2	1	2	2	1	1	1	1	1	1	1	1	1	3	4	34



TABLE G.—Eleventh Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	Irish	German	Polish	Austrian	Russian	Totals
January, .....	1			2			3
February, .....				4			4
March, .....				1			1
April, .....				1			1
May, .....				1			1
June, .....				4			4
July, .....		1	1	6			8
August, .....	1			1			2
September, .....							
October, .....				2		1	3
November, .....				2	1		3
December, .....	1						1
Totals, .....	3	1	1	27	1	1	34

TABLE H.—Eleventh Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Scotch	Irish	German	Polish	Italian	Lithuanian	Tyrolian	Totals
January, .....	2	1				5	1			9
February, .....	2			1		6				9
March, .....		1				6				7
April, .....					1	4			1	6
May, .....	4			3		4				11
June, .....	2	1		1	1	6				11
July, .....						4		1		5
August, .....						2				2
September, .....						5				5
October, .....	1		1			4		1		7
November, .....		1				2		1		4
December, .....				1		5		1		7
Totals, .....	12	4	1	6	2	53	2	3	1	84

TABLE I.—Eleventh Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

Names of Operators and Mines	Kind of opening	Gasous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering of the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
P. and R. Coal and Iron Co.	Slope...	Gasous...	Fan.....	18	6-6	6	95	1	Guibal.	Steam..	75	64,521	54,350	66,077	167	325
Knickerbocker, .....	Slope...	Gasous...	Fan.....	20	6-6	6	80	1	Guibal.	Steam..	7	38,000	22,000	39,000	108	203
Eliangowan, .....	Slope...	Gasous...	Fan.....	15	5-6	4-4	70	1	Guibal.	Steam..	15	129,124	175,228	175,228	803	218
Eliangowan, .....	Slope...	Gasous...	Fan.....	21	7	6-6	85	2	Guibal.	Steam..	8	44,610	33,665	46,680	164	205
Maple Hill, .....	Shaft...	Gasous...	Fan.....	21	7	6-6	85	2	Guibal.	Steam..	10	41,916	40,806	42,220	190	215
Maple Hill, .....	Shaft...	Gasous...	Fan.....	21	7	6-6	85	2	Guibal.	Steam..	9	65,515	53,900	74,065	167	215
St. Nicholas, .....	Slope...	Gasous...	Fan.....	12	3	4	75	1-2	Guibal.	Steam..	12	272,915	45,325	274,335	290	156
St. Nicholas, .....	Slope...	Gasous...	Fan.....	21	7 1/2	6-3	75	2	Guibal.	Steam..	10	41,916	40,806	42,220	190	215
North Mahanoy City, .....	Slope...	Gasous...	Fan.....	21	7	6-3	75	2	Guibal.	Steam..	9	65,515	53,900	74,065	167	215
Mahanoy City, .....	Slope...	Gasous...	Fan.....	18	5	4-6	95	1-2	Guibal.	Steam..	12	272,915	45,325	274,335	290	156
Tunnel Ridge, .....	Slope...	Gasous...	Fan.....	15	5	4-6	100	2	Guibal.	Steam..	10	108,860	59,120	109,055	112	528
Tunnel Ridge, .....	Slope...	Gasous...	Fan.....	16	6	4-8	100	2	Guibal.	Steam..	10	108,860	59,120	109,055	112	528
Tunnel Ridge, .....	Slope...	Gasous...	Fan.....	21	5-2	6-3	75	2	Guibal.	Steam..	7	85,485	92,080	92,080	544	169
Boston Run, .....	Slope...	Gasous...	Fan.....	18	6-6	5 1/2	95	2	Guibal.	Steam..	7	85,485	92,080	92,080	544	169
Sutrook, .....	Slope...	Gasous...	Fan.....	18	6-6	5 1/2	95	2	Guibal.	Steam..	7	85,485	92,080	92,080	544	169
Silver Brook Coal Co.	Slope...	Gasous...	Fan.....	18	5	8	55	2	Guibal.	Steam..	4	30,370	9,690	33,070	44	220
Silver Brook, .....	Slope...	Gasous...	Fan.....	14	1	7	50	2	Guibal.	Steam..	4	30,370	9,690	33,070	44	220
Silver Brook, .....	Slope...	Gasous...	Fan.....	14	1	7	50	2	Guibal.	Steam..	4	30,370	9,690	33,070	44	220



TABLE 1.—Eleventh Anthracite District, 1903  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
P. and R. Coal and Iron Co.	Schuylkill.	W. J. Richards.	Pottsville.	John Veith.	Pottsville.	Philadelphia & Reading
Knickerbocker.	Schuylkill.	W. J. Richards.	Pottsville.	John Veith.	Pottsville.	Philadelphia & Reading
Eliangowan.	Schuylkill.	W. J. Richards.	Pottsville.	John Veith.	Pottsville.	Philadelphia & Reading
Maple Hill.	Schuylkill.	W. J. Richards.	Pottsville.	John Veith.	Pottsville.	Philadelphia & Reading
Suffolk.	Schuylkill.	W. J. Richards.	Pottsville.	John Veith.	Pottsville.	Philadelphia & Reading
Saint Nicholas.	Schuylkill.	W. J. Richards.	Pottsville.	John Veith.	Pottsville.	Philadelphia & Reading
Boston Run.	Schuylkill.	W. J. Richards.	Pottsville.	John Veith.	Pottsville.	Philadelphia & Reading
Tunnel Ridge.	Schuylkill.	W. J. Richards.	Pottsville.	John Veith.	Pottsville.	Philadelphia & Reading
Mahanoy City.	Schuylkill.	W. J. Richards.	Pottsville.	John Veith.	Pottsville.	Philadelphia & Reading
North Monahan.	Schuylkill.	W. J. Richards.	Pottsville.	John Veith.	Pottsville.	Philadelphia & Reading
Saint Nicholas washery.	Schuylkill.	W. J. Richards.	Pottsville.	John Veith.	Pottsville.	Philadelphia & Reading
Lehigh Valley Coal Co.	Schuylkill.	S. D. Warriner.	Wilkes-Barre.	W. H. Davis.	Hazleton.	Lehigh Valley
Primrose colliery.	Schuylkill.	S. D. Warriner.	Wilkes-Barre.	W. H. Davis.	Hazleton.	Lehigh Valley
Lentz and Co.	Schuylkill.	Edward Reese.	Mahanoy City.	James Reese.	Park Place.	Lehigh Valley
Park Place colliery.	Schuylkill.	Edward Reese.	Mahanoy City.	James Reese.	Park Place.	Lehigh Valley
Crystal Run Coal Co.	Schuylkill.	John L. Williams.	Frackville.	John L. Williams.	Frackville.	Philadelphia & Reading
Broad Mountain colliery.	Schuylkill.	John L. Williams.	Frackville.	John L. Williams.	Frackville.	Philadelphia & Reading
Silver Brook Coal Co.	Schuylkill.	John L. Wentz.	1100 Girard Trust Building, Phila.	James Long.	Silver Brook.	Lehigh Valley
Silver Brook colliery.	Schuylkill.	John L. Wentz.	1100 Girard Trust Building, Phila.	James Long.	Silver Brook.	Lehigh Valley

TABLE 2.—Eleventh Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.	Schuylkill,.....	243,405	23,980	979	238,454	222	654	3	3	3,505	55,789	51
Kniekerbocker,.....	Schuylkill,.....	423,549	33,770	348	463,657	509	1,013	13	13	13,393	11,333	24
Ellangowan,.....	Schuylkill,.....	563,454	22,374	962	596,770	268	1,848	4	4	15,257	30,646	82
Suifolk,.....	Schuylkill,.....	563,988	30,812	.....	596,800	251	1,362	4	4	3,244	33,848	81
Maple Hill,.....	Schuylkill,.....	222,905	36,896	271	260,072	270	1,625	1	1	956	38,206	31
Saint Nicholas,.....	Schuylkill,.....	84,185	38,127	.....	122,313	221	361	1	1	5,715	39,497	75
Boston Run,.....	Schuylkill,.....	301,259	57,536	1	358,795	275	600	16	16	5,715	39,497	75
Tunnel Ridge,.....	Schuylkill,.....	205,620	54,293	27,657	287,580	270	506	5	3	4,145	12,775	65
Mahanoy City,.....	Schuylkill,.....	385,378	38,075	2,840	426,493	255	889	1	13	6,880	19,140	104
North Mahanoy,.....	Schuylkill,.....	2,765,032	341,843	33,099	3,140,975	256	6,311	29	67	62,615	250,715	678
Saint Nicholas washery,.....	Schuylkill,.....	12,297	.....	.....	12,297	.....	26	.....	.....	.....	.....	.....
Totals,.....	.....	2,778,240	341,843	33,099	3,153,182	.....	6,337	29	67	62,615	250,715	678
Crystal Run Coal Co.	Schuylkill,.....	34,841	9,900	562	45,304	252	162	.....	.....	545	8,909	18
Broad Mountain Colliery,.....	Schuylkill,.....	119,848	30,000	1,241	151,189	296	337	.....	.....	.....	.....	.....
Silver Brook Coal Co.	Schuylkill,.....	221,141	17,503	3,403	242,047	242	556	.....	.....	.....	.....	.....
Silver Brook colliery,.....	Schuylkill,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lehigh Valley Coal Co.	Schuylkill,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Primrose colliery,.....	Schuylkill,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\*Totals in this column are averages.

TABLE 2—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lentz and Co.	Schuylkill,....	357,308	27,957	1,252	356,547	241	799	3	12	9,047	18,088	102
Grand totals, .....	.....	3,511,378	427,203	39,688	3,978,269	.....	8,821	34	84	89,054	319,580	908

TABLE 2—Recapitulation

Philadelphia and Reading Coal and Iron Co.,....	Schuylkill,....	2,778,210	341,843	33,009	3,153,182	256	6,937	29	67	62,615	250,715	678
Crystal Run Coal Co., .....	Schuylkill,....	34,841	9,960	563	45,304	252	1,2	.....	.....	545	8,900	18
Silver Brook Coal Co., .....	Schuylkill,....	119,848	39,060	1,341	151,189	236	337	.....	.....	823	9,900	33
Lehigh Valley Coal Co., .....	Schuylkill,....	221,141	17,503	3,403	242,047	242	556	2	4	7,024	31,887	77
Lentz and Co., .....	Schuylkill,....	357,308	27,957	1,252	356,547	241	799	3	12	9,047	18,088	102
Totals, .....	.....	3,511,378	427,203	39,688	3,978,269	245	8,821	34	84	89,054	319,580	908

\*Not including washeries.



TABLE 2—Continued

Names of Operators and Collieries	County	Number of Boilers			Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors		
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Locomotives									
							Steam								Air	Electric
Philadelphia and Reading Coal and Iron Co.	Schuylkill	20	684	12	1,560	2,244	3	1,977	4	3,800	2,500	.....	.....			
Knickerbocker, .....	Schuylkill	.....	.....	16	2,560	2,560	2	2,584	6	4,000	3,800	.....	2			
Ellansowan, .....	Schuylkill	.....	.....	18	2,560	2,560	1	1,261	4	3,295	3,500	.....	.....			
Sufolk, .....	Schuylkill	.....	.....	18	2,340	2,340	1	5,880	.....	2,666	1,100	.....	5			
Maple Hill, .....	Schuylkill	.....	.....	16	2,820	2,820	.....	20	2,685	6,290	4,500	.....	.....			
Saint Nicholas, .....	Schuylkill	.....	.....	14	1,820	1,820	1	1,676	5	3,290	2,500	.....	.....			
Boston Penn., .....	Schuylkill	.....	.....	18	2,840	2,760	.....	14	2,620	4,900	4,200	.....	1			
Bonnet Ridge, .....	Schuylkill	12	260	.....	.....	.....	.....	9	1,154	3,000	2,400	.....	.....			
North Mahanoy, .....	Schuylkill	.....	.....	16	2,080	2,080	.....	15	2,342	6,500	2,400	.....	.....			
North Philadelphia, .....	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
Saint Nicholas washery, .....	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
Totals, .....	.....	22	1,014	138	17,940	18,984	11	25,719	34	37,491	24,950	.....	8			
Crystal Run Coal Co.	Schuylkill	.....	.....	5	480	480	.....	4	400	780	338	.....	.....			
Broad Mountain colliery, .....	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
Silver Brook Coal Co.	Schuylkill	.....	.....	8	1,270	1,250	2	1,240	6	5,250	5,250	.....	.....			
Silver Brook colliery, .....	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
Lehigh Valley Coal Co.	Schuylkill	.....	.....	10	1,560	1,560	1	1,430	5	4,000	2,000	.....	2			
Primrose colliery, .....	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
Park Place colliery, .....	Schuylkill	.....	.....	13	3,250	3,250	2	1,910	3	4,800	4,800	.....	.....			
Leutz and Co.	Schuylkill	.....	.....	174	24,450	25,464	16	30,689	50	52,321	37,338	.....	10			
Grand totals, .....	.....	32	1,044	174	24,450	25,464	16	30,689	50	52,321	37,338	.....	10			

TABLE 2—Recapitulation

Names of Operators and Collieries	County	Number of Boilers			Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—Gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Tubular	Horse power	Steam	Air	Electric							
Philadelphia and Reading Coal and Iron Co.,	Schuylkill	32	198	17,940	11	6	142	25,710	34	37,491	24,950	.....	8	
Crystal Run Coal Co.,	Schuylkill	.....	5	480	.....	.....	4	400	.....	.....	338	.....	.....	
Steger Coal Co.,	Schuylkill	.....	8	1,270	.....	.....	19	1,240	.....	.....	5,250	.....	.....	
Lehigh Valley Coal Co.,	Schuylkill	.....	10	1,500	2	.....	11	1,430	.....	.....	2,000	.....	.....	
Lentz and Co.,	Schuylkill	.....	13	3,250	2	.....	33	1,910	.....	.....	4,800	.....	.....	
Totals,	.....	32	174	24,420	16	6	209	30,699	50	52,321	37,338	.....	10	

TABLE 3.—Eleventh Anthracite District, 1903  
Number of Each Class of Employes at Each Colliery

Names of Operators and Collieries.	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside									
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes	Total outside
P. and R. Coal and Iron Co.	Schuylkill,	1	1	7	68	76	15	6	2	31	86	293	1	8	30	138	31	3	150	361	654
Kriegerbocker, .....	Schuylkill,	1	1	11	262	480	41	12	.....	54	104	706	1	8	24	113	39	3	122	310	1,016
Eliangwan, .....	Schuylkill,	1	1	12	203	339	21	20	.....	34	165	863	1	8	31	159	71	3	184	459	1,262
Surfak, .....	Schuylkill,	1	1	12	204	134	24	9	.....	31	132	644	1	5	22	74	40	3	159	304	848
Saint Nicholas, .....	Schuylkill,	1	1	2	84	134	18	3	.....	41	67	312	.....	1	15	66	33	2	110	233	635
Boston Run, .....	Schuylkill,	1	1	2	40	37	16	3	.....	4	40	67	.....	1	37	31	15	63	150	361	571
Tunnel Ridge, .....	Schuylkill,	1	1	6	153	52	33	6	.....	45	161	453	1	5	57	63	34	3	90	232	690
Mahanoy City, .....	Schuylkill,	1	1	3	140	67	27	14	.....	39	73	363	1	7	23	63	22	3	116	316	856
North Mahanoy, .....	Schuylkill,	2	1	4	117	135	41	12	.....	25	118	515	1	6	29	136	46	3	155	374	889
Saint Nicholas washery, .....	Schuylkill,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	63	232	861	320	25	1,109	2,618	6,911
Totals, .....	.....	10	8	58	1,407	1,094	276	91	10	351	1,018	4,293	8	63	234	861	320	26	1,122	2,644	6,937
Crystal Run Coal Co.	Schuylkill,	1	1	1	54	12	9	1	6	25	7	117	1	1	5	9	17	.....	1	41	192
Broad Mountain, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Silver Brook Coal Co.	Schuylkill,	2	1	.....	57	41	16	4	9	8	43	181	1	1	8	20	16	3	55	156	337
Silver Brook colliery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE 3--Continued

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside										
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes	Total outside	Grand total inside and outside
Lehigh Valley Coal Co.	Schuylkill	1	1	3	173	41	39	9	4	.....	109	383	.....	1	10	15	83	12	5	100	173	556
Primrose colliery, .....	Schuylkill	1	1	1	54	12	9	6	25	7	117	4,293	.....	8	63	224	861	329	28	1,132	2,644	6,337
Lentz and Co. ....	Schuylkill	2	2	3	245	146	46	12	113	.....	.....	575	.....	1	25	31	35	70	5	15	224	799
Park Place colliery, .....	Schuylkill	16	13	65	1,940	1,397	336	107	41	497	1,177	5,549	4	12	111	304	988	418	37	1,383	1,272	8,821
Grand totals, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE 3--Recapitulation

P. and R. Coal and Iron Co. ....	Schuylkill	10	8	58	1,497	1,061	276	91	10	351	1,018	4,293	.....	8	63	224	861	329	28	1,132	2,644	6,337
Crystal Run Coal Co., .....	Schuylkill	1	1	1	54	12	9	1	6	25	7	117	.....	1	5	9	17	.....	1	41	75	192
Silver Brook Coal Co., .....	Schuylkill	2	1	.....	57	41	16	4	9	8	43	181	.....	1	1	8	29	52	3	55	156	337
Lehigh Valley Coal Co., .....	Schuylkill	1	1	3	173	44	29	9	4	.....	109	383	.....	1	10	15	33	2	3	109	173	556
Lentz and Co., .....	Schuylkill	2	2	3	249	146	46	2	12	113	.....	575	.....	2	25	31	35	70	5	15	224	799
Totals, .....	.....	16	13	65	1,940	1,397	336	107	41	497	1,177	5,549	4	12	111	304	988	418	37	1,383	1,272	8,821

TABLE 3—Continued

Names of Operators and Collieries	County	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Philadelphia and Reading Coal and Iron Co.	Schuylkill	17.6	15.5	17.7	11.3	23.1	24.3	23	21.1	21.6	19.2	16.6	18.9	233
Knickerbocker, .....	Schuylkill	23.4	20.7	17.3	17.3	24	24.3	25	23.9	22.9	21	17	19	260
Eliangowan, .....	Schuylkill	23.4	21.4	23	17.6	24.7	24.3	25	23.9	22.9	21	17	19	260
Maple Hill, .....	Schuylkill	23.4	21.4	23	17.6	24.7	24.3	25	23.9	22.9	21	17	19	260
Suffolk, .....	Schuylkill	23.4	21.4	23	17.6	24.7	24.3	25	23.9	22.9	21	17	19	260
Saint Nicholas, .....	Schuylkill	23.4	21.4	23	17.6	24.7	24.3	25	23.9	22.9	21	17	19	260
Run, .....	Schuylkill	5.9	18.2	21.1	17.1	26.3	21.1	26	26	25	22	17	16.1	221
Tunnel Ridge, .....	Schuylkill	2.4	24.2	26.3	18.1	26.3	26	26	25	23.7	22	18	18	259
Mahanoy City, .....	Schuylkill	25.9	23	25	18.1	23.6	26	25.9	25.4	22.8	21.8	17.5	17.3	249
North Mahanoy, .....	Schuylkill	24.6	22.9	25.4	18.3	24	26	25.6	25	23.7	3	11.9	19	255
Averages, .....		21.2	20.9	22.2	17.8	23.4	25	24.6	23.4	21	19.6	17.6	18.4	256
Crystal Run Coal Co.	Schuylkill	.....	23	17	24	20.3	23.8	25.2	25.2	21.6	25.3	20	23.2	252
Broad Mountain, .....	Schuylkill	.....	23	17	24	20.3	23.8	25.2	25.2	21.6	25.3	20	23.2	252
Silver Brook Coal Co.	Schuylkill	22	18.6	20.2	21	20.9	20.1	20.7	19.8	19.9	17.3	16.8	18.7	236
Silver Brook colliery, .....	Schuylkill	22	18.6	20.2	21	20.9	20.1	20.7	19.8	19.9	17.3	16.8	18.7	236
Lehigh Valley Coal Co.	Schuylkill	23.5	23.2	25.2	19.1	26.3	22	22.8	20.4	16.7	17.4	15.4	16.4	242
Pelrose colliery, .....	Schuylkill	23.5	23.2	25.2	19.1	26.3	22	22.8	20.4	16.7	17.4	15.4	16.4	242
Park Place colliery, .....	Schuylkill	21.9	20.4	20.9	18.2	21.3	23.1	22.3	21.4	19.3	16.9	16.6	19.4	241
Lentz and Co.	Schuylkill	22.2	21.2	21.3	20	21.2	22.6	23.1	22	20.3	19.3	17.3	19.2	245
Park Place colliery, .....	Schuylkill	22.2	21.2	21.3	20	21.2	22.6	23.1	22	20.3	19.3	17.3	19.2	245
Averages, .....		21.2	20.9	22.2	17.8	23.4	25	24.6	23.4	21	19.6	17.6	18.4	256

TABLE 3—Recapitulation

Philadelphia and Reading Coal and Iron Co., .....	Schuylkill	21.2	20.9	23.2	17.8	23.4	25	24.6	23.1	21.6	19.6	17.6	18.4	256
Crystal Run Coal Co., .....	Schuylkill	.....	23	17	24	20.3	23.8	25.2	25.2	21.6	25.3	20	23.2	252
Silver Brook Coal Co., .....	Schuylkill	22	18.6	20.2	21	20.9	20.1	20.7	19.8	19.9	17.3	16.8	18.7	236
Silver Brook colliery, .....	Schuylkill	22	18.6	20.2	21	20.9	20.1	20.7	19.8	19.9	17.3	16.8	18.7	236
Lehigh Valley Coal Co., .....	Schuylkill	23.5	23.2	25.2	19.1	26.3	22	22.8	20.4	16.7	17.4	15.4	16.4	242
Lehigh Valley colliery, .....	Schuylkill	23.5	23.2	25.2	19.1	26.3	22	22.8	20.4	16.7	17.4	15.4	16.4	242
Lentz and Co., .....	Schuylkill	21.9	20.4	20.9	18.2	21.3	22.1	22.3	21.4	19.3	16.9	16.6	19.4	241
Lentz and Co., .....	Schuylkill	21.9	20.4	20.9	18.2	21.3	22.1	22.3	21.4	19.3	16.9	16.6	19.4	241
Averages, .....		22.2	21.2	21.3	20	21.2	22.6	23.1	22	20.3	19.3	17.3	19.2	245

TABLE 4.—Eleventh An thracite District, 1903  
Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 6	Boles Veretsky, .....	Polish, .....	Miner, .....	30	M.	1	2	Tunnel Ridge, .....	Schuylkill,	Instantly killed by a fall of coal and roof. Crushed between car and roof. Crushed between car and roof. Internally injured by a rush of coal. Died on the 15th. Instantly killed. Caught in the scraper line. Internally injured between roller and casing in breaker February 19. Died at State Hospital July 11. Scalded and leg broken by falling down chute in breaker. Died February 24. Burned by an explosion of gas. Died March 11. Killed by a fall of coal. Died the same day.
Jan. 7	Joe Lewonisz, .....	Polish, .....	Loader, .....	22	S.	.....	.....	Primrose, .....	Schuylkill,	
Feb. 14	Joseph Bolensky, .....	Polish, .....	Miner, .....	24	S.	.....	.....	Mahanoy City, .....	Schuylkill,	
19	Peter Hellantheil, .....	American, ..	Watchman, ..	19	S.	.....	.....	Mahanoy jig house, ..	Schuylkill,	
20	Andrew Vizarra, .....	Polish, .....	Slate picker, ..	32	S.	.....	.....	Park Place, .....	Schuylkill,	
21	William Breaskie, .....	Polish, .....	Slate picker, ..	14	S.	.....	.....	Eliangowan, .....	Schuylkill,	
25	Mike Mitsko, .....	Polish, .....	Miner, .....	37	S.	.....	.....	Mahanoy City, .....	Schuylkill,	
March 11	John Luto, .....	Polish, .....	Miner, .....	35	M.	1	.....	Eliangowan, .....	Schuylkill,	
April 10	Anthony Skummin, .....	Polish, .....	Miner, .....	30	M.	1	2	Eliangowan, .....	Schuylkill,	
May 12	John Deubleck, .....	Polish, .....	Laborer, .....	30	S.	.....	.....	Eliangowan, .....	Schuylkill,	
June 5	Peter Pieski, .....	Polish, .....	Door boy, .....	17	S.	.....	.....	Maple Hill, .....	Schuylkill,	
6	Anthony Shedeski, .....	Polish, .....	Miner, .....	38	M.	1	4	Suffolk, .....	Schuylkill,	Instantly killed by a fall of rock. Instantly killed by mine locomotive. Instantly killed by falling down slope. Instantly killed by a fall of top coal. Instantly killed by a fall of slate. Instantly killed by being run over by a gunboat. Instantly killed by a fall of coal. Drowned by a rush of water from Knickerbocker colliery.
11	Joseph Cheronis, .....	Polish, .....	Loader, .....	21	S.	.....	.....	Maple Hill, .....	Schuylkill,	
17	William Carlunas, .....	Polish, .....	Laborer, .....	25	M.	1	.....	Park Place, .....	Schuylkill,	
17	Anthony Mehtatis, .....	Polish, .....	Laborer, .....	33	M.	1	.....	Boston Run, .....	Schuylkill,	
14	Patrick Whalen, .....	Irish, .....	Miner, .....	33	S.	.....	.....	Suffolk, .....	Schuylkill,	
15	Jacob Kester, .....	German, .....	Carpenter, .....	55	M.	1	1	Saint Nicholas, .....	Schuylkill,	
15	John Aranovich, .....	Polish, .....	Miner, .....	25	M.	1	1	Maple Hill, .....	Schuylkill,	
22	Alex Yznoch, .....	Polish, .....	Miner, .....	46	M.	1	5	Eliangowan, .....	Schuylkill,	
22	Mike Yznoch, .....	Polish, .....	Laborer, .....	36	S.	.....	.....	Eliangowan, .....	Schuylkill,	
22	Matt Shevinski, .....	Polish, .....	Laborer, .....	40	S.	.....	.....	Eliangowan, .....	Schuylkill,	
22	Peter Kleckner, .....	Polish, .....	Miner, .....	40	M.	1	1	Eliangowan, .....	Schuylkill,	

Aug.	21	Peter Sneek, .....	American, ..	Locomotive engineer.	25	M.	1	.....	Knickerbocker, .....	Schuykill.	Killed by being caught between door and locomotive.
	25	Jack Hensky, .....	Polish, .....	Laborer, ...	26	S.	.....	.....	Mahanoy City, .....	Schuykill.	Killed by a rush of coal.
Oct.	17	Joseph Ginder, .....	Russian, ...	Laborer, ...	37	S.	.....	.....	Park Place, .....	Schuykill.	Killed by a fall of clod.
	20	Paul Resalusky, .....	Polish, .....	Miner, .....	35	M.	1	3	Tunnel Ridge, .....	Schuykill.	Leg broken by a fall of coal. Died at State Hospital October 23.
	21	Frank Karish, .....	Polish, .....	Laborer, ...	20	S.	.....	.....	Knickerbocker, .....	Schuykill.	Killed by being crushed between prop and rib.
Nov.	4	William Romonofsky, ..	Polish, .....	Miner, .....	23	S.	.....	.....	Primrose, .....	Schuykill.	Killed by a fall of top coal.
	7	Jacob Orlowski, .....	Polish, .....	Laborer, ...	28	S.	.....	.....	North Mahanoy, .....	Schuykill.	Killed by a fall of coal from the side.
	6	Joseph Steakes, .....	Austrian, ...	Laborer, ...	22	M.	1	3	Boston Run, .....	Schuykill.	Killed by falling down main slope.
Dec.	30	Anthony Szagalis, .....	Polish, .....	Laborer, ...	21	S.	.....	.....	Mahanoy City, .....	Schuykill.	Killed by a fall of top coal.
	12	William McCabe, .....	American, ..	Driver, ...	18	S.	.....	.....	Boston Run, .....	Schuykill.	Killed by being squeezed between car and mule.
	16	Joseph Metules, .....	Polish, .....	Miner, .....	48	M.	1	3	Saint Nicholas, .....	Schuykill.	Was hit with a hammer while holding a mule, was thrown to his death, He died from lockjaw December 25.
	23	Joe Puscavage, .....	Polish, .....	Driver, ...	18	S.	.....	.....	Maple Hill, .....	Schuykill.	Killed by falling under a car.

TABLE 5.—Eleventh Anthracite District, 1903  
Non-Fatal Accidents in and about the Mires

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 3	Tony Versol, .....	Italian, .....	Hopperman, .....	37	M	Primrose, .....	Schuylkill,	Arm broken in two places by timber fall- ing on him.
5	Walter Banks, .....	American, ..	Miner, .....	28	M	Tunnel Ridge, .....	Schuylkill,	Leg broken by a piece of coal falling on him.
7	John Gsoda, .....	Polish, .....	Miner, .....	27	S	North Mahanoy, .....	Schuylkill,	Hands and face burned by an explosion of gas.
7	Frank Knitsky, .....	Polish, .....	Miner, .....	25	M	North Mahanoy, .....	Schuylkill,	Hands and face burned by an explosion of gas.
12	Andrew Riddle, .....	English, .....	Driver, .....	23	S	Park Place, .....	Schuylkill,	Foot broken by being caught between two cars.
14	Joseph Gurchuck, .....	Polish, .....	Miner, .....	24	S	Mahanoy City, .....	Schuylkill,	Leg and hand cut by a piece of coal fall- ing on him.
15	George Zelinsky, .....	Polish, .....	Laboret, .....	40	M	Saint Nicholas, .....	Schuylkill,	Leg broken while excavating, by a piece of frozen ground.
19	Charles Yewcutskoy, ..	Polish, .....	Miner, .....	34	S	Maple Hill, .....	Schuylkill,	Hand blown out by dynamite while clean- ing a hole that had missed fire.
31	Joseph Doyle, .....	American, ..	Miner, .....	28	S	Mahanoy City, .....	Schuylkill,	Face and hands burned by an explosion of gas.
31	Martin Sincavage, .....	Polish, .....	Laborer, .....	29	M	Tunnel Ridge, .....	Schuylkill,	Face and hands burned by an explosion of gas.
12	William Brennan, .....	Irish, .....	Car runner, .....	22	S	Maple Hill, .....	Schuylkill,	Leg fractured by being caught between two cars.
13	Michael Sachel, .....	Polish, .....	Miner, .....	30	M	Tunnel Ridge, .....	Schuylkill,	Face and hands burned by an explosion of gas.
16	Thomas Miller, .....	American, ..	Laborer, .....	18	S	Saint Nicholas jig house	Schuylkill,	Head cut by falling through the banister to the ground in breaker.
19	Mike Cossatt, .....	Polish, .....	Miner, .....	32	S	Suffolk, .....	Schuylkill,	Face and hands burned by an explosion of gas.
25	William Bobble, .....	Polish, .....	Miner, .....	42	M	Mahanoy City, .....	Schuylkill,	Face and hands burned by an explosion of gas.
25	John Knopkus, .....	Polish, .....	Miner, .....	38	M	Maple Hill, .....	Schuylkill,	ribs broken by a fall of coal.
26	Stoney Sattle, .....	P. ish, .....	Miner, .....	29	M	Suffolk, .....	Schuylkill,	Face and hands burned by an explosion of gas.
28	William Faust, .....	American, ..	Miner, .....	24	S	North Mahanoy, .....	Schuylkill,	Leg bruised by a fall of coal.



March	17	Frack Oneseavage, ....	Polish, .....	Miner, .....	37	M. Ellangowan, .....	Schuykill, .....	Face and hands burned by an explosion of gas.	
	17	Leatwig Vurowsky, .....	Polish, .....	Laborer, .....	24	S. Saint Nicholas, .....	Schuykill, .....	Legs injured by a fall of coal.	
	17	William Mineavage, .....	Polish, .....	Laborer, .....	23	S. Park Place, .....	Schuykill, .....	Face and hands burned by an explosion of gas.	
	14	Peter Kinchinski, .....	Polish, .....	Miner, .....	38	S. Park Place, .....	Schuykill, .....	Face and hands burned by an explosion of gas.	
	11	Moxum Darras, .....	Polish, .....	Laborer, .....	23	S. Park Place, .....	Schuykill, .....	Internally injured by being caught between two cars.	
	16	Thomas Fowell, .....	English, .....	Fire boss, .....	49	M. Ellangowan, .....	Schuykill, .....	Internally injured by being caught between two cars.	
	17	Anthony Grabblek, .....	Polish, .....	Miner, .....	42	S. Maple Hill, .....	Schuykill, .....	Face and hands injured by a premature blast.	
	April	4	Dominiek Parameh, .....	Tyrolian, .....	Laborer, .....	38	M. Ellangowan, .....	Schuykill, .....	Leg cut off by being run over by an empty car.
		14	Peter Kuzavavage, .....	Polish, .....	Miner, .....	33	M. Tunnel Ridge, .....	Schuykill, .....	Head cut by premature explosion.
		17	Charles Keslavage, .....	Polish, .....	Miner, .....	35	M. North Mahanoy, .....	Schuykill, .....	Head cut by explosion of gas, slightly burned by an explosion of gas.
		17	Martin Alencavage, .....	Polish, .....	Laborer, .....	26	S. North Mahanoy, .....	Schuykill, .....	Hands slightly burned by an explosion of gas.
		27	Anthony Casper, .....	Polish, .....	Miner, .....	20	S. North Mahanoy, .....	Schuykill, .....	Face and hand burned by an explosion of gas.
		30	Frank Conrad, .....	German, .....	Laborer, .....	24	S. Primrose, .....	Schuykill, .....	Leg broken by a piece of timber rolling on him.
		May	1	Lewis Benedict, .....	American, ..	Miner, .....	48	M. Ellangowan, .....	Schuykill, .....
6			Paul Volanus, .....	Polish, .....	Miner, .....	47	S. Maple Hill, .....	Schuykill, .....	Leg broken by a fall of coal.
9			Daniel Brennan, .....	Irish, .....	Laborer, .....	49	M. Primrose, .....	Schuykill, .....	Leg fractured by being caught between cars.
12			Joe Bannacus, .....	Polish, .....	Miner, .....	40	M. Ellangowan, .....	Schuykill, .....	Head and face burned by an explosion of gas.
12	Terrance Brennan, .....		Irish, .....	Laborer, .....	47	M. Tunnel Ridge, .....	Schuykill, .....	Foot and leg broken by being run over by mine car.	
13	Frank Polighner, .....		American, ..	Laborer, .....	30	M. Tunnel Ridge, .....	Schuykill, .....	Leg broken by being bumped between cars.	
13	Edward M'Glynn, .....		Irish, .....	Miner, .....	50	M. Tunnel Ridge, .....	Schuykill, .....	Hand bruised while coupling cars.	
13	Joe Dubesky, .....		Polish, .....	Laborer, .....	30	S. Tunnel Ridge, .....	Schuykill, .....	Toes cut off by a fall of coal.	
13	Jeremiah Brown, .....		American, ..	Laborer, .....	30	S. North Mahanoy, .....	Schuykill, .....	Contusion of the head by a fall of rock.	
June	21		John Shliravage, .....	Polish, .....	Car runner, .....	22	S. Maple Hill, .....	Schuykill, .....	Face and hand burned by an explosion of face and hand.
	25	George Whitaker, .....	American, ..	Water boy, .....	16	M. Kettlebocker, .....	Schuykill, .....	Legs broken and back injured by a fall of slate.	
	6	Anthony Gzowski, .....	Polish, .....	Miner, .....	40	M. Park Place, .....	Schuykill, .....	Hands blown off by an explosion of dynamite.	
	12	August Schwade, .....	German, .....	Miner, .....	41	M. Tunnel Ridge, .....	Schuykill, .....	Face and hands burned by powder.	
	16	Joseph Domerofsky, .....	Polish, .....	Miner, .....	34	S. Kettlebocker, .....	Schuykill, .....	Leg fractured by a rush of coal.	
	17	Henry Schmitt, .....	American, ..	Starter, .....	40	M. Boston Run, .....	Schuykill, .....	Hand injured by being caught in machinery.	
	18	Michael Carnady, .....	Irish, .....	Miner, .....	58	S. North Mahanoy, .....	Schuykill, .....	Head cut by a premature blast.	
	18	Thomas Richardson, .....	English, .....	Miner, .....	50	M. North Mahanoy, .....	Schuykill, .....	Body strained by pushing mine car.	
	18	Peter Dennis, .....	American, ..	Laborer, .....	26	S. North Mahanoy, .....	Schuykill, .....		
	20	Joseph Navarousky, .....	Polish, .....	Slate picker, .....	16	S. Tunnel Ridge, .....	Schuykill, .....		
22	Anthony Stummes, .....	Polish, .....	Miner, .....	27	S. Tunnel Ridge, .....	Schuykill, .....			
22	Anthony Stummes, .....	Polish, .....	Leader, .....	30	S. Saint Nicholas, .....	Schuykill, .....			

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
July	7 Andrew Slackis, .....	Polish, .....	Laborer, .....	23	S.	Ellangowan, .....	Schuylkill,	Hands, leg and face injured by a prema- ture explosion.
	7 Peter Leader, .....	Polish, .....	Laborer, .....	23	S.	Ellangowan, .....	Schuylkill,	Hands, leg and face injured by a prema- ture explosion.
	14 Peter Bondrick, .....	Lithuanian, .....	Miner, .....	50	S.	Park Place, .....	Schuylkill,	Leg broken by a fall of coal.
	22 John Nasowage, .....	Polish, .....	Miner, .....	33	M.	Ellangowan, .....	Schuylkill,	Back injured by a rush of water forcing through the manway.
Aug.	27 John Androskie, .....	Polish, .....	Miner, .....	25	S.	Ellangowan, .....	Schuylkill,	Chest and back injured by a fall of coal.
	8 John Eubhuski, .....	Polish, .....	Driver, .....	17	S.	Ellangowan, .....	Schuylkill,	Leg and arm injured by being caught between car and door frame.
	24 Charles Sapinskas, .....	Polish, .....	Laborer, .....	25	S.	Primrose, .....	Schuylkill,	Hip injured by being bumped between mine cars.
Sept.	4 Anthony Kattelas, .....	Polish, .....	Miner, .....	26	S.	Tunnel Ridge, .....	Schuylkill,	Hands and face burned by an explosion of gas.
	10 Charles Harker, .....	American, .....	Driver, .....	27	S.	Park Place, .....	Schuylkill,	Foot bruised by a mine car running over it.
	12 Charles Palaconis, .....	Polish, .....	Laborer, .....	22	S.	Ellangowan, .....	Schuylkill,	Leg broken by a fall of coal.
	14 Mike Bogdenuch, .....	Polish, .....	Miner, .....	30	S.	Ellangowan, .....	Schuylkill,	Face, body and hands burned by prema- ture blast.
	14 George Ambrolavige, .....	Polish, .....	Laborer, .....	23	S.	Ellangowan, .....	Schuylkill,	Face and hands burned by prema- ture blast.
Oct.	30 John Yanshitis, .....	Polish, .....	Miner, .....	37	M.	North Mahanoy, .....	Schuylkill,	Leg broken by a fall of coal.
	2 Richard Davidson, .....	Scotch, .....	Driver, .....	17	S.	Saint Nicholas, .....	Schuylkill,	Arm broken. Squeezed between mine car and mule.
	2 Adam Shirey, .....	American, .....	Shaker engineer, .....	20	S.	Maple Hill, .....	Schuylkill,	Leg cut by knife slipping off hemp rope.
	9 John Yeigenstey, .....	Polish, .....	Miner, .....	35	M.	Park Place, .....	Schuylkill,	Hip broken by a fall of coal.
	13 Mike Geladones, .....	Polish, .....	Miner, .....	35	M.	Tunnel Ridge, .....	Schuylkill,	Head injured by a piece of coal from a blast.
	13 John Boleta, .....	Polish, .....	Driver, .....	19	S.	Maple Hill, .....	Schuylkill,	Arm crushed by a car going over it.
	14 William Wobutski, .....	Polish, .....	Laborer, .....	37	S.	Park Place, .....	Schuylkill,	Leg cut by a rush of coal.
	22 Andrew Gerasz, .....	Italian, .....	Miner, .....	46	M.	Silver Brook, .....	Schuylkill,	Hand injured by a premature blast.
Nov.	4 Anthony Pittney, .....	Polish, .....	Driver, .....	21	S.	Knickerbocker, .....	Schuylkill,	Squeezed between mine-car and timber.
	6 August Bergerick, .....	Lithuanian, .....	Laborer, .....	36	M.	Park Place, .....	Schuylkill,	Cane and hands burned by a fall of coal.
	13 William Pugh, .....	Polish, .....	Miner, .....	33	M.	Park Place, .....	Schuylkill,	Chest and back injured by a fall of slate.
	13 Martin Kendrick, .....	Polish, .....	Laborer, .....	29	S.	Tunnel Ridge, .....	Schuylkill,	Leg broken by falling down a manway.

Dec.	2	Peter Stal, .....	Polish, .....	Miner, .....	42	M.	Park Place, .....	Schuykill,	Wounds on face and neck by premature blast and head injured by a fall of coal.
	5	George Lesavage, .....	Polish, .....	Miner, .....	40	M.	North Mahanoy, .....	Schuykill,	Face and ankle hurt by a prop falling on him.
	10	Patrick Dempsey, .....	Irish, .....	Miner, .....	50	M.	North Mahanoy, .....	Schuykill,	Leg fractured by a fall of slate. Face and hands burned by gas.
	12	William Wines, .....	Polish, .....	Miner, .....	34	S.	Tunnel Ridge, .....	Schuykill,	Internally injured by falling under a trip of cars while in motion.
	16	John Conosk, .....	Polish, .....	Miner, .....	42	M.	Suffolk, .....	Schuykill,	
	17	Charles Maletsky, .....	Lithuanian, .....	Miner, .....	34	M.	Tunnel Ridge, .....	Schuykill,	
	24	Anthony Nowgen, .....	Polish, .....	Loader, .....	22	S.	Maple Hill, .....	Schuykill,	

## FATAL ACCIDENTS

## By Falls of Coal, Slate and Roof

January 6. Bolest Veretsky, miner at Tunnel Ridge, was killed while preparing for a length of manway, by a piece of coal falling on him.

March 11. John Luto, miner at Ellangowan, leg and back broken by fall of coal. He had fired a blast at the face of the breast and had gone up and was dressing some loose coal, when it fell and caught him. He died on the way to the hospital.

April 10. Anthony Skummin, miner at Ellangowan, was instantly killed while working in face of breast by a fall of top rock.

June 6. Anthony Shedeski, miner at Suffolk, was killed by a fall of slate, while in the act of charging a hole. He should have timbered the place as directed by the boss.

July 1. Anthony Melutis, laborer at Boston Run, was working in the gangway when a piece of coal fell from the roof and killed him. The coal seemed to be solid a few minutes before the accident occurred.

July 14. Patrick Whalen, miner at Suffolk, was blasting bottom coal when a piece fell and drove him down pitch. He was found dead at the battery.

July 15. John Aranovich, miner at Maple Hill, was preparing to put up brattice when a piece of top coal fell on him, killing him.

August 25. Jack Hemskey, laborer at Mahanoy City, While drilling a hole, a piece of slate, on which he was standing, broke off and started the loose piece he was drilling in. The coal slid down the pitch onto Hemskey, killing him.

October 17. Joseph Ginder, laborer at Park Place, was killed by a fall of clod while working as a laborer in gangway.

October 20. Paul Resalusky miner at Tunnel Ridge. While shoveling coal in the chute, a piece of top coal fell on him and broke his leg. He died in the hospital.

November 4. William Romonofsky, miner at Primrose. Instantly killed by a fall of coal in a breast, while tamping a hole.

November 6. Joseph Skeakes, laborer at North Mahanoy. While taking down a piece of coal as instructed, it fell on him, injuring him. He died at State Hospital.

November 30. Anthony Shagalis, laborer at Mahanoy City. While putting down sheet iron in breast, coal fell on him and killed him.

## By Cars

January 17. Joe Lewonis, loader at Primrose. Caught on trip of cars that was being pulled to counter chute. He jumped off on low

side of gangway and was caught between car and rock. Died from his injuries.

June 5. Peter Pieski, doorboy at Maple Hill, was caught between car and door. He closed the door before the last car was through. He was injured on the head and died.

June 11. Joe Cheronis, loader at Maple Hill. Killed by locomotive. Engineer got off and turned switch. The engine started on backward motion and jammed Cheronis between rib and cars.

December 12. William McCabe, driver at Boston Run. In turning his mule he got caught between mule and car and was internally injured. He died at his home the same evening.

December 23. Joe Puscavage, driver at Maple Hill. He fell under his trip of cars while coming out of the mine and was fatally injured.

#### By Explosions

February 25. Mike Mitsko, miner at Mahanoy City, was in the act of putting on length of brattice when a fall of coal brushed down the gas on his naked light, and caused an explosion. He died at the hospital. He had been strictly forbidden to work with anything but safety lamp.

May 12. John Dudlick, laborer at Ellangowan. He went up the chute and fired the gas, burning his face and hands. He was working with a safety lamp, but must have tampered with it.

#### By Falling Down Shafts, Slopes, Etc.

June 17. William Carlunas, laborer at Park Place. Killed while attempting to descend slope after working hours, without notifying engine man.

November 7. Jacob Opelia, miner at Boston Run. Killed by falling down slope. He and eight others were hoisted to the surface on west side of slope. After walking a short distance away from the slope he returned and fell down the opening on the east side.

#### By Suffocation

February 14. Joseph Bolensky, miner at Mahanoy City. He was barring down coal when he fell and the coal rolled on him. He was fatally injured.

#### Miscellaneous.

July 22. Alexander Lynch, Mike Yancofski, Matt Shevinski. While working in the west top split No. 2 west gangway, shaft level,

the water broke in to breast No. 15 from an old abandoned working of the Knickerbocker Colliery. The three men were drowned.

July 22. Peter Kleckner, miner at Ellangowan, was drowned while working in west top split No. 2 gangway, No. 15 breast. I did not know nor did those in charge of the colliery know anything of the accumulation of water, as the map did not show that portion of the abandoned workings.

August 21. Peter Sneck, locomotive engineer at Knickerbocker. While the engine was going through a door at mouth of drift, the door attendant in some way let the door swing half shut and Sneck was crushed between engine and door.

October 21. Frank Karish, laborer at Knickerbocker, was killed by being crushed between rib and prop while in the act of lifting prop.

December 16. Joseph Metules, miner at Saint Nicholas. His finger was smashed while holding a jumper for his partner to strike on. He was struck on the finger and died of lockjaw at the State Hospital.

#### CONDITION OF COLLIERIES

##### PHILADELPHIA AND READING COAL AND IRON COMPANY

##### Maple Hill Colliery

This is one of the most modern and the largest coal producing collieries operated by this company. They are at the present time sinking a No. 2 shaft, size 12 feet 8 inches by 31 feet in the clear. Outside dimensions 15 feet 2 inches by 33 feet 6 inches. This shaft contains six compartments, two for coal and four for water. It is timbered with 12x12 inch southern yellow pine, and is lagged with 3 inch southern yellow pine plank back of timber. The depth of the shaft is to be 1,050 feet reaching the Buck Mountain Basin.

It is ventilated with a 15 foot fan while in sinking operation. A carpenter and blacksmith shop 32x76 feet has recently been completed outside. The breaker has been remodeled. They have taken out all the circular screens and replaced them with shakers. They also have taken out all the old jigs and have replaced them with the latest improved jigs. The ventilation, drainage and road beds of this mine are in good condition.

We expect very good ventilation at this colliery after the 21 foot fan which was recently erected, has been connected.

##### Suffolk Colliery

They have done much at this colliery to improve the ventilation. In connection with one fan, an opening was driven through solid rock a distance of 153 feet 11x12 feet or 122 feet area. Seventy-five

feet below the surface in this opening, a brick arch was built 100 feet area on a pitch of 35 degrees and continued all the way up. Over this a 21 foot fan was erected which will ventilate the South Tunnel workings of the Maple Hill Colliery. To increase the volume of air the main airways have been enlarged at different points connecting with the Mammoth Top Split fan. At different parts of the mines, crosscuts have been driven through slate and rock, connecting the different splits with the main airway.

The ventilation, drainage and road beds of this colliery are in good condition.

### Saint Nicholas Colliery

This colliery is very important. Both inside and outside workings are equipped with the latest mining inventions, and from present indications will in the near future be one of the largest producers of this company.

An airway was driven in the Mammoth seam from the third level to the surface 100 feet in area over which a 21 foot force fan has been erected.

An air tunnel has been driven from middle split south dip to bottom split north dip on the third level, and another from the bottom split to the top split south dip at third level.

A third tunnel has been driven from east middle split to bottom split east of hoisting slope.

The main hoisting slope has been extended from second to third level and gunboats used in the place of cages.

In the second level a pump house has been driven in the solid rock, size 16x21x50 feet in which a pump 12x48 inches has been placed. Another pump house was driven in third level in the same manner. A pump was also placed in it, size 18x48 inches. One steam and one column way was driven from third to second level to supply the pump on the lower level.

The road beds are exceptionally good. The ventilation and drainage are also in good condition.

### Boston Run Colliery

Outside—They have constructed two tubular boilers, size 6x18 feet, built a lamp house and inside foreman's office combined 26x15x8 feet, and a wash house, size 24x24x9 feet. They have also laid an engine foundation for the little Buck Mountain slope 26x60 feet.

Inside—A tunnel was driven from Holmes to Primrose second level, length 110 feet. Another was driven from bottom split of Mammoth to Skidmore second level, length 45 feet. A third tunnel was driven from Buck Mountain to Little Buck Mountain third level,

length 60 feet. They have driven an air tunnel from Little Buck Mountain to Buck mountain water level, main airway, length 36 feet. They have sunk the Little Buck Mountain Gunboat slope to a depth of 950 feet from surface, but it is not yet completed. They have driven two air tunnels from Seven-foot to Skidmore, second level, 6x6 feet, length 40 feet through slate and rock.

An airway 10x10 feet has been driven in the Buck Mountain vein from the surface to the second level to act as an out-let for Saint Nicholas Colliery, length 450 feet. It is partly finished. The ventilation, drainage and road beds are in good condition.

### Tunnel Ridge Colliery

This is another important colliery. An underground single track slope is being sunk in the Skidmore vein, south dip, but it is not yet completed. A tunnel from the Seven Foot to the Skidmore vein forming a landing at the top of this underground slope 60 feet in length has been driven. A new pump house was driven in the solid rock and a 12x48 inch pump was placed in it.

Outside—Two new tubular boilers 6x18 feet have been erected. One bore hole to the depth of 519 feet with six inch casing where ropes shall be placed for the purpose of hoisting from the underground slope. An engine house has been placed at the bore hole with an engine 18x48 inches.

Ventilation, drainage and road beds of this colliery are in good order.

### North Mahanoy Colliery

Outside—They have erected a new engine house where a pair of new engines 30x60 inches were placed, doing away with a smaller pair which only hoisted four cars per trip, while the new ones will hoist six cars per trip.

Inside—A tunnel was driven from the bottom split to the top split mammoth vein, in the Ellangowan basin, length 332 feet and struck a vein 19 feet in the thickness of good coal.

Ventilation, drainage and etc., are in good order.

### Knickerbocker Colliery

In the Buck Mountain seam, they have just completed the first level of an underground slope. This slope is driven across the pitch a distance of 650 feet. They have driven an airway parallel with this slope, and they are now driving a tunnel on this level from the Buck Mountain to the bottom split of the Mammoth vein. This tun-



nel will cut the Seven Foot and Skidmore. They have also driven a tunnel from the bottom split to the top split of the Mammoth vein.

Ventilation, drainage and road beds are in good condition.

#### Mahanoy City Colliery

Outside—Two bore holes 550 feet each in depth with four and five inch casing in which ropes will be placed for the purpose of hoisting from an underground shaft. The foundations for the engines are nearly completed.

Inside—A rock plane has been driven from second level, Holmes vein, through rock a distance of 255 feet, cutting the Primrose vein. A new underground shaft is being sunk to the basin of the Buck Mountain vein. By means of this shaft they will be able to mine coal below their present levels.

The ventilation, drainage and road beds are in good order.

#### Ellangowan Colliery

There has been erected at the bottom of the shaft a pump house in rock between the bottom and middle veins, 95x25x16 feet in which are placed two coal and iron pumps 18x48 inches. Shaft level tunnel driven from Seven Foot, cutting the Skidmore vein. Double track turnout in rock at top of No. 2 slope, 18 feet wide and 224 feet long.

One air locomotive hauling coal from top of slope to bottom of shaft. A five inch air line from compressor house on surface to west end of shaft level turnout and from shaft level to fifth level. A tunnel driven in fifth level from Buck Mountain, cutting Seven Foot and Skidmore veins. A tunnel in fifth level east, cutting the Skidmore vein. One air locomotive hauling the coal from the turnouts in the different veins to the bottom of the slope.

Ventilation, drainage and road beds in this Colliery are in good condition.

#### LEHIGH VALLEY COAL COMPANY

#### Primrose Colliery

A tunnel 200 feet in length was driven northward on the water level from ten foot or bottom split of mammoth to the seven foot. A tunnel 240 feet long was driven from east ten foot water level gangway to connect the basin slope. An eight inch rope hole was put down 117 feet from the surface to east plane level basin slope in the mammoth vein for the more economical operation of the spoon end of the basin. To do this work a pair of 12x20 foot engines were placed on the surface in a 30x25 foot frame building.

A new pump house 12x20x60 feet was constructed at a location

120 feet east of main hoisting slope. A new dam was constructed on the surface for the purpose of taking care of the discharged pump water or water pumped. A combination blacksmith, carpenter and machine shop was erected, frame 55 feet square.

Ventilation, drainage, etc., are in good order.

#### CRYSTAL RUN COAL COMPANY

##### Broad Mountain Colliery

They have started a new level in the Buck Mountain vein below the present level. This new level was opened on No. 3 slope, and this slope was sunk a number of years ago and had been filled with water. We pumped the water out of said slope to a depth of 350 feet, and at a distance of 325 feet started the said new level. We struck a splendid Buck Mountain vein eleven feet in thickness. They propose to pump the remainder of the water out the slope as there still remains a depth of 250 feet to the basin. Outside they have erected three tubular boilers of a high grade.

The ventilation, drainage, etc., are in good condition.

#### SILVER BROOK COAL COMPANY

##### Silver Brook Colliery

At a distance of 1,660 feet from the slope a subterranean slope has been sunk to the bottom of the basin a distance of 250 feet, with an average of 48 degrees pitch. Struck coal eight feet thick at bottom of basin, good quality. An airway west of the workings has been driven to the surface, a distance of 275 feet on an average pitch of 30 degrees.

The ventilation is fair, drainage and road beds not so good.

#### LENTZ AND COMPANY

##### Park Place Colliery

Outside of the ventilation being greatly improved, there is nothing worth mentioning, as the other improvements are very few and small.

The ventilation, drainage and roads are in good condition.

#### Mine Foremen's Examinations

Examinations of candidates for mine foremen and assistant mine foremen were held May 12 and August 8. The following applicants were successful and received certificates of qualification.

#### Mine Foremen

Gwylm Jones, Shenandoah; Joseph F. Long, Silver Brook: Wil-

liam Lamuels, Mahanoy City; Michael McNelis, Mahanoy City; Patrick J. Moore, Mahanoy City; Thomas Bray, Mahanoy City; John Kericher, St. Nicholas; Evan Thomas, Frackville.

#### Assistant Mine Foremen

William Evans, Shenandoah; John Dietrick, Shenandoah; John Twait, Shenandoah; Thomas Manion, Shenandoah; James Herrington, Shenandoah; William McLaren, St. Nicholas; John Wentz, St. Nicholas; John Coughlin, Mahanoy City; Bartle Trainor, Mahanoy City; Michael Scanlan, Mahanoy City; Henry Fry, Shenandoah; Benjamin Motz, Shenandoah; Thomas R. Powell, St. Nicholas; Thomas Moore, Mahanoy City; John Braithwaite, St. Nicholas; William Southall, St. Nicholas; George Witchey, Mahanoy City; Griffith T. Powell, St. Nicholas; John Friel, Mahanoy City; John Gurtitus, St. Nicholas; Jacob Webb, Mahanoy City; Thomas J. Davis, Brañondville; James Foley, Gilberton; Charles McKerns, St. Nicholas; George Campbell, Mahanoy City; Charles Terrill, St. Nicholas; John Perry, Mahanoy City; John Southall, Mahanoy City; James Halloway, Mahanoy City; Robert Williams, Mahanoy City; George Carmitchel, Mahanoy City; Thomas H. Hales, St. Nicholas; David Miles, St. Nicholas; John Cody, Mahanoy City; William Glover, Park Place; Alexander Bradley, Park Place; Harry Hales, Mahanoy City; William Anderson, Mahanoy City; Owen Jones, Mahanoy City; Philip Schlimmer, Mahanoy City; James Kennedy, St. Nicholas; William Cone, Mahanoy City; Lewis J. Benedict, Mahanoy City; John Higgins, St. Nicholas.



# Twelfth Anthracite District

SCHUYLKILL COUNTY

---

Pottsville, Pa., March 1, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines for the Twelfth Anthracite District, for the year ending December 31, 1903.

It contains the usual statistics in tabulated form. The total production of coal was 3,498,306. There were 7,923 persons employed. To produce this quantity of coal 55,817 kegs of powder and 445,055 pounds of dynamite were used. The number of fatal accidents was 33; the number of non-fatal 88.

Respectfully submitted,

MICHAEL J. BRENNAN,

Inspector.

## Twelfth Anthracite District, 1903

## SUMMARY OF STATISTICS

Number of mines in district, .....	21
Number of mines in operation, .....	21
Number of tons of coal produced, .....	3,498,306
Number of tons shipped to market, .....	3,013,224
Number of tons sold at mines to local trade, .....	30,567
Number of tons consumed at mines in generating steam and heat, .....	447,015
Number of persons employed inside the mines, .....	4,845
Number of persons employed outside, .....	3,078
Number of fatal accidents inside the mines, .....	28
Number of tons produced for each fatal accident inside, .....	124,939
Number of persons employed per fatal accident inside, .....	173
Number fatal accidents outside, .....	5
Number of persons employed per fatal accident outside, .....	616
Number of wives made widows by fatal accidents, ....	22
Number of children orphaned by fatal accidents, .....	50
Number of non-fatal accidents inside of mines, .....	73
Number of persons employed per non-fatal accident in- side, .....	66
Number of non-fatal accidents outside, .....	15
Number of persons employed per non-fatal accident outside, .....	205
Number of electric motors used inside, .....	5
Number of fans used for ventilation, .....	38
Number of gaseous mines in operation, .....	16
Number of non-gaseous mines in operation, .....	5

TABLE A.—Twelfth Anthracite District, 1903

PRODUCTION OF COAL	
Names of Companies	Tons
Philadelphia and Reading Coal and Iron Company, . . .	1,818,592
Leisenring and Company, . . . . .	158,339
Pine Hill Coal Company, . . . . .	184,483
Buck Run Coal Company, . . . . .	184,518
Darkwater Coal Company, . . . . .	21,320
Lytle Coal Company, . . . . .	224,775
St. Clair Coal Company, . . . . .	469,789
Silverton Coal Company, . . . . .	60,454
East Ridge Coal Company, . . . . .	112,645
Davis Brothers, . . . . .	46,457
E. C. White and Company, . . . . .	40,654
Mt. Hope Coal Company, . . . . .	54,800
Losch, Snyder and Company, . . . . .	21,514
Black Diamond Anthracite Coal Company, . . . . .	9,000
Stoddart Coal Company, . . . . .	90,966
	<hr/>
Total, . . . . .	3,498,306
	<hr/> <hr/>
Production by Counties	
Schuylkill, . . . . .	3,498,306

TABLE B.—Twelfth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Companies	Fatal Accidents		Non-Fatal Accidents		Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident		
	Inside	Outside	Total	Inside										Outside	Total
Philadelphia and Reading Coal and Iron Co., . . . . .	13	1	14	38	9	46	183,892	50,516	2,798	1,623	4,421	215	78	1,623	180
Leisenring and Co., . . . . .	6	7	13	7	7	14	26,399	22,620	249	117	416	56	43	1,623	43
Pine Hill Co., . . . . .	3	3	6	6	6	6	61,184	39,747	214	133	317	88	44	49	49
Buck Run Coal Co., . . . . .	2	2	4	6	6	6	30,753	30,753	219	99	318	36	36	49	49
Parkwater Coal Co., . . . . .	2	2	4	8	1	9	74,925	28,797	62	35	167	137	31	47	47
Lyttle Coal Co., . . . . .	3	1	4	8	1	9	43,925	28,797	10	368	578	137	31	31	168
Chair Coal Co., . . . . .	1	1	2	1	5	6	43,925	68,154	319	361	720	344	133	31	62
Silverdale Coal Co., . . . . .	2	1	3	1	1	2	59,227	68,154	172	102	234	66	43	43	43
East Ridge Coal Co., . . . . .	1	1	2	1	1	2	112,645	112,645	84	149	293	84	84	84	84
Totals and averages for district, . . . . .	28	5	33	73	15	88	124,939	47,922	4,845	3,073	7,923	173	66	616	205



TABLE C.—Twelfth Anthracite District, 1903  
Classification of Fatal Accidents

	Inside of Mines										Outside of Mines					Grand total								
	Coal	State	Roof	By falls of	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	Slopes	Manways, breast, etc.	Crushed at batteries	By mules	Suffocated by coal, etc.		Miscellaneous causes	Total inside	By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside
January			1		1			3		1							4	1						1
February		1	1							1	1													1
March			1								1													1
April			2																					2
May		1	1																					2
June		1	1																					2
July		1			1											1		3						3
August					1													1						1
September																						1		1
October																								1
November	1	1	1															3						3
December	1	1	1															3	1	2				5
Totals	7	4	8		2			3		1	1	1			1		28	1	2			3		33



TABLE E.—Twelfth Anthracite District, 1903  
Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines

	Inside										Outside								Grand total		
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Furpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Book-keepers and clerks		All other employes	Total outside
January, .....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
February, .....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
March, .....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
April, .....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
May, .....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
June, .....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
July, .....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
August, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
September, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
October, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
November, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
December, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Totals, .....	.....	.....	.....	19	3	2	.....	.....	.....	.....	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	53

TABLE F.—Twelfth Anthracite District, 1903  
Occupations of Persons Injured Inside and Outside the Mines

	Inside											Outside								Grand total	
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes		Total outside
January	1			3	1	1	1		1		1				3				1	4	13
February			1	2	2	2	1		1						1				1	1	6
March			1	2	1	1			1						1				1	1	16
April				1	1	1			1						1				1	1	4
May				1	1	1			1						1				1	1	4
June				1	1	1			2						1				2	2	10
July			1	1	1	1			1						1				1	1	7
August				2	1	1	1								1				1	1	6
September	1			4	1	1			1						1				1	1	5
October				6	1	2			1						1				1	1	9
November				1	1	1			1						1				1	1	3
December				2	1	1			1						1				1	1	7
Totals	1		2	47	4	10	2	1	6		73				6				9	15	88

TABLE G.—Twelfth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	Welsh	Irish	German	Polish	Italian	Slavonian	Lithuanian	Totals
January, .....	4			1		1	4		5
February, .....	1								5
March, .....	1						1		4
April, .....	1					1		1	4
May, .....	1				1		1		3
June, .....	1			1					3
July, .....	1							1	3
August, .....	1				1				1
September, .....	1								1
October, .....	1								1
November, .....	3								5
December, .....	3	1	1						5
Totals, .....	17	1	1	2	2	2	6	2	33

TABLE H.—Twelfth Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Hungarian	Slavonian	Lithuanian	Austrian	Totals
January, .....	6	2	2	2				1			13
February, .....	2			1		1	1	1			6
March, .....	2				1	2		3			13
April, .....	1						1				4
May, .....	1						1		1		4
June, .....	4			1		2		2		1	10
July, .....	5		1				1				7
August, .....	2			1		1		1			5
September, .....	2			1		2					5
October, .....	3		2			4					9
November, .....	3										3
December, .....	6								1		7
Totals, .....	46	2	5	6	1	12	4	8	2	2	88

TABLE I.—Twelfth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of fans, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employee per minute

Names of Operators and Mines	Kind of opening	Gasous or non-gasous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
Philadelphia and Reading Coal and Iron Co.																
West Brookside No. 1	Slope	Non-gas.	Fan	18	6	5	70	2	Guibal	Steam	2	15,258	15,258	14,000	95	436
West Brookside No. 2	Slope	Gaseous	Fan	21	6	5	80	2	Guibal	Steam	6	19,388	10,400	10,000	85	436
East Brookside No. 4	Slope	Gaseous	Fan	18	7	6	50	1.9	Guibal	Steam	8	62,887	42,386	39,000	261	436
Lincoln No. 1	Slope	Gaseous	Fan	18	6	5	60	1.6	Guibal	Steam	8	125,887	125,999	125,000	261	436
Lincoln No. 2	Slope	Gaseous	Fan	12	4	3-4	.....	1.4	Guibal	Steam	8	111,934	111,934	113,076	440	419
Good Spring No. 1	Slope	Gaseous	Fan	18	6	5	80	1.3	Guibal	Steam	17	72,722	72,722	72,872	231	435
Good Spring No. 2	Slope	Gaseous	Fan	18	6	5	80	1.3	Guibal	Steam	5	59,809	59,809	59,809	231	435
Good Spring No. 3	Slope	Gaseous	Fan	18	5	4	90	1.7	Guibal	Steam	7	40,780	40,780	40,400	.....	.....
Good Spring No. 3	Slope	Gaseous	Fan	18	5	4	90	1.7	Guibal	Steam	7	40,780	40,780	40,400	.....	.....
Otto, West	Slope	Gaseous	Fan	12	4	2	120	1.8	Guibal	Steam	6	82,700	82,700	85,200	217	888
Otto, White Ash	Slope	Gaseous	Fan	12	4	2	100	1.6	Guibal	Steam	7	110,200	110,200	110,200	.....	.....
Phoenix Park No. 3	Slope	Gaseous	Fan	15	5	3-3	80	2.5	Guibal	Steam	5	46,000	46,000	53,000	156	284
Phoenix Park No. 3	Slope	Gaseous	Fan	15	5	3-3	85	1.1	Guibal	Steam	5	46,487	46,487	50,500	117	582
Glendower, Taylorsville	Slope	Gaseous	Fan	14	6	5	70	6	Guibal	Steam	5	46,487	46,487	50,500	117	582
Glendower, Taylorsville	Slope	Gaseous	Fan	14	5	3-6	50	.7	Guibal	Steam	3	21,682	21,682	20,194	.....	.....
Glendower, Glendower	Slope	Gaseous	Fan	12	4	3-5	60	1	Guibal	Steam	.....	150,986	180,986	.....	230	786
Glendower, Glendower	Shaft	Gaseous	Fan	21	7	6	58	.6	Guibal	Steam	.....	150,986	180,986	.....	230	786
Wadesville	Shaft	Gaseous	Fan	21	7	6	58	.6	Guibal	Steam	.....	150,986	180,986	.....	230	786
Wadesville	Shaft	Gaseous	Fan	21	7	6	58	.6	Guibal	Steam	.....	150,986	180,986	.....	230	786
Pine Knot sinking	Shaft	Gaseous	Fan	12	3	4	.....	3	Guibal	Steam	1	20,000	20,000	20,000	40	500



TABLE 1.—Twelfth Anthracite District, 1903  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
West Brookside colliery	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Lancolt colliery	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Good Spring colliery	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Otto colliery	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Phoenix Park No. 3 colliery	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Glendower colliery	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Wadesville colliery	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Pine Knob colliery	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Kalmia washery	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Middle Creek washery	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Anchor washery	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Leising and Co.	Schuylkill	William Schwenk	Minersville	William Schwenk	Minersville	Philadelphia and Reading
Oak Hill colliery	Schuylkill	William Schwenk	Minersville	William Schwenk	Minersville	Philadelphia and Reading
Pine Hill Coal Co.	Schuylkill			Richard J. Wren	Minersville	Pennsylvania
Pine Hill washery	Schuylkill			Richard J. Wren	Minersville	Pennsylvania
Buck Run Coal Co.	Schuylkill			W. R. Wilson	Minersville	Philadelphia and Reading
Buck Run colliery	Schuylkill			W. R. Wilson	Minersville	Philadelphia and Reading
Darkwater Coal Co.	Schuylkill			W. R. Wilson	Minersville	Pennsylvania
Roberts colliery	Schuylkill			W. R. Wilson	Minersville	Pennsylvania
Roberts washery	Schuylkill			W. R. Wilson	Minersville	Pennsylvania
Lytle Coal Co.	Schuylkill			Arthur Kennedy	Minersville	Pennsylvania
Lytle colliery	Schuylkill			Arthur Kennedy	Minersville	Pennsylvania
St. Clair Coal Co.	Schuylkill			W. T. Smyth	Pottsville	Philadelphia and Reading
St. Clair colliery	Schuylkill			W. T. Smyth	Pottsville	Philadelphia and Reading
St. Clair washery	Schuylkill			W. T. Smyth	Pottsville	Philadelphia and Reading
Silverton Coal Co.	Schuylkill	T. R. Bowen	Llewellyn	T. R. Bowen	Llewellyn	Philadelphia and Reading
Silverton colliery	Schuylkill	T. R. Bowen	Llewellyn	T. R. Bowen	Llewellyn	Philadelphia and Reading
East Ridge Coal Co.	Schuylkill	E. E. Kingsley	Minersville		Minersville	Philadelphia and Reading
East Ridge colliery	Schuylkill	E. E. Kingsley	Minersville		Minersville	Philadelphia and Reading



Davis Brothers Ellsworth colliery, .....	Schuykill, ..	John H. Davis, ..	St. Clair, .....	.....	Philadelphia and Reading
E. C. White and Co. Howard colliery, .....	Schuykill, ..	Richard White, ..	Pottsville, .....	.....	Philadelphia and Reading
Mt. Hope Coal Co. Mt. Hope colliery, .....	Schuykill, ..	S. D. Kynor, .....	Pottsville, .....	.....	Philadelphia and Reading
Losch, Snyder and Co. Lorberry colliery, .....	Schuykill, ..	.....	.....	Pinegrove, .....	.....
Black Diamond Anthracite Coal Co. Black Diamond, .....	Schuykill, ..	F. P. Christian, ..	Pottsville, .....	.....	Philadelphia and Reading
Stoddart Coal Co. Wolf Creek washery, .....	Schuykill, ..	.....	.....	Minersville, .....	Philadelphia and Reading

TABLE 2.—Twelfth Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked †	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.	Schuylkill	315,381	50,403	.....	395,784	2-0	1,169	5	13	4,733	65,903	124
West Brookside, .....	Schuylkill	327,136	23,781	6,588	357,505	2-0	853	1	3	8,818	12,214	105
Lehigh Valley, .....	Schuylkill	204,737	16,046	3,184	224,017	279	497	4	6	5,753	30,603	48
Good Spring, .....	Schuylkill	139,841	37,484	1,329	178,654	268	561	2	4	3,947	29,416	71
Otto, .....	Schuylkill	116,594	33,272	1,287	151,153	353	537	1	2	1,105	30,350	53
Phoenix Park No. 3, .....	Schuylkill	117,504	33,272	298	148,322	453	537	.....	.....	611	18,345	49
Glendower, .....	Schuylkill	161,484	27,555	4,561	193,599	250	507	1	12	3,047	31,609	41
Wadesville, .....	Schuylkill	11,094	5,945	19	17,058	.....	76	.....	.....	75	17,600	6
Pine Knot, .....	Schuylkill	1,476,827	210,320	17,882	1,705,029	.....	4,377	14	.....	28,086	239,770	497
Kalmia washery, .....	Schuylkill	69,079	4,018	.....	73,097	.....	32	.....	.....	.....	25	.....
Middle Creek washery, .....	Schuylkill	289	275	.....	564	.....	9	.....	.....	.....	54	.....
Anchor washery, .....	Schuylkill	36,242	3,660	.....	39,902	132	3	.....	.....	.....	.....	.....
Totals, .....		105,610	7,953	.....	113,563	.....	44	.....	.....	.....	79	.....
Lelsenring and Co.		1,852,437	218,273	17,882	1,818,592	271	4,421	14	45	28,086	239,849	497
Oak Hill, .....	Schuylkill	139,250	16,000	3,089	158,339	256	416	6	7	3,651	15,350	42

\*No time reported by operators  
†Totals in this column are averages.

Pine Hill Coal Co.																					
Pine Hill colliery,.....	168,256	10,950	836	180,042	238	382	3	6	4,590	27,000	20										
Pine Hill washery,.....	4,410		1	4,410		15															1
Totals,.....	172,666	10,950	837	184,452	238	397	3	6	4,590	27,000	21										
Buck Run,.....	165,903	18,250	365	184,518	260	318	2	6	2,499	24,931	29										
Buck Run Coal Co.																					
Darkwater Coal Co.																					
Roberts colliery,.....	16,702	4,590	28	21,320	105	157	2														
Lytle Coal Co.																					
Lytle colliery,.....	154,339	68,450	1,026	224,775	236	578	3	9	1,809	67,667	75										
St. Clair Coal Co.																					
St. Clair colliery,.....	267,064	70,760	1,691	339,515	268	604	1	13	8,794	9,148	44										
St. Clair washery,.....	100,276		18	100,274																	
Totals,.....	337,320	70,760	1,709	469,789	268	604	1	13	8,794	9,148	44										
Silverton Coal Co.																					
Silverton colliery,.....	47,105	13,140	209	60,454	211	231	2	1	123	26,567	29										
East Ridge Coal Co.																					
East Ridge colliery,.....	105,448	7,100	97	112,645	218	223															
Ellsworth colliery,.....	43,147	2,950	360	46,157	382	109															
Davis Brothers																					
Howard colliery,.....	35,396	5,000	258	40,654	255	92															
E. C. White and Co.																					
Ellsworth colliery,.....	47,326	5,000	2,464	54,800	187	155															
Howard colliery,.....																					
Mt. Hope colliery,.....	19,184	1,850	489	21,514	197	80															
E. C. White and Co.																					
Mt. Hope colliery,.....	37,509	1,500		9,000	300	89															
E. C. White and Co.																					
Howard colliery,.....	86,901	3,202	863	90,966		40															
Mt. Hope colliery,.....	3,020,724	447,015	30,567	3,498,306		7,423															
Grand totals,.....																					

†Employees included with the St. Clair colliery 47,500 tons stored

TABLE 2—Recapitulation

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Not including washeries)	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co., . . . . .	Schuylkill, . . . . .	1,552,437	218,273	17,882	1,818,592	271	4,421	14	45	28,086	229,849	497
Leisnering and Co., . . . . .	Schuylkill, . . . . .	139,250	46,060	3,059	158,339	256	416	6	7	3,651	15,950	42
Pine Hill Coal Co., . . . . .	Schuylkill, . . . . .	172,616	10,950	837	184,483	238	397	3	6	4,590	27,000	21
Buck Run Coal Co., . . . . .	Schuylkill, . . . . .	165,903	18,250	355	184,518	260	318	3	6	2,499	24,557	19
Darkwater Coal Co., . . . . .	Schuylkill, . . . . .	16,702	4,590	28	21,320	105	137	3	1	1,000	1,000	1
Lytle Coal Co., . . . . .	Schuylkill, . . . . .	154,399	68,450	1,926	224,775	236	578	1	13	8,793	67,667	73
St. Clair Coal Co., . . . . .	Schuylkill, . . . . .	397,320	70,700	1,709	469,729	238	924	1	13	8,133	9,148	44
Silverton Coal Co., . . . . .	Schuylkill, . . . . .	47,105	13,140	97	139,644	213	223	2	1	1,735	26,567	29
East Ridge Coal Co., . . . . .	Schuylkill, . . . . .	168,448	5,070	360	46,457	582	109	1	1	1,000	6,185	13
Davis Brothers, . . . . .	Schuylkill, . . . . .	35,366	5,000	258	40,654	255	92	1	1	250	500	7
E. C. White and Co., . . . . .	Schuylkill, . . . . .	47,366	5,000	2,464	54,800	187	155	1	1	4,100	11,700	14
Mt. Hope Coal Co., . . . . .	Schuylkill, . . . . .	19,184	1,850	480	21,514	197	80	1	1	140	800	6
Loesch, Snyder and Co., . . . . .	Schuylkill, . . . . .	37,500	1,500	1,000	9,000	300	89	1	1	10	7,200	6
Stack Diamond Anthracite Coal Co., . . . . .	Schuylkill, . . . . .	86,901	3,202	863	90,966	.....	40	.....	.....	.....	.....	3
Stoddart Coal Co., . . . . .	Schuylkill, . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, . . . . .	.....	3,020,724	447,045	30,587	3,498,306	231	7,923	33	88	55,817	445,055	814

TABLE 2—Continued

Names of Operators and Collieries	County	Number of Boilers			Total horse power	Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in Gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical		Tubular		Steam	Air	Electric							
		Horse power	Horse power	Horse power											
Philadelphia and Reading Coal and Iron Co.	Schuylkill	18	450	26	3,870	4	90	6,277	5	4,800	2,940	1			
Westbrookside, .....	Schuylkill	2	50	18	2,340	1	12	5,560	*	8,000	4,500	1			
Leacon, .....	Schuylkill	2	50	18	2,340	1	12	5,560		8,000	4,500	1			
Good Spring, .....	Schuylkill	84	940	3	1,460	3	19	1,863	3	3,400	1,800	.....			
Orto, .....	Schuylkill	30	750	4	520	1	12	1,372	6	4,100	2,740	.....			
Phoenix Park No. 3, .....	Schuylkill	30	750	2	240	.....	4	463	3	2,000	1,464	.....			
Glendower, .....	Schuylkill	14	350	2	200	2	10	1,380	5	6,290	4,280	.....			
Wadesville, .....	Schuylkill	42	1,050	2	1,310	.....	11	4,827	*	3,600	1,800	.....			
Pine Knot sinkings, .....	Schuylkill	140	3,580	71	9,570	12	81	21,928	26	82,436	19,654	.....			
	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Kalmia washery, .....	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Middle Creek washery, .....	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Anchor washery, .....	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Totals, .....		16	400	9	710	.....	6	682	.....	.....	.....	.....	.....	.....	
		156	3,990	80	10,280	12	87	22,580	26	82,436	19,654	.....	.....	.....	
Leisenring and Co.	Schuylkill	12	180	8	1,310	1	8	990	5	3,400	1,550	.....	.....	.....	
Oak Hill, .....	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Pine Hill Coal Co.	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Pine Hill colliery, .....	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Pine Hill washery, .....	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Totals, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

\*Four tanks

TABLE 2—Continued

Names of Operators and Collieries	County	Number of Boilers				Total horse power	Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Tubular	Horse power	Horse power		Steam	Air	Electric							
Buck Run, Buck Run Coal Co.	Schuylkill,.....	.....	6	900	900	.....	.....	.....	8	500	1	450	450	.....	1	
Roberts colliery, Darkwater Coal Co.	Schuylkill,.....	7	2	40	215	.....	.....	.....	3	90	.....	.....	.....	.....	.....	
Lytle colliery, Lytle Coal Co.	Schuylkill,.....	.....	26	4,100	4,100	1	.....	.....	14	6,875	.....	5,000	5,000	.....	3	
St. Clair colliery, St. Clair Coal Co.	Schuylkill,.....	9	16	2,400	2,850	5	.....	.....	3	3,551	4	1,020	600	3	.....	
Silverton colliery, Silverton Coal Co.	Schuylkill,.....	8	5	821	1,301	.....	.....	.....	12	629	2	515	515	.....	1	
East Ridge colliery, East Ridge Coal Co.	Schuylkill,.....	.....	6	570	570	.....	.....	.....	13	680	2	500	300	.....	.....	
Ellsworth colliery, Davis Brothers	Schuylkill,.....	1	4	240	270	.....	.....	.....	3	130	1	450	450	.....	1	
Howard colliery, E. C. White and Co.	Schuylkill,.....	6	3	425	605	.....	.....	.....	6	258	2	2,400	1,800	.....	.....	
Mt. Hope colliery, Mt. Hope Coal Co.	Schuylkill,.....	4	9	745	825	.....	.....	.....	10	240	.....	.....	.....	.....	.....	



TABLE 3.—Twelfth Anthracite District, 1903  
Number of Each Class of Employees at Each Colliery

Names of Operators and Collieries	County	Occupations of Persons Employed Inside											Occupations of Persons Employed Outside								Grand total inside and outside		
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total Inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes		Total outside	
Philadelphia and Reading Coal and Iron Co.	Schuylkill.	4	2	11	257	127	49	22	.....	109	197	760	.....	1	13	60	83	19	3	221	409	1,169	
West Brookside, .....	Schuylkill.	2	2	4	224	91	47	7	.....	54	187	583	.....	1	11	41	45	23	2	137	269	853	
Lincolln, .....	Schuylkill.	2	2	6	98	44	10	5	.....	51	77	293	.....	1	6	29	50	18	2	98	204	497	
Good Spring, .....	Schuylkill.	2	2	4	119	74	34	9	.....	45	66	355	.....	1	8	34	30	30	2	101	206	561	
Otto, .....	Schuylkill.	2	2	6	103	32	9	5	.....	21	64	239	.....	1	4	10	29	13	3	58	118	357	
Phoenix Park No. 3, .....	Schuylkill.	1	1	6	44	27	15	7	.....	22	37	159	.....	1	6	34	20	32	1	104	198	357	
Glendower, .....	Schuylkill.	1	1	6	140	45	19	9	.....	49	81	356	.....	1	5	24	34	24	2	67	157	507	
Wadesville, .....	Schuylkill.	1	1	2	38	.....	.....	.....	.....	.....	49	.....	.....	1	3	8	.....	.....	.....	24	38	76	
Pine Knot, .....	Schuylkill.	13	4	43	987	478	183	64	.....	342	681	2,798	.....	8	56	240	291	159	15	810	1,579	4,377	
Kalmia washery, .....	Schuylkill.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	5	3	1	21	32	32	
Middle Creek washery, .....	Schuylkill.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	3	32	
Anchor washery, .....	Schuylkill.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	3	3	
Totals, .....	.....	13	4	43	987	478	183	64	.....	342	684	2,798	.....	3	.....	1	5	3	3	29	44	44	
Lelsenring and Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	56	241	296	162	18	839	1,623	4,421	
Oak Hill, .....	Schuylkill.	1	.....	6	193	38	21	7	4	25	4	299	.....	2	1	6	18	29	1	4	56	117	416





TABLE 3—Recapitulation

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside							Grand total inside and outside.			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Book-keepers and clerks	All other employes	Total outside
Philadelphia and Reading Coal and Iron Co.	Schuylkill	13	4	43	987	478	183	64	.....	342	684	2,798	.....	11	56	241	296	162	18	889	1,623	4,421
Leiseming and Co.	Schuylkill	1	1	6	133	38	21	7	4	25	4	2,994	2	1	6	18	29	1	4	56	117	416
Pine Hill Coal Co.	Schuylkill	1	1	3	123	86	15	1	3	6	24	264	1	1	5	12	41	13	2	58	133	397
Buck Run Coal Co.	Schuylkill	1	1	1	97	59	7	1	2	7	51	219	1	1	9	8	15	4	6	55	99	318
Darkwater Coal Co.	Schuylkill	1	1	1	23	27	6	1	1	4	.....	4	1	1	4	4	17	.....	1	67	85	157
Lytic Coal Co.	Schuylkill	1	1	7	150	30	11	10	6	93	167	416	1	2	15	46	32	11	4	57	168	578
St. Clair Coal Co.	Schuylkill	2	4	4	131	104	27	10	6	.....	60	344	1	2	18	39	39	11	4	146	269	694
Silverton Coal Co.	Schuylkill	1	4	1	53	17	17	3	2	26	9	133	1	1	9	18	9	5	2	89	149	234
Deer Run Coal Co.	Schuylkill	1	1	1	29	13	5	.....	2	3	19	84	1	1	8	9	30	9	2	57	102	234
Davis Ridge Coal Co.	Schuylkill	1	1	1	1	15	9	.....	2	9	.....	4	1	3	4	17	.....	1	41	69	169	
E. C. White and Co.	Schuylkill	1	1	1	20	20	2	.....	1	7	15	65	1	1	2	4	26	5	1	27	90	155
Mt. Hope Coal Co.	Schuylkill	1	1	1	16	20	3	.....	2	10	53	53	1	1	2	4	6	.....	1	12	27	89
Loseb, Snyder and Co.	Schuylkill	1	1	1	8	9	.....	.....	.....	.....	22	22	1	1	1	1	.....	.....	.....	.....	.....	.....
Black Diamond Anthracite Coal Co.	Schuylkill	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stoddart Coal Co.	Schuylkill	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	.....	27	15	70	1,857	927	308	96	25	543	977	4,845	15	26	147	448	557	294	50	1,611	3,078	7,923

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Philadelphia and Reading Coal and Iron Co.	Schuylkill,.....	26	24	25	26.9	21	25	26	26	24	22.9	18	250	
West Brookside,.....	Schuylkill,.....	25	24	26	21.6	24	24.9	25.9	24.6	23.3	23	19	280	
Lincoln,.....	Schuylkill,.....	25	21.6	23.8	23.8	23	25	26	26	24	23	18	279	
Good Spring,.....	Schuylkill,.....	25	21.6	24.2	21.4	22.5	26	26	25	24	13	18	268	
Otto,.....	Schuylkill,.....	26	24	24.8	21.4	22.5	26	26	25	24	13	18	268	
Phoenix Park No. 3,.....	Schuylkill,.....	26	23.1	26	23.6	24	25.8	26	24.1	24	23	18	283	
Glendower,.....	Schuylkill,.....	29	23	25	9.9	24	24.7	24	25	29.9	29.5	16	255	
Wadesville,.....	Schuylkill,.....	20.1	18.3	20.7	23.7	22.3	24.7	23.1	22	21.1	20.6	16.9	255	
Pine Knot,.....	Schuylkill,.....	20.1	18.3	20.7	23.7	22.3	24.7	23.1	22	21.1	20.6	16.2	250	
Averages,.....	.....	25.2	22.6	24.5	20.7	23.3	25.2	25.3	24.7	23.1	20.9	17.4	271	
Leisenring and Co.,.....	Schuylkill,.....	18.6	23.3	20.8	22.6	20.8	23.1	23.2	20.3	20.4	21.5	19.7	256	
Oak Hill,.....	Schuylkill,.....	18.6	23.3	20.8	22.6	20.8	23.1	23.2	20.3	20.4	21.5	19.7	256	
Pine Hill Coal Co.,.....	Schuylkill,.....	17.2	19.9	21.5	22	21.5	21.4	18.2	19.4	20.1	19.5	17.6	238	
Buck Run colliery,.....	Schuylkill,.....	24.5	20.8	22.9	23.5	22	23.8	22.3	23.3	21.7	20.9	16.3	260	
Buck Run Coal Co.,.....	Schuylkill,.....	24.5	20.8	22.9	23.5	22	23.8	22.3	23.3	21.7	20.9	16.3	260	
Darktown Coal Co.,.....	Schuylkill,.....	.....	.....	.....	.....	.....	.....	.....	22.1	22.5	21.5	29.3	105	
Roberts colliery,.....	Schuylkill,.....	.....	.....	.....	.....	.....	.....	.....	22.1	22.5	21.5	29.3	105	
Lytile Coal Co.,.....	Schuylkill,.....	19.9	16.7	17.2	18.2	18.7	20.8	20.7	19.2	17.1	23.2	21.7	236	
Lytile colliery,.....	Schuylkill,.....	19.9	16.7	17.2	18.2	18.7	20.8	20.7	19.2	17.1	23.2	21.7	236	
St. Clair Coal Co.,.....	Schuylkill,.....	24.2	22	22.3	20	19.8	24.3	24.8	24.6	23.7	23	20.1	268	
St. Clair colliery,.....	Schuylkill,.....	24.2	22	22.3	20	19.8	24.3	24.8	24.6	23.7	23	20.1	268	
Silverton Coal Co.,.....	Schuylkill,.....	20	21.6	21.1	20.7	15.9	21.2	20.6	19.2	20.1	18.5	16.3	221	
Silverton colliery,.....	Schuylkill,.....	20	21.6	21.1	20.7	15.9	21.2	20.6	19.2	20.1	18.5	16.3	221	
East Ridge Coal Co.,.....	Schuylkill,.....	18.5	16.3	18.3	18.7	14.8	21.8	21.4	21	18.4	18.4	14.6	218	
East Ridge colliery,.....	Schuylkill,.....	18.5	16.3	18.3	18.7	14.8	21.8	21.4	21	18.4	18.4	14.6	218	

\*No time reported by company.

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Davis Brothers Ellsworth colliery, .....	Schuykill, .....	23.9	26.1	22.5	27.3	23.6	25	24.7	26	24	14	21.3	19	282
E. C. White and Co. Howard colliery, .....	Schuykill, .....	24.8	19.6	22.3	21.3	19.6	23.6	23.2	18.1	23.7	18	20.8	18.8	255
Mt. Hope Coal Co. Mt. Hope colliery, .....	Schuykill, .....	23	21	18	18	1	1	21	22	20	20	16	6	187
Losch, Snyder and Co. Lorberry colliery, .....	Schuykill, .....	19	20	18	16	.....	14	22	21	21	19	17	10	197
Black Diamond Anthracite Coal Co. Black Diamond, .....	Schuykill, .....	†	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Averages, .....	.....	22	20.8	20.9	20.7	18.3	20.4	22.3	21.5	21.2	19.9	18.4	17.2	231

†Breaker under construction.

TABLE 3—Recapitulation

Philadelphia and Reading Coal and Iron Co., .....	Schuykill, .....	25.2	22.6	21.5	20.7	23.3	25.2	25.3	24.7	23.1	20.9	17.4	17.9	271
Lehigh and Co., .....	Schuykill, .....	18.6	22.3	20.8	23.6	20.8	23.1	23.2	20.3	20.4	21.5	19.7	21.7	256
Black Hill Co., .....	Schuykill, .....	17.2	19.9	21.5	22	21.5	21.4	18.2	19.4	20.1	19.5	17.6	19.5	228
Buck Run Coal Co., .....	Schuykill, .....	24.5	20.8	22.9	23.5	22	23.8	22.2	22.3	21.7	20.9	16.3	18.6	260
Dankwater Coal Co., .....	Schuykill, .....	.....	.....	.....	.....	.....	.....	.....	22.1	22.5	21.5	20.3	19	105
Lytle Coal Co., .....	Schuykill, .....	19.9	16.7	17.2	18.2	18.7	20.8	20.7	19.2	17.1	21.2	21.7	22.7	236
St. Clair Coal Co., .....	Schuykill, .....	22	22.3	20	19.8	24.3	24.8	24.8	21.6	23.7	23	20.1	19.1	288
Silverton Coal Co., .....	Schuykill, .....	24.0	21.6	21.1	20.7	15.9	21.2	20.6	19.2	20.1	18.5	16.3	15.6	271
East Ridge Coal Co., .....	Schuykill, .....	18.5	16.3	18.3	18.7	14.8	21.8	21.4	21	18.4	18.4	14.6	15.3	252
Davis Brothers, .....	Schuykill, .....	28.9	26.1	22.5	27.3	23.6	25	24	20	24	14	20.3	18.8	382
E. C. White and Co., .....	Schuykill, .....	24.8	19.6	22.3	21.3	19.6	23.6	23.2	18.1	23.7	18	20.8	18.8	255
Mt. Hope Coal Co., .....	Schuykill, .....	23	21	18	18	1	1	21	22	20	20	16	6	187
Losch, Snyder and Co., .....	Schuykill, .....	19	20	18	16	.....	14	22	21	21	19	17	10	197
Averages, .....	.....	22	20.8	20.9	20.7	18.3	20.4	22.3	21.5	21.2	19.9	18.4	17.2	231

TABLE 4.—Twelfth Anthracite District, 1903  
Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 2	Joseph Procup, .....	Slavonian, ..	Miner, .....	36	M.	1	2	Oak Hill, .....	Schuylkill, ..	These three men were provided with a case of dynamite to be used among four of them, each one carrying it in his turn. Michael Onder was the last seen with it, but it is supposed he dropped it when he fell, causing it to explode, killing the three.
1	Michael Onder, .....	Slavonian, ..	Miner, .....	35	M.	1	4	Oak Hill, .....	Schuylkill, ..	
2	Andrew Onder, .....	Slavonian, ..	Miner, .....	30	M.	1	2	Oak Hill, .....	Schuylkill, ..	
17	Dominick Wheel (alias Vitallo), .....	Italian, .....	Miner, .....	33	M.	1	...	Pine Hill, .....	Schuylkill, ..	Killed by fall of rock. He was about to quit work for the day, when a piece of rock fell, killing him instantly.
20	John Karak, .....	Slavonian, ..	Car loader, ..	23	S.	...	...	Otto, .....	Schuylkill, ..	Fatally injured. Caught between branch chute and side of car door. Died January 21.
Feb. 6	Adam Miller, .....	American, ..	Shaft topman	25	S.	...	...	Brookside, .....	Schuylkill, ..	Killed by falling down shaft. Killed by being caught by sprocket wheel of elevator.
16	Richard G. B. Adams, ..	American, ..	Oiler, .....	17	S.	...	...	Buck Run, .....	Schuylkill, ..	
16	Michael J. Murphy, ....	American, ..	Fire boss, ..	45	M.	1	4	Lyle, .....	Schuylkill, ..	Fatally injured by falling down slope. Died the next day.
16	Peter Miller, .....	German, .....	Miner, .....	60	M.	1	...	Good Spring, .....	Schuylkill, ..	Killed by fall of slate at face of breast. Killed by fall of slate in breast.
27	Charles Robinson, .....	American, ..	Miner, .....	52	M.	1	...	Brookside, .....	Schuylkill, ..	
March 21	Christ Maurer, .....	American, ..	Miner, .....	52	S.	...	...	Good Spring, .....	Schuylkill, ..	Killed by falling down manway in breast. Killed by fall of rock in breast.
21	John Chervauk, .....	Slavonian, ..	Laborer, .....	38	M.	1	6	St. Clair, .....	Schuylkill, ..	
April 15	George Alabuda, .....	Lithuanian, ..	Miner, .....	40	M.	1	2	Lyle, .....	Schuylkill, ..	Killed by fall of coal in breast. Killed by fall of coal at gangway face.
15	Louis Trasetta, .....	Italian, .....	Miner, .....	27	M.	1	1	Phoenix Park, .....	Schuylkill, ..	
29	William Wythe, .....	American, ..	Miner, .....	29	M.	1	3	Oak Hill, .....	Schuylkill, ..	Killed by fall of rock in breast. Killed by fall of slate.
2	Edward Frank, .....	American, ..	Miner, .....	26	M.	1	1	Oak Hill, .....	Schuylkill, ..	
May 2	Martin Wanok, .....	Slavonian, ..	Miner, .....	30	M.	1	1	Wadesville, .....	Schuylkill, ..	Killed by fall of rock in breast. Killed by fall of slate.
5	Martin Manakowski, ..	Polish, .....	Laborer, .....	38	M.	1	3	Silverton, .....	Schuylkill, ..	
16	Evan Hummel, .....	American, ..	Laborer, .....	20	S.	...	...	Good Spring, .....	Schuylkill, ..	Fatally injured by being caught between mine car and top slate.
June 5	George Smith, .....	American, ..	Laborer, .....	22	S.	1	...	Lincoln, .....	Schuylkill, ..	Killed by fall of rock on gangway. Killed by fall of coal. Killed by fall of slate.
10	George Fester, .....	American, ..	Miner, .....	21	M.	1	1	Brookside, .....	Schuylkill, ..	
15	Herman Nehanky, .....	German, .....	Miner, .....	52	M.	1	4	Brookside, .....	Schuylkill, ..	

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
July 18	David Richards, .....	American, ..	Driver, ..	20	S. ....	.....	.....	Lytle, .....	Schuylkill, ..	Fatally injured. Struck by backboard on car while ascending the slope.
29	Edgar Clark, .....	American, ..	Spragger, ..	18	S. ....	.....	.....	Silverton, .....	Schuylkill, ..	Killed by being caught between mine car and timber.
29	Joseph Yeneric, .....	Lithuanian, ..	Miner, .....	43	M. 1	4	.....	Oak Hill, .....	Schuylkill, ..	Killed by fall of coal while working at face of breast.
Aug. 14	Frank Chicks, .....	Polish, .....	Loader, .....	18	S. ....	.....	.....	Pine Hill, .....	Schuylkill, ..	Killed by being caught between mine cars.
15	William O'Brien, .....	American, ..	Tip man, ..	18	S. ....	.....	.....	Buck Run, .....	Schuylkill, ..	Spine fractured by falling from car tip to ground below. Died September 17.
Nov. 11	Henry Morgau, .....	American, ..	Miner, .....	47	M. 1	4	.....	Good Spring, .....	Schuylkill, ..	Killed by fall of coal.
Dec. 14	William Irving, .....	American, ..	Miner, .....	21	M. 1	3	.....	Otto, .....	Schuylkill, ..	Fatally injured by fall of coal. Died December 15.
15	Abe Frantz, .....	American, ..	Slate picker, ..	14	.....	.....	.....	Roberts, .....	Schuylkill, ..	Killed by shaker shaft.
18	John W. Mahoney, .....	American, ..	Miner, .....	45	M. 1	5	.....	Roberts, .....	Schuylkill, ..	Killed by fall of timber.
18	John Curry, .....	Irish, .....	Miner, .....	45	M. 1	1	.....	Brookside, .....	Schuylkill, ..	Killed by fall of rock at face of breast.
29	Daniel Williams, .....	Welsh, .....	Miner, .....	44	M. 1	.....	.....	Pine Hill, .....	Schuylkill, ..	Killed by fall of slate.

TABLE 5.—Twelfth Anthracite District, 1903  
Non-Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 2	Michael Raynek, .....	Slavonian, ..	Miner, .....	37	M.	Oak Hill, .....	Schuylkill, .....	Face cut by flying timber and coal from dynamite explosion.
2	James Patterson, .....	English, .....	Miner, .....	34	S.	Oak Hill, .....	Schuylkill, .....	Head injured by being struck by mine door.
2	George W. Bowe, .....	English, .....	Miner, .....	45	M.	Oak Hill, .....	Schuylkill, .....	Face cut and internally injured by flying timber and coal from dynamite explosion.
2	John Stanton, .....	Irish, .....	Miner, .....	53	M.	Oak Hill, .....	Schuylkill, .....	Arm bruised and drum of ear injured by flying timber from dynamite explosion.
3	Richard Pryor, .....	Welsh, .....	Laborer, .....	62	M.	St. Clair, .....	Schuylkill, .....	Head cut. Struck by shaker cam.
9	Joseph August, .....	Welsh, .....	Miner, .....	45	M.	Otto, .....	Schuylkill, .....	Severely injured about the body by fall of coal.
12	Jacob Eisenacher, .....	American, ..	Miner, .....	35	M.	Good Spring, .....	Schuylkill, .....	Leg broken by fall of coal.
16	Richard McCormick, .....	Irish, .....	Engineer, .....	65	M.	Wadesville, .....	Schuylkill, .....	Ribs and collar bone fractured. Caught between water tanks and girder.
21	Patrick Hobin, .....	American, ..	Miner, .....	40	M.	Glendower, .....	Schuylkill, .....	Foot fractured by run of coal.
22	Irvin Strause, .....	American, ..	Loader, .....	25	M.	Lincoln, .....	Schuylkill, .....	Leg broken by fall of coal.
28	John Kelly, .....	American, ..	Driver, .....	19	S.	Lytle, .....	Schuylkill, .....	Wheels of mine car being caught beneath locomotive boiler.
30	Joseph Evans, .....	American, ..	Engineer, .....	38	M.	St. Clair, .....	Schuylkill, .....	Shoulder blade fractured by explosion of locomotive boiler.
30	William Albright, .....	American, ..	Locomotive helper, ..	23	M.	St. Clair, .....	Schuylkill, .....	Injured by explosion of locomotive boiler.
Feb. 5	Michael Hardeck, .....	Slavonian, ..	Loader, .....	21	S.	Lytle, .....	Schuylkill, .....	Ribs broken by falling on mine car from chute.
6	Wash. Shaffer, .....	American, ..	Miner, .....	50	M.	Ruck Run, .....	Schuylkill, .....	Collar bone broken by fall of coal.
20	Thomas F. Brennan, .....	Irish, .....	Timberman, .....	65	M.	Phoenix Park, .....	Schuylkill, .....	Foot crushed by fall of coal.
21	Roman Bender, .....	American, ..	Door boy, .....	17	M.	Brookside, .....	Schuylkill, .....	Leg broken. Caught between mine cars.
27	Harry Slimko, .....	Hungarian, ..	Laborer, .....	28	M.	St. Clair, .....	Schuylkill, .....	Leg broken. Walked under descending cage at breaker.
27	Fuity Moser, .....	Polish, .....	Miner, .....	30	S.	Oak Hill, .....	Schuylkill, .....	Foot injured between cars.
March 2	Adam Koons, .....	German, .....	Engineer, .....	50	M.	Richardson, .....	Schuylkill, .....	Arm broken by falling from railroad car to ground.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
March 3	William Kopp, .....	American, .....	Miner, .....	25	M.	Brookside, .....	Schuylkill, .....	Ankle bruised by fall of coal.
5	John Maluskey, .....	Polish, .....	Driver, .....	18	S.	Lytle, .....	Schuylkill, .....	Arm broken; while bumping cars it was caught between breaker.
5	Adam Dearing, .....	Polish, .....	Miner, .....	46	M.	Lytle, .....	Schuylkill, .....	Face and hands burned.
6	John N. Hanger, .....	American, .....	Miner, .....	34	M.	Pine Hill, .....	Schuylkill, .....	Head injured by blast.
10	Thomas Evans, .....	American, .....	Driver, .....	17	S.	Brookside, .....	Schuylkill, .....	Severely injured by being caught between mine car and top rock.
12	Elias Reiner, .....	American, .....	Laborer, .....	25	S.	Brookside, .....	Schuylkill, .....	Finger cut off. Was lifting a collar, when a piece of coal fell, striking his fingers.
14	William Prokus, .....	Slavonian, .....	Miner, .....	30	M.	Wadesville, .....	Schuylkill, .....	Faces and hands burned. Prokus was preparing a shot in heading. When Sodontus came into heading for drill a spark from his lamp ignited the powder.
14	William Sodontus, .....	Slavonian, .....	Miner, .....	32	M.	Wadesville, .....	Schuylkill, .....	Leg broken. Struck by mine door, which was blown open by slight explosion of gas.
14	George Lehniger, .....	American, .....	Fire boss, .....	45	M.	Good Spring, .....	Schuylkill, .....	Arm shattered. Struck by mine car while repairing bell wire on slope.
14	John Farley, .....	American, .....	Pulley man, .....	41	M.	Phoenix Park, .....	Schuylkill, .....	Head and shoulders injured by fall of slate.
16	Richard Lipssett, .....	American, .....	Miner, .....	32	M.	Buck Run, .....	Schuylkill, .....	Leg bruised. Run over by mine car.
16	John Ditchey, .....	Slavonian, .....	Laborer, .....	37	M.	St. Clair, .....	Schuylkill, .....	Leg broken by piece of timber rolling against it.
21	Albert Moyer, .....	American, .....	Laborer, .....	29	M.	Brookside, .....	Schuylkill, .....	Compound fracture of leg. Coal rushed from battery and caught his leg against prop.
27	James Dormer, .....	American, .....	Miner, .....	36	M.	Glendower, .....	Schuylkill, .....	Leg broken. A piece from chute fell on him in breaker.
April 2	Wasley Machesa, .....	Austrian, .....	Laborer, .....	37	M.	St. Clair, .....	Schuylkill, .....	Ankle dislocated. Was working in gangway, when a fall of slate caught him.
3	Andrew Grandey, .....	American, .....	Miner, .....	33	M.	Pine Hill, .....	Schuylkill, .....	Back injured by fall of coal.
14	John Pennollow, .....	Hungarian, .....	Laborer, .....	25	S.	Lytle, .....	Schuylkill, .....	Foot cut by an axe while rounding the timber.
27	William Conrad, .....	American, .....	Miner, .....	34	M.	Lincoln, .....	Schuylkill, .....	Leg broken by fall of coal.
May 12	Charles Wasauski, .....	Lithuanian, .....	Miner, .....	42	M.	Buck Run, .....	Schuylkill, .....	Leg broken by fall of coal.



May	15	Wilson Boyer, .....	American, ..	Miner, .....	30	M.	Good Spring, .....	Schuykill, ....	Body injured. Was overcome by smoke and fell down manway.
	23	Charles Bicht, .....	American, ..	Driver, .....	35	M.	Brookside, .....	Schuykill, ....	Collar bone broken. Caught between car and chute.
June	29	Stephen Marks, .....	Hungarian, ..	Fireman, .....	24	M.	Glendower, .....	Schuykill, ....	Foot broken. Run over by ash cart, car foot mashed. Slipped on rail and car ran over it.
	3	Dennis Goodlick, .....	Polish, .....	Miner, .....	45	M.	St. Clair, .....	Schuykill, ....	Face and hands burned by gas.
	3	Louis Rizzal, .....	Austrian, ..	Miner, .....	17	S.	Otto, .....	Schuykill, ....	Leg broken by fall of top slate.
	9	Thomas Martin, .....	American, ..	Miner, .....	25	M.	Brookside, .....	Schuykill, ....	Hand injured by being caught on car by falling prop.
	16	Thomas Dooley, .....	American, ..	Laborer, .....	58	M.	Brookside, .....	Schuykill, ....	Collar bone broken. Steam pipe fell on him while lifting it on platform.
	16	Joseph Loyd, .....	Polish, .....	Miner, .....	40	M.	Lytle, .....	Schuykill, ....	Toe bruised by fall of coal.
	24	Thomas Grescavage, .....	Slavonian, ..	Miner, .....	42	M.	Wadesville, .....	Schuykill, ....	Bodies bruised by concussion from explosion of gas. They fired a shot, lighting the gas.
	29	George McCullough, .....	Slavonian, ..	Miner, .....	40	M.	Wadesville, .....	Schuykill, ....	Face cut and bruised. Kicked by mule. Head severely injured by fall of coal.
July	29	Edward Hunter, .....	American, ..	Driver, .....	18	S.	Brookside, .....	Schuykill, ....	Arm broken. Struck by mine car.
	30	Patrick Brophy, .....	Irish, .....	Miner, .....	36	S.	East Ridge, .....	Schuykill, ....	Foot bruised. Struck by mine car.
	2	Thomas Evans, .....	Welsh, .....	Footman, .....	36	M.	St. Clair, .....	Schuykill, ....	Leg broken. Caught between a prop and rush of rock in rock chute at breaker.
	2	Charles Dougherty, .....	American, ..	Track layer, .....	42	M.	St. Clair, .....	Schuykill, ....	Body injured. Caught between cage and shaft.
	7	Martin Karnot, .....	Hungarian, ..	Laborer, .....	50	M.	Glendower, .....	Schuykill, ....	Collar bone broken. Caught between car and mine door.
	20	Luke Nolan, .....	American, ..	Fire boss, .....	40	M.	Wadesville, .....	Schuykill, ....	Body injured. Caught between car and mine door.
	25	Henry Austin, .....	American, ..	Driver, .....	28	M.	St. Clair, .....	Schuykill, ....	Body injured. Caught between car and mine door.
	30	William Reed, .....	American, ..	Miner, .....	45	M.	Good Spring, .....	Schuykill, ....	Body injured. Caught between car and plank projecting from chute.
	30	John McGovern, .....	American, ..	Driver, .....	16	S.	Otto, .....	Schuykill, ....	Foot injured by mine car.
Aug.	3	John Curry, .....	Irish, .....	Miner, .....	40	M.	Brookside, .....	Schuykill, ....	Leg bruised between mine cars.
	7	Stiney Deal, .....	Polish, .....	Driver, .....	18	S.	Back Run, .....	Schuykill, ....	Toes cut off. Run over by mine car.
	18	Frank Scheebe, .....	American, ..	Pump engineer, .....	20	S.	Good Spring, .....	Schuykill, ....	Leg broken. Caught between mine car and high side of gangway.
	22	Frank Wendling, .....	American, ..	Door boy, .....	16	S.	Lincoln, .....	Schuykill, ....	Leg broken by fall of coal.
Sept.	27	John Dudah, .....	Slavonian, ..	Miner, .....	26	S.	St. Clair, .....	Schuykill, ....	Arm broken by fall of coal.
	17	William Price, .....	American, ..	Miner, .....	28	M.	Back Run, .....	Schuykill, ....	Leg broken by fall of slate.
	17	Charles Drumbusky, .....	Polish, .....	Miner, .....	30	M.	Pine Hill, .....	Schuykill, ....	Leg broken by fall of slate.
	18	Edward Berger, .....	American, ..	Miner, .....	33	M.	Brookside, .....	Schuykill, ....	Ribs squeezed by fall of coal.
	19	Patrick Britsky, .....	Irish, .....	Miner, .....	33	M.	Brookside, .....	Schuykill, ....	Ribs broken by fall of slate.
	20	Patrick Boney, .....	Irish, .....	Insight foreman, .....	57	M.	Brookside, .....	Schuykill, ....	Body and leg injured by fall of slate.
Oct.	2	John James L. Williams, .....	Welsh, .....	Miner, .....	40	M.	Pine Hill, .....	Schuykill, ....	Body and leg injured by fall of slate.
	3	William L. Williams, .....	Welsh, .....	Miner, .....	40	M.	St. Clair, .....	Schuykill, ....	Leg broken by fall of coal.
	8	Henry Parsell, .....	American, ..	Loader, .....	29	M.	Pine Hill, .....	Schuykill, ....	Back injured by piece of coal rolling down breast.
	16	John Woronick, .....	Polish, .....	Laborer, .....	38	M.	Lytle, .....	Schuykill, ....	Leg broken. Was assisting to move part of new fan, when it slipped and caught his leg.
	17	John Schreffler, .....	American, ..	Miner, .....	33	M.	Pine Hill, .....	Schuykill, ....	Face injured by blast.
	24	John Morgan, .....	American, ..	Miner, .....	28	M.	Wadesville, .....	Schuykill, ....	Eye injured. Struck by point of his pick while trimming off blast.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Oct. 24	Joseph Nero, .....	Polish, .....	Miner, .....	25	S.	Wadesville, .....	Schuykill, .....	Faces and hands burned by explosion of gas. After the explosion two of the safety lamps were found unscrewed, which is evidence they were tampering with lamps.
24	John Yostachock, .....	Polish, .....	Laborer, .....	27	S.	Wadesville, .....	Schuykill, .....	
21	John Norris, .....	Polish, .....	Miner, .....	35	M.	Wadesville, .....	Schuykill, .....	
Nov. 11	John Fisher, .....	American, ..	Miner, .....	31	S.	Silverton, .....	Schuykill, .....	Head injured and eye lost by premature blast.
18	Thomas Leary, .....	American, ..	Driver, .....	19	S.	Lytle, .....	Schuykill, .....	Leg broken. Caught between bumpers of mine cars.
19	John W. Eisenberg, ....	American, ..	Driver, .....	18	S.	Wadesville, .....	Schuykill, .....	Arm broken. Fell under mine car.
Dec. 2	Cyrus Dixler, .....	American, ..	Miner, .....	36	S.	Good Spring, .....	Schuykill, .....	Rib broken by blast. Miner in next breast fired without notifying him.
7	William Miller, .....	American, ..	Oiler, .....	21	M.	Brookside, .....	Schuykill, .....	Body injured by being wound around shaker shaft.
9	Harry Carter, .....	American, ..	Pump engineer, ..	39	M.	Otto, .....	Schuykill, .....	Leg fractured by pump rod rolling on it.
17	John D. Williams, .....	American, ..	Miner, .....	37	M.	St. Clair, .....	Schuykill, .....	Arm fractured by fall of coal.
17	John Williams, Jr., ....	American, ..	Miner, .....	24	S.	Buck Run, .....	Schuykill, .....	Leg injured by piece of rock flying from a blast.
19	Adam Bocavage, .....	Lithuanian, ..	Miner, .....	42	S.	Oak Hill, .....	Schuykill, .....	Body injured by fall of rock.
23	John McAndrew, .....	American, ..	Miner, .....	28	S.	Lytle, .....	Schuykill, .....	Ribs broken by falling down air hole.

## FATAL ACCIDENTS

## By Falls of Coal, Slate and Roof

January 17. Dominick Vitallo, miner at Pine Hill Colliery, was working in a breast and had the breast about finished, and was about to quit work for the day, when a fall of rock from a roll in the face of breast fell without warning, injuring him severely. He died next day.

February 16. Peter Miller, a miner at Good Spring Colliery, was engaged drilling a hole at the face of breast when a piece of slate fell, killing him.

February 27. Charles Robinson, miner at Brookside Colliery, was down the breast starting the coal which was blocked in the chute, when the coal started and a lump struck a prop near by, causing a piece of rock to fall from over the prop, killing him.

March 21. John Chervaurk, a laborer at St. Clair Colliery, and his miner, were working in a breast. There was a piece of loose rock at the face and they both tried to pull it down, but failed. The miner told his laborer not to go near it until he fired another hole from beneath it, but the warning was not heeded. He told the miner he was no greenhorn. He did not work long before it fell, catching and killing him.

April 6. George Alabuda, miner at Lytle Colliery, was engaged robbing pillars. He had drilled and charged two holes, one in the top and bottom benches. He fired the bottom one, went back to see what it had done, and while examining it the top coal that he had the second hole drilled in fell on him, killing him.

April 15. Louis Trasetta, a miner at Phoenix Park, was working with a pick in the gangway face under a piece of top coal, when it fell on him killing him. His buttie said he had tried to pull it down several times and failed.

April 29. William Wythe and Edward Frank, miners, were working together in a breast at Oak Hill Colliery. They went down for dinner and shortly after returning to face were killed by a fall of rock which had formed in the shape of a V. From the position in which one of them was found, it would seem that he was getting ready to prop the rock.

May 2. Martin Wanok, a miner at Wadesville Colliery, was engaged robbing pillars in big vein. When he commenced work in the morning, the place appeared quiet. He was working but a short time when a fall of coal occurred, killing him instantly.

May 5. Martin Manakowski, a laborer at Silvertown Colliery, was working with timber men cleaning up a fall on the gangway W. Tunnel vein, No. 3 level Black Mine Slope, when a piece of slate 18 inches square by 2 inches thick fell on him and killed him.

June 5. George Smith, a laborer, was employed with two others at Lincoln Colliery making a turnout in No. 2 slope. They fired a blast in a roll of rock which crossed the turnout, and the miner says he examined the top after the blast and found a piece bad and told the other men to keep from under it until he could drill a hole in it. They commenced cleaning up to get the car in to make a platform on which to stand in order to drill this hole. The miner was breaking a piece of rock with a hammer, and in order to avoid the small pieces that were flying from the hammer, Smith stepped out of the way and stood beneath the bad piece, when it fell on him and killed him.

June 10. George Feaster, a miner at East Brookside Colliery, was engaged robbing pillars. He went into a pillar heading to commence a new section and it is supposed he attempted to remove some laggings from high side of heading, which caused the pillar to run and cover him and partly cover his butt. It was several hours before they were liberated. Feaster was dead, but his butt was unhurt.

June 15. Herman Nehanky, a miner working in a breast at Brookside Colliery, was prying down a piece of top coal when a piece of slate fell on him, killing him.

July 29. Joseph Yeneric, a miner at Oak Hill Colliery, was working in a breast. He had fired one blast in the opening of a pillar heading and was in the act of trimming off the loose pieces when a piece of top coal from the upper side of heading fell on him, killing him.

November 11. Henry Morgan, a miner at Good Spring Colliery, was trimming down loose coal at face of breast, after blasting, when a piece gravitated from a back slip that reached partly across the face, and killed him.

December 14. William Irving, a miner at the Otto Colliery, was prying down a lump of coal in his breast that hung along the pillar. He tried to pull it from the upper side but failed, he then went below it and attempted to pry a few pieces from beneath it. It fell on him fatally injuring him. He died next day.

December 18. John Curry, a miner was killed at No. 4 Slope, Brookside Colliery. He was engaged with three others in robbing pillars. He and his butt went to the gangway to have lunch and when they returned his other two partners who had remained at the pillar told him the place was working. Curry and Stackum, the other miner, went in to examine the place. Curry picked up a drill, sounded the roll which reached across the face and pronounced it good. About three minutes afterward it fell, killing him. The pick in Stackum's hand was broken in his attempt to escape. The rock was too large to determine accurately by sounding, whether or not

it was safe to work beneath it. There were twenty cars or more in the face.

December 29. Daniel Williams, a miner at Pine Hill Colliery, was working in a chute in West Skidmore No. 1 counter in the shaft. He came down from chute and went into the face of counter gangway to get buggy to buggy coal from his chute. This gangway is crossing old breasts and was holed full width into one, the top slate of which had fallen across the breast to the thickness of 8 or 9 inches in line with the face of the gangway, leaving a piece hanging over the gangway face. The gangway man sounded this piece and concluded it was solid but did not like its appearance and was cleaning up the coal with the intention of timbering beneath it, when Williams approached him and spoke a few words when the piece fell killing him. The gangway man made a narrow escape.

#### By Cars

May 16. Evan Hummel, a laborer at Good Spring Colliery, was driving a mule after quitting time. He had 6 empty cars attached to the mule, 3 cars being a regular trip. The mule commenced kicking, and in trying to avoid coming in contact with the mule's hoofs he moved from the front to the side of the car and was caught between top slate and car. Died May 23 at Miners' Hospital.

July 29. Edgar Clark, a spragger at Silverton Colliery, jumped on empty trip of cars that were being hauled on turnout at bottom of slope, to uncouple a side chain. After uncoupling the chain he either fell under the cars or was knocked under by coming in contact with high side leg of turnout timber, and was fatally injured.

#### By Explosions

January 2. Joseph Procup, Michael Onder, Andrew Onder, three miners at Oak Hill Colliery, on January 2, procured a case of dynamite to be divided equally among four miners, the representatives of two breasts. They carried the dynamite in their turn until they reached a point where both sets of men were to separate to go to their places of work. It is supposed that one of the men used a pick to open the case to divide the dynamite and thereby caused it to explode, mangling the three men beyond recognition.

#### By Falling Down Shafts, Slopes, Etc.

February 6. Adam Miller, top man at East Brookside Shaft, was assisting to lower timber blocks down the shaft. He removed the bucket from the truck and put his foot to one end of the truck and

his arm around the shaft guide to push it off. In moving the truck, he reached his full length in over the shaft. While attempting to regain his footing, he fell down the shaft and was killed.

February 16. Michael J. Murphy, fire boss at Lytle Colliery, was working by night. He got on the car at bottom of inside slope to ascend the slope, the car jumped the track, throwing him down the slope. He was found at bottom with his skull fractured. He died next day at the Pottsville Hospital.

March 21. Christ Maurer, a miner at Good Spring Colliery, and his partner had fired two blasts in the face of breast, and on retiring from the blasts each man went down his own manway. Maurer's manway being the upcast, he was the first to return to face. He went back too soon. Maurer's blast did not do the work expected. It blew out on a slip thereby leaving a large cavity which the air did not reach and likely contained a quantity of carbonic oxide gas. Maurer must have put his head and body into this cavity and was overcome by the smoke and gas and fell down the manway and was killed.

#### Miscellaneous

July 18. David Richards, a driver at Lytle Colliery, was waiting for an empty trip at the bottom of underground slope. The empty car descending, was nearing the bottom. Seeing the footman engaged eating his lunch and being of liberal nature, he went to bottom and while waiting to throw the spreader chain from the car, the back-board used for retaining the coal in the car while ascending the slope, somehow or other, worked its way out over the back of the car, striking him and fatally injuring him.

#### Outside—By Cars

August 4. Frank Chicco, a loader at Pine Hill Colliery, with two others, was on the gangway going home from work when they heard the motor with a trip of loaded cars coming out. They stepped to one side to let the trip pass. The motor with four cars passed, when Chicco jumped the rear end of the fourth car, thinking it was last car of trip. Inside, part of the trip had become detached and followed close behind the first part. It caught up to the first section and squeezed him between the bumpers. He died next day at Miners' Hospital.

#### By Machinery

January 20. John Karak, a car loader at Otto Colliery, was inside of a box car that was being loaded, shovelling back coal. The coal train conductor ran a box car in on the siding, the car began to

gain speed, he applied the brakes, but the rails being frosty, the brakes failed to work effectively. The car bumped a car that was being loaded, catching Karak between a branch chute that extended into the car and the side of the car door, killing him.

February 16. Richard G. V. Adams, an oiler at Buck Run Colliery, was making his rounds oiling the machinery. For some cause unknown, he got over the fencing that guarded the machinery and was caught in the sprocket wheel of the elevator and killed.

September 15. William O'Brien, tip man at Buck Run Colliery, was leaving for home at quitting time. He went by a short cut under the car track and at the tip he jumped to a plank below. The plank broke precipitating him to the ground fracturing his spine. He died in Miners' Hospital.

December 15. Abe Frantz, a slate picker at Roberts Colliery, noticed the pea coal chute was blocked, and informed the breaker boss of it. He was told that there was a boy there for starting the coal. Contrary to orders he went to the chute, but was called back. As he returned he was caught by the shaker shaft and killed.

December 18. John W. Mahoney, a miner employed outside at Roberts Colliery, was blasting a side cut for mine car track from stripping to breaker. He drilled a seven foot hole at an angle of about 70 degrees, placed the greater part of a stick of dynamite in the hole and exploded it with the intention of springing the hole. A short time afterwards, he poured the greater part of a keg of black powder into the hole, and did not place any tamping or covering over the powder, with the exception of the tamping stick which he let lie loosely on it, while igniting the fuse. The blast was exploded by a spark from the match or fuse dropping into the hole. He was killed instantly.

#### THE CONDITION OF COLLIERIES

The sanitary condition of the Philadelphia and Reading Coal and Iron Company's mines is exceptionally good. The company operates the following collieries:

Wadesville, Glendower, Phoenix Park, Otto, Good Spring Nos. 1 and 3, Brookside and Lincoln.

#### LYTLE COAL COMPANY

##### Lytle Colliery

The sanitary condition of this colliery is good with the exception of Skidmore Plane. A new 18 foot fan is in course of erection and when running will improve the condition of the ventilation at this

colliery. The ill effects of 1902 strike have not as yet been overcome at this colliery. Great credit must be given the management for the rapidity and care exercised in surmounting the obstacles caused by the strike. Numerous gangways and airways were closed tight and the company has been constantly engaged in reopening them, but has not yet reached the face of some of them. The Skidmore gangway is one of this number. Not one accident can be traced to the work of reopening.

#### LEISENRING AND COMPANY

##### Oak Hill Colliery

The sanitary condition of this colliery is good, with the exception of drainage of East Skidmore, north basin gangway, which is bad. Credit is due the management and operator of this colliery for the speed and care exercised in removing the water and opening up the gangways and airways that were closed during the strike. Although unfortunate in having a large list of fatal accidents, not one of them can be attributed to this cause.

#### SILVERTON COAL COMPANY

##### Silverton Colliery

The sanitary condition of this colliery is good with the exception of West Black Mine, gangway No. 3 dip. The Company is opening and will have finished in a short time, a new outlet to the fan. When completed, I have no doubt it will considerably improve the ventilation.

#### ST. CLAIR COAL COMPANY

##### St. Clair Mine

The sanitary condition of this mine is good.

#### BLACK DIAMOND ANTHRACITE COAL COMPANY

##### Black Diamond Mine

The sanitary condition of this mine is good.

#### EAST RIDGE COAL COMPANY

##### East Ridge Mine

The sanitary condition of this mine is good.



## DAVIS BROTHERS

## Ellsworth Mine

The sanitary condition of this mine is good.

## E. C. WHITE AND COMPANY

## Howard Mine

The sanitary condition of this mine is good.

## MT. HOPE COAL COMPANY

## Mt. Hope Mine

The sanitary condition of this mine is good with the exception of the big vein workings, which in my opinion, owing to the condition of the same, are hard to ventilate, they having been worked over and over again by different parties, and the coal being more or less crushed. I found in the beginning of the year that the ventilation in the Seven Foot vein was not what it should be, and after consulting with Mr. Kynor, the superintendent, on the matter, he neither lost time nor spared money to improve it. There is at present a new 12 foot fan running on this vein and giving good satisfaction.

## BUCK RUN COAL COMPANY

## Buck Run Mine

The sanitary condition of this mine is good.

## PINE HILL COAL COMPANY

## Pine Hill Mine

The sanitary condition of this mine is good, with the exception of the East Red Ash gangway in shaft, the drainage of which is bad. Though being in bad condition it does not reflect any discredit upon the management. The gangway is being robbed and will be finished in a short time. The track heaves a great deal and causes unlimited trouble and expense. There being but a few men at work in this gangway, and the limit of work being of small area, the expense incurred under the circumstances would hardly be necessary.

## LOSCH, SNYDER AND COMPANY

## Lorberry Colliery

This colliery has been idle the greater part of the year and is at present drowned.

## Improvements

## PHILADELPHIA AND READING COAL AND IRON COMPANY

## Otto Colliery, West Slope

A tunnel has been driven through saddle at No. 50 breast in the east top bench gangway. Length of tunnel is 575 feet. A continuation of the same tunnel has been driven from the top to the bottom bench of mammoth vein, a distance of 60 feet.

The main tunnel near the bottom of slope has been extended from the top to the bottom bench of mammoth vein, also an air tunnel to ventilate the same.

## Swatara Basin Slope

A tunnel has been driven through saddle from southern to northern basin, length 182 feet.

A tunnel has been driven on the top of No. 1 plane from bottom to the top bench of mammoth vein, length 115 feet.

A tunnel is now being driven in West Skidmore water level gangway to Buck Mountain vein. At present writing it has been driven 100 feet.

## Pine Knot Shaft

The Pine Knot Shaft has been sunk 752 feet during the year. The depth of shaft at end of year was 1,017 feet.

## Wadesville Colliery

A plane has been driven on West Holmes vein gangway 765 feet long, from which there will be worked 2 lifts of the Holmes, Primrose and Orchard veins. The rope will be run through an 8 inch bore hole from the surface to handle the coal on this plane.

## Middle Creek Colliery

The breaker has been remodeled into a washery and the coal in the old banks will be reclaimed.

### Good Spring Colliery

No. 1 Slope.—One (1) trial slope on No. 2 Lykens Valley vein has been sunk to a depth of 121 yards and stopped.

Mammoth vein tender slope has been sunk from second lift to third lift, a distance of 305 feet, making total length of slope to date 1,081 feet.

No. 3 Slope.—One (1) steam pipe bore hole 8 inches in diameter has been sunk to pump house on second lift, the depth of which is 447 feet.

A second steam pipe hole is now being sunk and has reached a depth of 132 feet.

One tunnel from Mammoth to Skidmore vein, second lift, 49 1-3 yards long.

One 18 foot standard fan has been erected to ventilate second lift workings.

### Lincoln Colliery

The first coal dumped in new breaker was on June 22, 1903, and the old breaker abandoned July 1, 1903.

One set standard return tubular boilers, 18 feet long 6 feet in diameter, was erected.

One complete new fan blast plant has been erected.

One tunnel, fourth lift, No. 2 slope west, No. 5 vein gangway from No. 5 to No. 4 vein, 150 feet long.

Two new blocks of miners' houses 2½ stories high have been built.

### West Brookside Colliery

One tunnel on third lift basin, slope west gangway from No. 5 to No. 4 vein, 37 1-3 yards.

One tunnel on third lift basin, slope west gangway from No. 5 to No. 4 vein, 34 yards.

One tunnel on fifth lift basin, slope west gangway from No. 5 to No. 4 vein, 48 yards.

### East Brookside Colliery

The water and coal shaft had reached a depth of 1,061 feet, December 31, 1903.

One pair direct acting engines 24 inch cylinder, 5 foot stroke, has been placed in position to complete the sinking of shaft.

### LYTLE COAL COMPANY

#### Lytle Colliery

A new air shaft was sunk 60 feet deep from surface to Big Tracey

vein, connecting with an airway driven in the Tracey seam from the second level.

A new 18 foot reversible fan built of concrete and iron has been erected over the Tracey airway.

Second level, a tunnel has been driven from Big Tracey to Little Diamond, east and west of the shaft, a distance of 160 feet and 155 feet respectively. These two tunnels were driven to make connection to cross from the east to west side of the shaft.

A tunnel has been driven from the Big to the Little Tracey, a distance of 145 feet. Air tunnel from the Big Tracey to the Big Diamond is being driven, and is now in 100 feet.

Fourth level, a tunnel has been driven from the Big Diamond, cutting the Little Diamond at a distance of 126 feet.

Fifth level, a tunnel has been driven from White Ash cutting 4 foot vein at a distance of 40 feet. An air tunnel has been driven from Primrose, cutting the Holmes at a distance of 78 feet.

A tunnel has been driven from Big Diamond south dip, cutting the Big Diamond on the north dip at a distance of 350 feet.

A double track tunnel has been completed from the Orchard to the Big Diamond vein, a distance of 285 feet, 120 feet of which have been driven this year.

A tunnel has been driven from the Diamond to the Orchard 190 feet. They expect when it is completed it will be 400 feet long.

#### BUCK RUN COAL COMPANY

##### Buck Run Colliery

There has been an inside slope sunk on the Crosby vein, a distance of 358 feet, on an angle of 46 degrees. A tunnel has been started north to the Daniel vein and gangways turned east and west on the Crosby.

#### DARKWATER COAL COMPANY

##### Roberts Colliery

Roberts Colliery, formerly under control of the Darkwater Coal Company, is now operated by the Buck Run Coal Company. A new breaker which, when completed, will have a capacity of 400 tons, is being erected. New slopes are being sunk in the Skidmore vein in the back basin and the lower bench of the Mammoth.

#### THE ST. CLAIR COAL COMPANY

The inside Buck Mountain slope has been extended at the drift workings to a depth of 1,430 feet.

There has been erected a blacksmith, carpenter and machine shop

on the site of the one burned down last September, and also an iron engine house at head of dirt plane to replace the one burned down last October.

They have constructed two new dams a short distance above the shaft boiler house, and have laid a two-mile line of 6 inch cast iron pipe to convey water from the dams to the boiler house at the breaker.

There has been considerable work in the way of improving the electric plant. They have added a 24x22 inch McEwen engine of 450 horse power, running 190 revolutions per minute, which is directly connected to an 8 pole Fort Wayne generator of 278 K. W., and will give a total haulage output of 1,400 amperes at 275 volts; also a new switch board to accommodate the instruments rendered necessary by the new unit.

The small engine running the light dynamo has been replaced with a new 80 horse power McEwen engine.

Another 8 ton electric locomotive has been placed in the drift slope workings.

An electric pump of the 3 plunger vertical style, having a capacity of 50 gallons per minute at 325 feet vertical, has been placed at the bottom of the new inside slope.

A large drum electric hoist has been installed to hoist on the inside plane at the tunnel workings.

#### SILVERTON COAL COMPANY

##### Silverton Colliery

A tunnel has been driven direct from the bottom of Salem slope to South Salem vein 511 feet.

A tunnel has been driven from second lift of Black Mine slope 223 feet long to the first and second dip of Tunnel vein.

A tunnel has been driven in the water level drift from the first to the second dip of the Salem vein.

#### BLACK DIAMOND ANTHRACITE COAL COMPANY

The slope reported last year is completed at a distance of 340 feet at an average angle of 32 degrees. The west gangway has been extended from the slope 1,200 feet. The east gangway has been extended 450 feet. When it reaches a point 750 feet east of the present slope, a permanent slope will be put down.

The breaker, the foundation of which was reported to be under course of construction last year, is near completion and is expected to resume work in the near future. Its capacity will be 1,500 tons per day.

A narrow gauge railroad connecting the slope with trestle plane, and that connecting with breaker is about to be constructed. A small locomotive, 36 inch gauge, will supply the motive power.

A commodious office and supply house building, a blacksmith and carpenter shop and boiler house have been erected during the year.

### Mine Foremen's Examinations

The annual examinations of applicants for mine foremen and assistant mine foremen certificates of qualification were held in the court house, Pottsville, April 28 and 29, and August 25, 26, 27 and 28. The board consisted of Michael J. Brennan, inspector, Pottsville; John Maguire, superintendent, Pottsville; Fred. Osman, miner, Newtown; Jacom Amos, miner, Branchdale, and the following persons were recommended for certificates:

#### Mine Foremen

Evan C. Jones, St. Clair.

#### Assistant Mine Foremen

Michael J. Ward, Minersville; Henry Adams, Minersville; Irvin Daubert, Llewellyn; John O'Brien, Heckscherville; John H. Augustine, Llewellyn; Michael O'Brien, Heckscherville; Martin Dougherty, St. Clair; Patrick J. McCullough, St. Clair; Irvin A. Lasch, Minersville; James F. Haley, Joliett; Daniel J. Farley, Tower City; Samuel W. Miller, Tremont; David J. Williams, Joliett; John E. Davy, Llewellyn; George H. Godfrey, Minersville; William Shearstone, Minersville; Oliver Zerby, Llewellyn; Luke Nolan, Wade; Joseph H. Evans, Peoples; Rudolph J. Schneider, Reinerton; Charles E. Shoffstall, Minersville; Louis Steinman, Llewellyn; Jacob Bittinger, Tremont; Arthur Hughes, Heckscherville; Richard Foran, Minersville; H. H. Adams, Tower City; James Sweeney, Duncott; William Keiser, Reinerton; Irvin Zimmerman, Llewellyn; Frank H. Schneider, Reinerton; Richard Birch, St. Clair; Jacob Hoppstetter, Minersville; Charles Maurer, Tower City; Henry J. Murphy, Tower City; Harry L. Kopp, Tower City; George M. Latshaw, Tower City; John J. McAndrew, Minersville; John Farrell, Tower City; Adam Williams, Joliett; Michael Close, Heckscherville; David Hughes, Minersville; John J. Cavanaugh, Good Spring; Daniel P. McGinley, Tremont; George Myers, Reinerton; John J. Kelley, Wade; Evan D. Jenkins, Wade; Leonard F. Schmidt, Minersville; Samuel Clark, Joliett; William Davis, St. Clair; William H. Smith, Tower City; John Charles, Minersville; Thomas O'Boyle, Glen Carbon; Elias Schreffler,

Joliett; William A. Shoffstall, Joliett; Ferdinand Richter, Joliett; Michael Appleby, Branchdale; Samuel Evans, Minersville; William E. Minnig, Joliett; William F. Flannery, St. Clair; Henry Seeber, Pottsville; James J. Burns, St. Clair; Nicholas Curran, Glen Carbon; James J. Brennan, Branchdale; William J. Lipsett, Heckscherville; Thomas F. English, Donaldson; Timothy J. Lyons, Joliett; John N. Eichenberg, Duncott; Thomas B. Conway, Joliett; James Connelly, Branchdale; George Athey, Donaldson; Thomas Tobin, Glen Carbon; Patrick J. Smith, Wade; Frank B. Reilly, Minersville; Edward O. Williams, St. Clair; John James, Minersville; James Moran, Minersville; Joseph Lloyd, Minersville; John Dougherty, Minersville; Charles Rumberger, Joliett; Salathiel Harris, Minersville; John Weideshold, Minersville; Christopher Ward, Minersville.





# Thirteenth Anthracite District

SCHUYLKILL COUNTY

---

Pottsville, Pa., March 1, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of herewith submitting my first annual report as Inspector of Mines for the Thirteenth Anthracite District for the year 1903.

It contains the usual tabular statements of mine accidents, the number of each class of employes, the quantity of coal produced, a brief description of the sanitary condition of the collieries, the improvements made in the past year, and other useful information.

Respectfully submitted,

JOHN CURRAN,  
Inspector.

## Thirteenth Anthracite District, 1903

## SUMMARY OF STATISTICS

Number of mines in district, .....	22
Number of mines in operation, .....	22
Number of tons of coal produced, .....	3,476,312
Number of tons shipped to market, .....	3,029,463
Number of tons sold at mines to local trade, .....	55,010
Number of tons consumed at mines in generating steam and heat, .....	391,839
Number of persons employed inside the mines, .....	4,698
Number of persons employed outside, .....	3,131
Number of fatal accidents inside the mines, .....	17
Number of tons produced for each fatal accident inside, .....	204,489
Number of persons employed per fatal accident inside, .....	276
Number of fatal accidents outside, .....	7
Number of persons employed per fatal accident outside, .....	447
Number of wives made widows by fatal accidents, ....	10
Number of children orphaned by fatal accidents, .....	34
Number of non-fatal accidents inside of mines, .....	86
Number of persons employed per non-fatal accident in- side, .....	55
Number of non-fatal accidents outside, .....	20
Number of persons employed per non-fatal accident outside, .....	157
Number of steam locomotives used inside, .....	5
Number of compressed air locomotives used inside, ....	2
Number of fans used for ventilation, .....	25
Number of gaseous mines in operation, .....	13
Number of non-gaseous mines in operation, .....	9

TABLE A.—Thirteenth Anthracite District, 1903

PRODUCTION OF COAL	
Names of Companies	Tons
Lehigh Coal and Navigation Company, .....	944,266
Philadelphia and Reading Coal and Iron Company, ...	519,981
Lehigh and Wilkes-Barre Coal Company, .....	603,478
Mill Creek Coal Company, .....	473,621
Coxe Brothers and Company, Incorporated, .....	320,205
Truman M. Dodson Coal Company, .....	135,100
Dodson Coal Company, .....	212,647
Beddall Brothers, .....	96,099
Dunkelberger and Young, .....	10,929
D. Shepp Estate, .....	23,111
Slattery Brothers, .....	21,604
Gorman and Campion, .....	29,770
William Cook, .....	4,406
Joseph H. Denning, .....	7,079
Butcher Creek Coal Company, .....	12,507
Phillips Brothers, .....	2,500
Carson Coal Company, .....	8,770
Smith, Meyers and Company, .....	50,239
Total, .....	<u>3,476,312</u>
Production by Counties	
Schuylkill, .....	3,476,312

TABLE E.—Thirteenth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Companies	Fatal Accidents		Non-Fatal Accidents		Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident		
	Inside	Outside	Total	Inside										Outside	Total
Lehigh Coal and Navigation Co., .....	2	1	3	13	.....	472,133	1,204	668	1,872	602	93	668	.....		
Philadelphia and Reading Coal and Iron Co., .....	4	1	5	15	2	129,945	794	519	1,313	199	53	519	260		
Lehigh and Wilkes-Barre Coal Co., .....	4	1	5	15	14	34,665	1,098	517	1,615	275	73	517	37		
Mill Creek Coal Co., .....	1	1	2	16	.....	150,870	529	282	811	529	33	282	.....		
Coxe Brothers and Co., Incorporated, .....	1	1	2	5	1	473,621	379	242	621	379	76	242	242		
Truman M. Dodson Coal Co., .....	2	1	3	18	1	320,205	283	140	423	379	13	140	140		
Dodson Coal Co., .....	2	1	3	18	2	67,569	292	287	373	117	13	140	144		
Beddall Brothers, .....	1	.....	1	3	.....	7,506	92	30	489	101	.....	31	.....		
Gorman and Campion, .....	1	.....	1	1	.....	32,083	47	34	182	47	.....	.....	.....		
William Cook, .....	.....	1	1	1	.....	29,770	6	30	84	.....	.....	.....	.....		
Carson Coal Co., .....	.....	1	1	.....	.....	4,406	.....	122	122	.....	.....	.....	.....		
Totals and averages for district, .....	17	7	24	86	20	204,489	4,698	3,131	7,829	276	55	447	157		

TABLE C.—Thirteenth Anthracite District, 1903  
Classification of Fatal Accidents

	Inside of Mines										Outside of Mines						Grand total						
	By Falls of			By Falling Into				Total inside			Total outside												
	Coal	Slate	Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	Slopes	Manways, breast, etc.	Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes	Total inside		By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside
January, .....			1											1		1	1						4
February, .....				1																			1
March, .....		1																	1				2
April, .....																							1
May, .....																							1
June, .....			1																				2
July, .....																							2
August, .....								1															2
September, .....																							1
October, .....	1																						2
November, .....																							1
December, .....			1																				2
Totals, .....	2	1	4	3	2			2	1				2	17		17	3	3	1				7

TABLE D.—Thirteenth Anthracite District, 1903  
Classification of Non-Fatal Accidents

	Inside of Mines										Outside of Mines						Grand total						
	By Falls of		Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	By Falling Into		Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes	Total inside		By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside
	Coal	State								Slopes	Manways, breasts, etc.												
January	1		1	1	2				1		1				1		2				4	8	15
February	2		2	1					1	1					1		1				1	1	10
March	1		1	1	1					1					1						1	1	10
April	1		1	1	1					1					1						1	1	11
May	1		1	4	2										1		1				1	1	11
June	1		2	1	2										1		1				1	1	9
July	1		1	1	1										1		1				1	1	10
August	1		3	1	1										1		1				1	1	2
September	1		2	2	1								1		2		1				1	1	10
October	1		2	2	5								1		2		1				1	1	11
November	1		1	2	2										1		1				1	1	11
December	1		1	1	4										1		1				1	1	6
Totals	16	2	9	12	30	1	3	1	1	3	1	1	1	7	86	3	4				13	20	106



TABLE F.—Thirteenth Anthracite District, 1903  
Occupations of Persons Injured Inside and Outside the Mines

	Inside										Outside								Grand total		
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendent	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Book-keepers and clerks		All other employes	Total outside
January, .....				6	6				1	7					1					1	15
February, .....				6	6					9										1	10
March, .....				6	3					9										1	10
April, .....				3	3					4					1					1	11
May, .....				4	4					8										1	11
June, .....				5	2	1				8										1	9
July, .....				5	2					7										1	10
August, .....				4	3					7										1	9
September, .....				3	1	2				6										1	11
October, .....				6	1	1			2	10										1	11
November, .....				3	1	1			1	7										1	8
December, .....				5	1				1	7										1	8
Totals, .....				54	14	9			5	86					2					17	106



TABLE G.—Thirteenth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	Welsh	Irish	German	Polish	Hungarian	Italian	Slavonian	Lithuanian	Totals
January, .....	1				2			1		4
February, .....	1									1
March, .....	3									3
April, .....										2
May, .....			1		1					2
June, .....			1		1				1	3
July, .....					1	1				2
August, .....					1					1
September, .....	1									1
October, .....		1				1				2
November, .....	1									1
December, .....						1	1	1		3
Totals, .....	7	2	2	1	5	3	1	2	1	24

TABLE H.—Thirteenth Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Hungarian	Italian	Lithuanian	Austrian	Russian	Totals
January, .....	5			1		3	4		1	1		15
February, .....	2			2		2	2		2			10
March, .....	1			2		4	2			1		10
April, .....	1			2		2	1		1			5
May, .....	2		1	2	2	3	1					11
June, .....	4	1		2		1			1			9
July, .....	1					1						2
August, .....	6			1		2	1					10
September, .....	1				1	1	2	1			2	9
October, .....	5			2		2	2			1		11
November, .....	2		1			2						6
December, .....	1					7						8
Totals, .....	31	1	2	12	3	20	16	1	5	3	2	106





TABLE 1.—Thirteenth Anthracite District, 1903  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
Lehigh Coal and Navigation Co. Colliery No. 8	Schuylkill	Wm. D. Zehner	Lansford	Baird Snyder	Lansford	Central Railroad of N. J.
Colliery No. 12	Schuylkill	Wm. D. Zehner	Lansford	Baird Snyder	Lansford	Central Railroad of N. J.
Colliery No. 10	Schuylkill	Wm. D. Zehner	Lansford	Baird Snyder	Lansford	Central Railroad of N. J.
Colliery No. 11	Schuylkill	Wm. D. Zehner	Lansford	Baird Snyder	Lansford	Central Railroad of N. J.
Philadelphia and Reading Coal and Iron Co. Silver Creek	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Eagle Hill	Schuylkill	Wm. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Lehigh and Wilkes-Barre Coal Co. Audenried No. 4	Schuylkill	C. F. Huber	Wilkes-Barre	George B. Hadesty	Audenried	Central Railroad of N. J.
Honey Brook No. 5	Schuylkill	C. F. Huber	Wilkes-Barre	George B. Hadesty	Audenried	Central Railroad of N. J.
Mill Creek Coal Co. Buck Mountain	Schuylkill	T. D. Jones	New Boston	J. Elmer Jones	New Boston	Lehigh Valley
Vulcan	Schuylkill	T. D. Jones	New Boston	J. Elmer Jones	New Boston	Lehigh Valley
Coxe Brothers and Co., Inc. Onelda Nos. 1, 2 and 3	Schuylkill			L. C. Smith	Drifton	D., S. and S.
Truman Dodson Coal Co. Kaska William	Schuylkill	E. L. Bullock	Audenried	D. Beveridge	Kaska	Philadelphia and Reading
Morea Dodson Coal Co.	Schuylkill	E. L. Bullock	Audenried	J. H. Dugan	Morea	Lehigh Valley
Greenwood Beadall Brothers	Schuylkill			M. A. Gerber	Tamaqua	Central Railroad of N. J.
Dunkleberger and Young West Lehigh	Schuylkill			John Young	Tamaqua	Philadelphia and Reading
D. Shepp Estate East Lehigh	Schuylkill			E. M. B. Shepp	Tamaqua	Philadelphia and Reading
Slattery Brothers Tuscarora	Schuylkill			Daniel Slattery	Tuscarora	Philadelphia and Reading

Gorman and Campion	Schuylkill...	Edward Gorman,	Mahanoy City, ....	Edward Gorman,	Mahanoy City, ...	Philadelphia and Reading
Bell, .....	Schuylkill...	William Cook, ...	Tuscarora, .....	.....	.....	Philadelphia and Reading
Oakley, .....	Schuylkill...	Joseph H. Dennings	St. Clair, .....	.....	.....	Philadelphia and Reading
Sebastopol, .....	Schuylkill...	James J. Whims,	St. Clair, .....	P. F. McLaughlin,	Frackville, .....	Philadelphia and Reading
Butcher Creek Coal Co.	Schuylkill...	David E. Phillips,	Mahanoy City, ....	.....	.....	Philadelphia and Reading
Laurel Run, .....	Schuylkill...	H. E. Resinger,	Plymouth, .....	.....	.....	Central Railroad of N. J.
Silver Hill, .....	Schuylkill...	Henry Meyer, ...	Minersville, .....	H. D. House, .....	Reynolds, .....	Philadelphia and Reading
Phillips Brothers	Schuylkill...	.....	.....	.....	.....	.....
Carson Coal Co.	Schuylkill...	.....	.....	.....	.....	.....
Carson Washery, .....	Schuylkill...	.....	.....	.....	.....	.....
Smith, Meyer and Co.	Schuylkill...	.....	.....	.....	.....	.....
Washery, .....	Schuylkill...	.....	.....	.....	.....	.....

\*Abandoned May, 1903.

TABLE 2.—Thirteenth Anthracite District, 1903  
 Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Names of Operators and Colleries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at colliery	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lehigh Coal and Navigation Co. Colliery No. 5, .....	Schuylkill.....	302,857	18,699	7,661	320,240	265	563	2	5	360	78,000	126
Colliery No. 6, .....	Schuylkill.....	175,582	16,885	.....	92,467	264	284	.....	.....	811	30,250	33
Colliery No. 10, .....	Schuylkill.....	248,294	23,843	6,671	278,895	248	540	1	.....	1,088	44,100	96
Colliery No. 11, .....	Schuylkill.....	217,350	18,063	7,398	242,721	240	485	.....	.....	960	40,900	62
Totals, .....	.....	845,113	77,483	21,670	944,266	253	1,872	3	13	3,248	193,250	317
Philadelphia and Reading Coal and Iron Co. Silver Creek, .....	Schuylkill.....	249,812	31,227	3,037	284,176	245	756	4	11	4,278	10,080	76
Eagle Hill, .....	Schuylkill.....	200,872	32,203	2,730	235,805	263	557	1	6	1,902	14,922	53
Totals, .....	.....	450,684	63,430	5,767	519,981	254	1,312	5	17	6,180	25,002	129
Lehigh and Wilkes-Barre Coal Co. Audenried No. 4, .....	Schuylkill.....	906,639	42,641	3,052	989,622	270	747	2	19	5,476	61,035	68
Honey Brook No. 5, .....	Schuylkill.....	283,363	36,943	.....	320,346	244	868	3	10	3,128	126,570	44
Totals, .....	.....	520,542	79,884	3,052	608,478	237	1,615	5	29	8,508	187,605	112
Mill Creek Coal Co. Buck Mountain, .....	Schuylkill.....	213,291	18,293	.....	231,464	238	421	2	12	6,473	15,275	38
Vulcan, .....	Schuylkill.....	221,982	20,175	.....	242,157	243	390	.....	4	6,974	5,225	35
Totals, .....	.....	435,213	38,468	.....	473,621	241	811	2	16	13,447	20,500	73

\*Totals in this column are averages.

Coxe Brothers and Co., Inc. Onelda Nos. 1, 2 and 3, .....	Schuylkill, .....	262,365	54,240	3,660	320,365	238	621	2	6	6,522	17,919	83
Kaska William, .....	Schuylkill, .....	107,069	27,375	656	135,100	197	373	3	19	1,850	25,950	34
Morea, .....	Dodson Coal Co. Schuylkill, .....	171,801	40,000	846	212,647	243	489	2	2	4,571	42,500	62
Greenwood, .....	Beddall Brothers Schuylkill, .....	79,404	4,500	12,195	96,099	292	182	.....	3	155	10,000	17
West Lehigh, .....	Dunkleberger and Young Schuylkill, .....	9,578	597	754	10,929	199	45	.....	.....	25	1,900	8
East Lehigh, .....	D. Shepp Estate Schuylkill, .....	20,524	600	1,987	23,111	239	72	.....	.....	135	2,700	11
Tuscarora, .....	Slattery Brothers Schuylkill, .....	21,286	240	78	21,004	240	47	.....	.....	200	1,500	6
Bell, .....	Gorman and Camplon Schuylkill, .....	28,175	1,533	62	29,770	219	84	1	.....	395	3,200	9
Oakley, .....	William Cook Schuylk H, .....	3,719	399	288	4,406	266	10	.....	1	146	750	2
Sebastopol, .....	Joseph H. Denning Schuylkill, .....	2,618	600	3,861	7,079	277	37	.....	.....	8	1,400	11
Laurel Run,* .....	Butcher Creek Coal Co. Schuylkill, .....	12,009	450	48	12,507	222	68	.....	.....	5	1,200	7
Silver Hill, .....	Phillips Brothers Schuylkill, .....	2,458	20	22	2,500	108	31	.....	.....	30	95	1
Carson washery, .....	Carson Coal Co. Schuylkill, .....	8,290	480	.....	8,770	68	123	1	.....	.....	.....	8
Washery, .....	Smith, Meyer and Co. Schuylkill, .....	48,675	1,500	64	50,239	256	37	.....	.....	.....	.....	2
Grand totals, .....	.....	3,029,463	391,839	55,010	3,476,312	.....	7,829	24	106	45,425	535,401	892

\*Formerly Juglar.

TABLE 2—Recapitulation

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked Not including washeries	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lehigh Coal and Navigation Co.,	Schuylkill	\$45,113	77,482	21,670	944,266	253	1,872	3	13	3,218	193,250	317
Philadelphia Reading Coal and Iron Co.,	Schuylkill	450,684	63,530	5,767	519,981	254	1,313	5	17	6,180	25,002	129
Lehigh Valley Coal Co.,	Schuylkill	520,542	79,884	3,052	603,478	237	1,615	5	29	8,598	187,605	112
Mill Creek Coal Co.,	Schuylkill	435,213	38,408	.....	473,621	241	811	2	16	13,447	20,500	73
Coxe Brothers and Co., Incorporated,	Schuylkill	262,365	54,240	3,660	320,205	238	621	2	6	6,522	17,919	83
Truman M. Dodson Coal Co.,	Schuylkill	107,069	27,375	666	135,100	197	373	3	19	1,850	25,950	34
Dodson Coal Co.,	Schuylkill	171,801	40,000	846	212,647	243	489	2	2	4,571	42,500	62
Beddall Brothers,	Schuylkill	79,404	4,500	12,195	86,099	232	182	.....	3	195	10,000	17
Dunkleberger and Young,	Schuylkill	9,578	597	754	10,929	139	45	.....	.....	25	700	3
D. Shepp Estate,	Schuylkill	20,524	600	1,987	23,111	239	42	.....	.....	200	7,500	13
Slattery Brothers,	Schuylkill	21,286	240	.....	21,604	240	47	.....	.....	325	3,200	6
Gorman and Campion,	Schuylkill	28,175	78	1,987	29,470	243	91	1	.....	146	7,750	9
William Cook,	Schuylkill	3,719	338	288	7,699	277	37	.....	1	8	1,400	2
Joseph H. Denning,	Schuylkill	2,618	900	3,888	12,507	222	68	.....	.....	5	1,200	7
Butcher Creek Coal Co.,	Schuylkill	15,453	40	.....	15,507	108	31	.....	.....	30	25	1
Phillips Brothers,	Schuylkill	4,200	.....	.....	4,200	.....	.....	.....	.....	.....	.....	.....
Carson Coal Co.,	Schuylkill	8,990	480	.....	9,470	.....	.....	.....	.....	.....	.....	.....
Smith, Meyer and Co.,	Schuylkill	48,675	1,500	.....	50,279	.....	37	.....	.....	.....	.....	.....
Totals,	.....	3,029,463	391,839	59,010	3,476,312	223	7,829	24	106	45,425	585,401	892



TABLE 2—Continued

Names of Operators and Collieries	County	Number of Boilers			Total horse power	Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in Gallons per minute	Quantity delivered to surface per minute—Gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Tubular	Horse power		Steam	Air	Electric							
Lehigh Coal and Navigation Co.	Schuylkill	.....	16	1,688	.....	.....	.....	12	585	.....	.....	.....	.....	.....	
Colliery No. 8, .....	Schuylkill	.....	10	1,600	.....	.....	.....	12	608	.....	.....	.....	.....	.....	
Colliery No. 12, .....	Schuylkill	.....	3	800	.....	.....	.....	25	616	.....	.....	1,715	.....	.....	
Colliery No. 10, .....	Schuylkill	36	714	3,800	1	.....	.....	25	616	.....	.....	2,306	.....	.....	
Colliery No. 11, .....	Schuylkill	13	202	1,465	2	.....	.....	22	440	.....	.....	3,280	.....	1	
Totals, .....		49	916	5,532	3	.....	.....	71	2,109	9	12,815	4,961	.....	1	
Philadelphia and Reading Coal and Iron Co.	Schuylkill	.....	14	1,820	.....	.....	.....	11	3,130	4	3,900	2,100	.....	.....	
Silver creek, .....	Schuylkill	20	506	1,170	.....	.....	.....	8	1,985	4	2,800	1,400	.....	.....	
Eagle Hill, .....	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Totals, .....		20	506	2,990	.....	.....	.....	19	5,116	8	6,700	3,500	.....	.....	
Lehigh and Wilkes-Barre Coal Co.	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Audenried No. 4, .....	Schuylkill	32	1,120	1,700	2	.....	.....	14	1,770	6	10,620	3,600	.....	1	
Honey Brook No. 5, .....	Schuylkill	19	665	1,850	6	.....	.....	19	2,159	4	3,500	1,900	.....	.....	
Totals, .....		51	1,785	3,550	8	.....	.....	33	3,920	10	14,520	5,500	.....	1	
Mill Creek Coal Co.	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Puck Mountain, .....	Schuylkill	32	1,760	600	2	3	.....	20	2,035	5	3,500	1,000	.....	2	
Vulcan, .....	Schuylkill	20	1,200	1,150	1	.....	.....	19	1,575	4	4,900	1,000	.....	.....	
Totals, .....		52	2,960	1,750	3	3	.....	38	3,610	9	8,400	2,000	.....	2	
Coxe Brothers and Co., Inc.	Schuylkill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Oneida Nos. 1, 2 and 3, .....	Schuylkill	21	880	3,200	4	1	.....	35	2,069	8	7,770	4,662	.....	1	



Butcher Creek Coal Co. Laurel Run,*	.....	2	100	100	.....	2	100	.....	.....	.....	.....	.....	.....		
Phillips Brothers Silver Hill,	.....	1	8	8	.....	1	6	.....	.....	.....	.....	.....	.....		
Carson Coal Co. Carson washery,	.....	3	250	250	.....	4	.....	.....	.....	.....	.....	.....	.....		
Smith, Meyer and Co. Washery,	.....	2	250	250	.....	1	172	.....	.....	.....	.....	.....	.....		
<b>Grand totals,</b>	221	7,579	175	21,971	29,556	26	4	.....	.....	.....	50	58,555	25,183	2	5

TABLE 2—Recapitulation

Lehigh Coal and Navigation Co.,	49	916	43	5,533	6,419	3	.....	.....	.....	71	2,109	12,815	4,961	.....	1
Philadelphia and Reading Coal and Iron Co.,	20	560	21	2,980	3,480	.....	.....	.....	.....	19	5,116	6,790	3,500	.....	.....
Lehigh and Wilkes-Barre Coal Co.,	51	1,785	23	3,550	5,335	8	.....	.....	.....	33	3,820	14,520	5,560	.....	1
Mill Creek Coal Co.,	52	2,960	9	1,750	4,710	3	.....	.....	.....	38	3,610	8,400	2,000	.....	2
Coxe Brothers and Co., Inc.,	24	880	25	3,200	4,080	4	1	.....	.....	35	2,060	7,770	4,662	.....	1
Truman M. Dodson Coal Co.,	.....	.....	12	1,440	1,440	.....	.....	.....	.....	12	1,500	2,350	1,500	.....	1
Dodson Coal Co.,	24	520	17	1,750	2,270	4	.....	.....	.....	20	1,170	6,000	3,000	.....	.....
Beddall Brothers,	.....	.....	7	450	450	2	.....	.....	.....	8	250	.....	.....	.....	.....
Dunkleberger and Young,	.....	.....	3	140	140	.....	.....	.....	.....	10	140	.....	.....	.....	.....
D. Shupp Estate,	.....	.....	2	300	300	.....	.....	.....	.....	7	115	.....	.....	.....	.....
Slatery Brothers,	.....	.....	1	15	15	1	.....	.....	.....	2	75	.....	.....	.....	.....
Gorman and Campion,	.....	.....	2	140	140	.....	.....	.....	.....	7	49	.....	.....	.....	.....
William Cook,	.....	.....	1	15	15	.....	.....	.....	.....	2	50	.....	.....	.....	.....
Joseph Cook,	.....	.....	1	15	15	.....	.....	.....	.....	2	49	.....	.....	.....	.....
Butcher Creek Coal Co.,	.....	.....	2	100	100	.....	.....	.....	.....	2	100	.....	.....	.....	.....
Phillips Brothers,	.....	.....	1	8	8	.....	.....	.....	.....	1	6	.....	.....	.....	.....
Carson Coal Co.,	.....	.....	3	250	250	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smith, Meyer and Co.,	.....	.....	2	250	250	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>Totals,</b>	221	7,579	175	21,971	29,556	26	4	.....	.....	273	20,535	58,555	25,183	2	5

\*Formerly Juglar.  
†Not reported by operator.

TABLE 3.—Thirteenth Anthracite District, 1903  
Number of Each Class of Employes at Each Colliery

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside										
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes	Total outside	Grand total inside and outside
Lehigh Coal and Navigation Co.	Schuylkill	2	1	6	102	16	42	19	.....	86	108	382	.....	1	6	17	16	33	.....	108	181	563
Colliery No. 8	Schuylkill	1	1	2	97	10	32	2	4	45	52	185	.....	1	2	4	33	16	.....	74	96	383
Colliery No. 9	Schuylkill	1	1	5	76	29	44	2	2	106	340	.....	1	5	26	30	23	.....	104	206	541	
Colliery No. 10	Schuylkill	1	1	5	53	23	33	4	4	80	296	.....	1	4	16	43	43	.....	80	189	485	
Colliery No. 11	Schuylkill	1	1	5	53	23	33	4	4	80	296	.....	1	4	16	43	43	.....	80	189	485	
Totals,	.....	5	5	18	258	77	132	51	10	272	376	1,294	.....	4	17	68	133	117	.....	329	668	1,872
P. and R. Coal and Iron Co.	Schuylkill	1	1	10	190	102	29	4	.....	38	92	467	.....	1	9	25	69	53	.....	139	289	756
Silver Creek	Schuylkill	1	1	7	114	74	17	3	4	39	68	327	.....	1	9	21	52	33	.....	109	230	557
Eagle Hill	Schuylkill	2	1	17	304	176	46	7	4	77	160	794	.....	2	18	49	112	86	.....	248	519	1,313
Totals,	.....	2	1	17	304	176	46	7	4	77	160	794	.....	2	18	49	112	86	.....	248	519	1,313
Lehigh and Wilkes-Barre Coal Co.	Schuylkill	2	.....	2	179	116	28	13	5	80	73	599	.....	1	.....	59	73	9	.....	104	218	747
Amesbury No. 4	Schuylkill	1	2	1	175	119	16	9	1	61	184	569	3	5	27	70	9	.....	140	299	868	
Honey Brook No. 5	Schuylkill	3	2	4	354	265	44	22	6	141	257	1,098	3	6	37	56	149	18	.....	244	517	1,615
Totals,	.....	3	2	4	354	265	44	22	6	141	257	1,098	3	6	37	56	149	18	.....	244	517	1,615
Mill Creek Coal Co.	Schuylkill	1	1	1	144	65	24	3	2	30	10	281	.....	1	8	23	29	49	.....	26	140	421
Buck Mountain	Schuylkill	1	1	1	144	65	24	3	2	30	10	281	.....	1	8	23	29	49	.....	26	140	421

Vulcan, .....	Schuylkill,	1	1	2	153	40	13	8	2	14	14	248	.....	1	8	25	21	57	3	27	142	590	
Totals, .....	.....	2	2	3	297	102	37	11	4	44	24	529	.....	1	2	16	48	50	106	6	53	282	811
Coxe Brothers and Co., Inc. Oxide Nos. 1, 2 and 3, .....	Schuylkill,	3	2	.....	213	29	32	14	8	.....	78	379	.....	1	12	50	20	26	1	132	242	621	
Truman M. Dodson Coal Co. Kaska William, .....	Schuylkill,	1	1	3	96	39	27	5	4	7	50	233	.....	1	1	9	21	20	12	2	74	140	373
Dodson Coal Co. Morea, .....	Schuylkill,	1	2	2	78	41	21	1	4	50	2	292	.....	1	1	15	40	25	25	4	176	287	489
Beddall Brothers Greenwood, .....	Schuylkill,	1	.....	1	33	16	11	4	.....	18	8	92	.....	1	1	4	7	22	.....	1	54	90	182
Dunkleberger and Young West Lehigh, .....	Schuylkill,	1	.....	1	8	2	2	1	.....	3	.....	18	.....	2	1	2	4	7	.....	1	10	27	45
D, Shepp Estate East Lehigh, .....	Schuylkill,	1	.....	1	14	10	4	1	.....	.....	.....	31	.....	1	1	3	4	8	1	1	22	41	72
Slattery Brothers Tuscarora, .....	Schuylkill,	1	.....	.....	12	8	2	1	.....	.....	.....	24	.....	1	1	2	5	1	.....	.....	13	23	47
Gorman and Camplon Bell, .....	Schuylkill,	1	.....	.....	28	4	5	.....	.....	9	.....	47	.....	1	3	2	9	5	1	16	37	84	
William Cook Oakley, .....	Schuylkill,	1	.....	.....	3	1	1	.....	.....	.....	.....	6	.....	.....	.....	1	2	.....	.....	.....	1	4	10
Joseph H. Denning Sebastopol, .....	Schuylkill,	1	.....	.....	6	8	.....	.....	.....	.....	5	20	.....	2	.....	3	5	.....	.....	.....	7	17	37
Fletcher Creek Coal Co. Laurel Run,* .....	Schuylkill,	1	.....	.....	2	2	.....	.....	.....	.....	.....	5	.....	1	1	6	3	6	.....	1	45	63	68
Phillips Brothers Silver Hill, .....	Schuylkill,	1	.....	.....	10	3	2	.....	.....	.....	.....	16	.....	1	1	1	1	3	.....	1	7	15	31
Carson Coal Co. Carson washery, .....	Schuylkill,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	4	5	49	17	1	44	122	122
Smith Meyer and Co. Washery, .....	Schuylkill,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	3	5	2	2	1	21	37	37
Grand totals, .....	.....	26	15	50	1,716	786	365	118	40	621	960	4,698	.....	15	28	151	369	627	416	29	1,496	3,131	7,829

\*Formerly Juglar.

TABLE 3—Recapitulation

Names of Operators and Collienes	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Enginners and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes	Total outside	
Lehigh Coal and Navigation Co., ...	Schuykill.	5	4	1	1	2	132	51	10	272	376	1,294	4	17	68	133	117	.....	4	329	668	
P. and R. Coal and Iron Co., .....	Schuykill.	2	17	4	204	46	7	6	71	704	1,313	.....	2	18	49	112	86	.....	4	248	519	
Lehigh and Wilkes-Barre Coal Co., ...	Schuykill.	2	3	4	304	37	46	4	141	927	1,615	.....	6	37	56	149	18	.....	4	244	517	
Mill Creek Coal Co., .....	Schuykill.	2	2	8	254	105	34	4	44	78	1,088	.....	2	16	48	50	106	.....	6	581	1,066	
Coxe Bros. and Co., Incorporated, .....	Schuykill.	2	2	3	213	30	32	14	8	.....	379	.....	1	12	50	20	26	.....	1	132	242	
Truman, M., and Sons, .....	Schuykill.	1	1	3	96	30	27	5	4	.....	233	.....	1	1	20	12	2	.....	2	174	140	
Truman, M., and Sons, .....	Schuykill.	1	1	1	78	41	21	4	50	2	202	.....	1	15	40	25	25	.....	4	176	287	
Beffel Brothers, .....	Schuykill.	1	1	1	33	16	11	4	18	8	92	.....	1	4	7	22	.....	1	54	90		
Dunkleberger and Young, .....	Schuykill.	1	1	1	8	2	2	1	.....	3	18	.....	1	2	4	7	.....	1	10	27		
D. Shepp Estate, .....	Schuykill.	1	1	1	14	10	4	1	.....	31	31	.....	1	3	4	8	.....	1	22	41		
Slatery brothers, .....	Schuykill.	1	1	2	12	8	2	1	.....	47	47	.....	1	3	4	8	.....	1	13	23		
Gorman and Campion, .....	Schuykill.	1	1	1	28	4	5	5	9	.....	24	.....	1	3	2	6	.....	5	16	31		
William Cook, .....	Schuykill.	1	1	1	3	1	1	.....	9	.....	47	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Joseph H. Denning, .....	Schuykill.	1	1	1	6	8	.....	.....	7	.....	20	.....	2	.....	3	.....	.....	.....	.....	.....		
Batcher Creek Coal Co., .....	Schuykill.	1	1	2	3	.....	.....	.....	5	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Phillips Brothers, .....	Schuykill.	1	1	1	10	.....	.....	.....	.....	.....	16	.....	1	1	3	.....	.....	.....	.....	.....		
Carson Coal Co., .....	Schuykill.	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1	1	4	.....	.....	.....	.....	.....		
Smith, Meyer and Co., .....	Schuykill.	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	2	1	3	.....	.....	.....	.....	.....		
Totals, .....	Schuykill.	26	15	50	1,716	786	366	118	40	621	969	4,698	15	28	369	627	416	29	1,496	3,131	7,829	

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Lehigh Coal and Navigation Co.	Schuylkill,.....	25.9	21.7	22.7	23.4	22.5	22.7	23.4	22.1	21.6	19.2	18.9	19.9	285
Colliery No. 8, .....	Schuylkill,.....	25.5	22	23	22.7	22.2	21.7	23.1	21.9	21.5	18.7	18.9	18.6	260
Colliery No. 12, .....	Schuylkill,.....	22.5	21.3	18.7	22.3	20.9	22.8	22.8	21.6	21.6	18.6	18.9	16	248
Colliery No. 10, .....	Schuylkill,.....	25.7	20.2	16.5	20.5	21.9	20.5	21.4	22	15	18.3	18.5	19	240
Colliery No. 11, .....	Schuylkill,.....	25.2	21.3	20.2	22.2	21.9	21.9	22.7	21.9	19.9	18.7	18.8	18.4	253
Averages, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Philadelphia and Reading Coal and Iron Co.	Schuylkill,.....	25	23.2	25	23.8	21.6	25.2	21.6	23.1	16	6.2	14.2	16.6	245
Silver Creek, .....	Schuylkill,.....	26	22.2	25	18	21.8	24.1	25.8	22.6	21.2	21.9	16	17	263
Eagle Hill, .....	Schuylkill,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Averages, .....	.....	25.5	22.7	25	20.9	22.2	25.7	25.2	22.9	18.6	14.1	15.1	16.8	254
Lehigh and Wilkes-Barre Coal Co.	Schuylkill,.....	24	15.4	12.2	21.1	20.2	20.8	23.1	21.2	19.9	19.8	16	16	230
Audenried No. 4, .....	Schuylkill,.....	23.4	20.9	22.9	21.3	20.2	22.8	23.3	15.2	21	20.1	15.7	16.8	244
Honey Brook No. 5, .....	Schuylkill,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Averages, .....	.....	23.7	18.2	17.6	21.2	20.2	21.8	23.2	18.2	20.5	20	15.9	16.4	237
Mill Creek Coal Co.	Schuylkill,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Buck Mountain, .....	Schuylkill,.....	21.8	19.5	19.1	19	18	22.2	22.5	22	20.9	19.6	16.6	16.9	238
Vulcan, .....	Schuylkill,.....	22.4	19.1	20.4	19.7	20.6	22.1	22.4	21.2	20.9	19.4	17.4	18	243
Averages, .....	.....	22.1	19.3	19.8	19.1	19.3	22.3	22.5	21.6	20.9	19.5	17	17.5	241
Coxe Brothers and Co., Inc.	Schuylkill,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Onelda Nos. 1, 2 and 3, .....	Schuylkill,.....	23	22	22	19	21	23	22	22	21	15	13	11	238
Truman M. Dodson Coal Co.	Schuylkill,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kaska William, .....	Schuylkill,.....	22	19.6	14.6	20.7	20.8	20.6	.....	15.3	16.8	12.4	18.4	16.1	197

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Dodson Coal Co. Morea, .....	Schuylkill, .....	26	20, 8	14, 7	19, 7	21, 8	21, 6	21, 6	20, 6	21, 2	17, 3	17	20, 6	213
Reddall Brothers Greenwood, .....	Schuylkill, .....	27, 3	22, 8	21, 9	24, 6	24, 2	25	25, 6	25, 6	23, 2	24	23, 7	23, 9	232
Dunkleberger and Young West Lehigh, .....	Schuylkill, .....	25	22	19	.....	.....	21	23	13	22	17	16	21	169
D. Shepp Estate East Lehigh, .....	Schuylkill, .....	25	21	24	18	18	13	20	21	16	23	19	21	239
Slattery Brothers Tuscarora, .....	Schuylkill, .....	23	19	9	20	21	24	24	21	20	17	21	21	240
Gorman and Campion Bell, .....	Schuylkill, .....	26	22	8	7	22	24	23	17	15	20	16	19	219
William Cook Oakley, .....	Schuylkill, .....	23	21	18	22	24	24	19	20	23	24	24	24	266
Joseph H. Danning Sebastopol, .....	Schuylkill, .....	24	18	22	22	25	20	25	24	24	26	22	25	277
Butcher Creek Coal Co. Laurel Run,* .....	Schuylkill, .....	16	16	10	9	22	24	23	20	18	23	22	19	222
Phillips Brothers Silver Hill, .....	Schuylkill, .....	27	25	20	22	14	.....	.....	.....	.....	.....	.....	.....	108
Averages, .....	.....	24	20, 7	17, 9	19, 2	21, 2	22, 1	22, 8	20, 3	20	19, 4	18, 6	19, 6	233

\*Formerly Juglar.



TABLE 3—Recapitulation

Names of Operators and Colleries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Lehigh Coal and Navigation Co., .....	Schuylkill, .....	25.5	21.3	20.2	22.2	21.9	21.9	22.7	21.9	19.9	18.7	18.8	18.4	253
Philadelphia and Reading Coal Co., .....	Schuylkill, .....	25.5	22.7	25	20.9	22.2	24.7	25.9	22.9	18.6	14.1	15.1	16.8	254
Lehigh and Wilkes-Barre Coal Co., .....	Schuylkill, .....	23.7	13	17.6	21.2	20.2	21.8	23.2	18.2	20.5	20	15.9	16.4	297
Mill Creek Coal Co., .....	Schuylkill, .....	23.1	19.3	19.8	19.1	19.3	22.3	22.5	21.6	20.9	19.5	17	17.5	241
Coxe Brothers and Co., Incorporated, .....	Schuylkill, .....	23	22	22	19	21	23	22	23	21	15	13	14	238
Truman M. Dedson Coal Co., .....	Schuylkill, .....	22	19.6	14.6	20.7	20.8	20.6	.....	15.3	16.8	12.4	18.4	16.1	197
Dodson Coal Co., .....	Schuylkill, .....	25	20.8	14.7	19.7	21.8	21.6	21.6	20.6	21.2	17.3	17	20.6	243
Beddall Brothers, .....	Schuylkill, .....	27.3	22.8	21.9	24.6	24.2	25	25.6	25.6	23.2	24	23.7	23.9	262
Dunkelberger and Young, .....	Schuylkill, .....	25	22	19	.....	.....	21	23	13	22	17	16	21	189
D. Shepp Estate, .....	Schuylkill, .....	25	21	24	18	18	13	20	21	16	22	19	21	239
Stattersay Brothers, .....	Schuylkill, .....	23	19	8	27	24	24	24	21	19	17	21	21	240
William and Campbell, .....	Schuylkill, .....	23	20	8	.....	.....	21	23	21	20	20	16	19	243
William Cook, .....	Schuylkill, .....	23	21	18	22	24	24	19	20	23	24	21	21	241
Joseph H. Denning, .....	Schuylkill, .....	24	22	22	25	24	24	25	24	24	26	22	25	277
Butcher Creek Coal Co., .....	Schuylkill, .....	16	16	19	9	22	24	23	24	18	23	22	19	222
Phillips Brothers, .....	Schuylkill, .....	27	25	20	22	14	.....	.....	.....	.....	.....	.....	.....	168
Averages, .....	.....	24	20.7	17.9	19.2	21.2	22.1	22.8	20.3	20	19.4	18.6	19.6	253

TABLE 4.—Thirteenth Anthracite District, 1903  
Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 19	Joseph Roskeveze, .....	Polish, .....	Miner, .....	24	S.	.....	.....	Silver Creek, .....	Schuylkill,	Suffocated by loose coal from blocking manway after a blast.
20	Stiney PoppeL, .....	Polish, .....	Laborer, .....	24	S.	.....	.....	Kaska William, .....	Schuylkill,	Injured internally and died the same day. Knocked down and run over by mine car on timber bank.
22	George Faish, .....	Slavonian, .....	Laborer, .....	20	S.	.....	.....	Honey Brook No. 5, .....	Schuylkill,	Compound fracture of knee. Piece of rock fell on him. Died same day.
Feb. 26	Robert G. Morgan, .....	American, .....	Engineer, .....	21	S.	.....	.....	Silver Creek, .....	Schuylkill,	Killed by being caught in rope sheave.
28	John Palf, .....	American, .....	Door boy, .....	16	S.	.....	.....	Onelda No. 1, .....	Schuylkill,	Killed by being caught between chute and car.
March 11	Charles Sharp, .....	American, .....	Driver, .....	19	S.	.....	.....	Kaska William, .....	Schuylkill,	Fatally injured. Caught between mine car and timber; body squeezed. Died same day.
14	Michael Battersby, .....	American, .....	Miner, .....	35	M.	1	5	Eags Hill, .....	Schuylkill,	Killed by a piece of slate falling on him.
31	Daniel Sweeney, .....	American, .....	Slate picker, .....	13	M.	1	5	Carson washery, .....	Schuylkill,	Smothered in coal chute.
May 7	Peter Skripco, .....	Polish, .....	Miner, .....	49	M.	1	5	Silver Creek, .....	Schuylkill,	Fatally injured. Ignited the gas by a blast and was thrown down an empty chute. Died at State Hospital May 10.
19	Michael Campbell, .....	Irish, .....	Miner, .....	50	M.	1	.....	Buck Mountain, .....	Schuylkill,	Fatally injured. He was riding up the slope on empty car and was caught between the collar and car. Died same day.
June 9	Anthony Urban, .....	Lithuanian, .....	Miner, .....	40	M.	1	6	Audenried No. 4, .....	Schuylkill,	Killed by a fall of coal in breast.
22	Dennis O'Brien, .....	Irish, .....	Miner, .....	36	M.	1	3	Lehigh C. and N. No. 8	Schuylkill,	Killed by a fall of rock in breast.
24	Ludwig Wozniak, .....	Polish, .....	Miner, .....	50	S.	.....	.....	Silver Creek, .....	Schuylkill,	Killed by being caught on roller shaft.
25	William Spisak, .....	Polish, .....	Laborer, .....	25	M.	1	1	Lehigh C. and N. No. 8	Schuylkill,	Killed by being caught on shaker shaft.
Aug. 1	Frank Tolofski, .....	Polish, .....	Laborer, .....	35	S.	.....	.....	Buck Mountain, .....	Schuylkill,	Killed by falling down the shaft.
19	Thomas Williams, .....	Walsh, .....	Rock man, .....	39	M.	1	5	Kaska William, .....	Schuylkill,	Killed by rock falling on him from side of the shaft.

Sept.	2	George Briggs, .....	( American, .. )	Patcher, ...	20	S.	.....	.....	Onelda No. 6 slope, .	Schuylkill.	Killed by falling under a trip of cars coming from No. 6 slope.
Oct.	27	Gomer Jones, .....	Welsh, .....	Miner, .....	38	M.	1	3	Morea, .....	Schuylkill.	Killed by a fall of coal in gangway.
	31	Henry Kovitch, .....	Hungarian, ..	Laborer, ...	28	S.	.....	.....	Bell, .....	Schuylkill.	Killed by premature blast in gangway.
Nov.	18	Thomas Mitchell, .....	American, ..	Miner, .....	45	M.	1	2	Lehigh C. and N. Co. No. 10	Schuylkill.	Fatally injured by an explosion of gas.
	5	Martin Billin, .....	Hungarian, ..	Footman, ...	18	S.	.....	.....	No. 4 Audenried, ....	Carbon,....	Died November 23 at Miners' Hospital.
Dec.	10	George Kovalick, .....	Slavonian, ..	Laborer, ...	24	S.	.....	.....	Honey Brook, .....	Schuylkill.	Killed by falling under car on plane.
	18	Frank Macaluse, .....	Italian, .....	Miner, .....	49	M.	1	6	Honey Brook No. 5, ..	Schuylkill.	Smothered by a rush of fine dirt and water. Killed by a fall of top slate.

TABLE 5.—Thirteenth Anthracite District, 1903  
Non-Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 2	Stanley Olman, .....	Hungarian, ..	Driver, .....	20	S.	Audenried No. 4, .....	Schuylkill	Cut over the eye. Kicked by a mule.
6	Joseph Cologne, .....	Austrian, ..	Miner, .....	22	S.	Onsida No. 2, .....	Schuylkill	Skull injured. A piece of rock fell on him.
10	Anthony Shappela, .....	Polish, .....	Laborer, .....	37	M.	Morea, .....	Schuylkill	Leg broken by fall of coal on strippings.
10	Stincy Labonsky, .....	Polish, .....	Miner, .....	40	M.	Buck Mountain, .....	Schuylkill	Hands and face burned by gas.
12	George Posther, .....	Hungarian, ..	Tipman, .....	33	M.	Audenried, .....	Schuylkill	Back bruised. Fell down plane.
14	John Bowers, .....	American, ..	Jig runner, ..	16	S.	Morea, .....	Schuylkill	Hand injured. Caught between friction wheels.
15	Joseph Nalls, .....	Polish, .....	Miner, .....	50	M.	Audenried, .....	Schuylkill	Side injured. Jumped off car on slope.
17	Peter Shearn, .....	Irish, .....	Miner, .....	48	M.	Audenried No. 4, .....	Schuylkill	Ankle bruised. Caught between coal and prop.
17	James McGinley, .....	American, ..	Engineer, .....	20	S.	Audenried No. 4, .....	Schuylkill	Hip dislocated. Engine moved while he was repairing machinery.
19	Michael Meehala, .....	Hungarian, ..	Footman, .....	24	S.	Audenried No. 4, .....	Schuylkill	Leg broken. Caught by mine car while repairing machinery.
21	William Hitchens, .....	American, ..	Driver, .....	23	S.	Honey Brook, .....	Schuylkill	Ribs broke. Caught between dumper and piece of timber on strippings.
22	John Alex, .....	Lithuanian, ..	Miner, .....	26	M.	Vulcan, .....	Schuylkill	Hands and face burned by gas.
23	John Dolan, .....	American, ..	Miner, .....	23	M.	Lehigh C. and N. No. 10	Schuylkill	Leg broken. Piece of coal rolled from battery and caught him on the leg.
26	John Olman, .....	Magyar, .....	Footman, .....	25	S.	Audenried, .....	Schuylkill	Leg bruised. Piece of coal rolled down plane and struck him.
26	Rugh Gatins, .....	American, ..	Loader, .....	45	S.	Greenwood, .....	Schuylkill	Leg fractured. A lump of coal caught him in the car while loading from chute.
Feb. 3	Charles Crouse, .....	American, ..	Miner, .....	45	M.	Audenried, .....	Schuylkill	Legs bruised by fall of coal and slate.
6	Joseph Berkowski, .....	Polish, .....	Miner, .....	48	S.	Silver Creek, .....	Schuylkill	Head cut and bruised. Piece of rock caught him against pillar.
6	Joseph Youtsus, .....	Polish, .....	Miner, .....	48	S.	Silver Creek, .....	Schuylkill	Head cut and bruised. Piece of rock caught him against pillar.
7	Andrew Kushok, .....	Hungarian, ..	Miner, .....	26	M.	Buck Mountain, .....	Schuylkill	Face cut. Fell down breast.
9	Michael Kolesor, .....	Lithuanian, ..	Miner, .....	50	M.	Lehigh C. and N. No. 10	Schuylkill	Ribs fractured. Struck by coal from blast.
12	Joseph Carr, .....	Irish, .....	Miner, .....	40	S.	Lehigh C. and N. No. 10	Schuylkill	Hands and face burned by gas.
12	Frank Boyle, .....	Irish, .....	Miner, .....	40	M.	Lehigh C. and N. No. 10	Schuylkill	Hands and face burned by gas.

Feb.	14	John Bassler, .....	American, ..	Miner, .....	45	M. Kaska William, .....	Schuykill.	Back injured by premature explosion of blast.
	14	Michael Unto, .....	Hungarian, ..	Oiler, .....	24	S. Audenried, .....	Schuykill.	Shoulders injured. Caught between mine cars.
	24	Andrew Oliniski, .....	Lithuanian, ..	Miner, .....	27	S. Kaska William, .....	Schuykill.	Body injured. Caught by fall of coal against pillar.
March	5	Stanley Myers, .....	Polish, .....	Miner, .....	39	M. Buck Mountain, .....	Schuykill.	Back injured and hand cut by fall of slate.
	7	Paul Crouse, .....	Hungarian, ..	Lather, .....	27	M. Buck Mountain, .....	Schuykill.	Hands and face burned by gas.
	10	Thomas O'Connell, .....	American, ..	Slate picker, .....	19	M. Siver Creek, .....	Schuykill.	Arm broken by falling down breaker steps.
	11	Olsonz Glace, .....	Hungarian, ..	Miner, .....	39	M. Onelda No. 1, .....	Schuykill.	Back and ribs contused by fall of coal.
	13	Frank Stanskey, .....	Polish, .....	Miner, .....	28	S. Kaska William, .....	Schuykill.	Back and ribs contused by fall of coal and timbered. Caught between mine car
	18	Alex. Kinkus, .....	Polish, .....	Miner, .....	32	M. Buck Mountain, .....	Schuykill.	Hands and face burned by gas.
	18	Anthony Galinski, .....	Polish, .....	Laborer, .....	24	S. Buck Mountain, .....	Schuykill.	Hands and face burned by gas.
	18	Frank Gallagher, .....	Irish, .....	Miner, .....	53	M. Audenried, .....	Schuykill.	Back injured by fall of coal.
	27	Michael Sartori, .....	Austrian, ..	Miner, .....	35	M. Honey Brook, .....	Schuykill.	Shoulder dislocated by rush of coal from face of breast.
	27	James Mack, .....	Irish, .....	Laborer, .....	30	M. Honey Brook, .....	Schuykill.	Wrist cut. A piece of coal slipped along his drill and caught him.
April	7	John Gamhoski, .....	Polish, .....	Miner, .....	34	S. Buck Mountain, .....	Schuykill.	Back and leg bruised by fall of coal.
	14	Stanley Altham, .....	Polish, .....	Watchman, .....	22	S. Honey Brook No. 5, .....	Schuykill.	Face and hand burned while cleaning out fires beneath the boilers.
	27	Christ Yezet, .....	Lithuanian, ..	Laborer, .....	28	S. Kaska William, .....	Schuykill.	Leg broken. A piece of gangway timber fell on him while unloading it out of a car and bruised about head and shoulders.
	27	Mike Sloata, .....	Hungarian, ..	Miner, .....	31	M. Onelda No. 1, .....	Schuykill.	Fell down manway.
	30	Jere Rowan, .....	American, ..	Laborer, .....	36	M. Kaska William, .....	Schuykill.	Hurt internally. A piece of rock fell from side of shaft and struck him.
May	5	William Waters, .....	Walsh, .....	Laborer, .....	19	S. Audenried No. 4, .....	Schuykill.	Body and head injured. A truck wagon loaded with hay ran over him.
	5	William Klechker, .....	German, .....	Machinist, .....	32	M. Onelda No. 4, .....	Schuykill.	Leg bruised. A piece of metal casting fell on him.
	5	William Post, .....	German, .....	Driver, .....	19	S. Eagle Hill, .....	Schuykill.	Ankle broken. Bumped between mine cars. Face burned by an explosion of gas.
	6	Mike Borak, .....	Polish, .....	Miner, .....	38	S. Kaska William, .....	Schuykill.	Arm broken. Caught between mine car and collar coming out on a loaded trip.
	6	John Borak, .....	American, ..	Driver, .....	17	S. Kaska William, .....	Schuykill.	Thigh broken. Caught between mule and
	12	Michael Devlin, .....	Irish, .....	Driver, .....	23	S. Eagle Hill, .....	Schuykill.	Shoulder blade fractured. Caught between mine car and brattices in tunnel
	13	William Thomas, .....	American, ..	Driver, .....	20	S. Vulcan, .....	Schuykill.	Arm broken. A piece of coal fell off the rib.
	18	John Sturguski, .....	Polish, .....	Miner, .....	50	S. Siver Creek, .....	Schuykill.	Arm broken. A piece of coal fell off the rib.
	23	Steven Betrsban, .....	Maygar, .....	Laborer, .....	35	M. Audenried No. 4, .....	Schuykill.	Cut on wrist. In lifting a piece of rock it broke in his hands.
	25	Bert Lynch, .....	Irish, .....	Miner, .....	40	M. Eagle Hill, .....	Schuykill.	Back hurt by a fall of clod.
	25	William Whalen, .....	Polish, .....	Miner, .....	32	M. Eagle Hill, .....	Schuykill.	Hands and face burned by an explosion of gas.
June	13	Mike Roofskie, .....	Polish, .....	Miner, .....	27	S. Siver Creek, .....	Schuykill.	Back bruised by a fall of slate.
	13	William Jenkins, .....	American, ..	Jig runner, .....	4	S. Audenried No. 4, .....	Schuykill.	Foot bruised. Caught in j.g.
	18	Neal Boner, .....	American, ..	Miner, .....	28	S. Greenwood, .....	Schuykill.	Hands and face burned by an explosion of gas.
	18	Jonathan Jones, .....	American, ..	Laborer, .....	28	S. Greenwood, .....	Schuykill.	Hands and face burned by an explosion of gas.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
June 22	Lawrence Domin, ....	American, ..	Driver, .....	22	S.	Honey Brook No. 5, ..	Schuylkill,	Hurt internally. Knocked down and run over by loaded mine car.
22	Daniel Collins, .....	Irish, .....	Miner, .....	37	M.	Lehigh C. and N. No. 8	Schuylkill,	Hands and face burned by an explosion of gas.
25	Roger McCoy, .....	Irish, .....	Rock man, .....	32	M.	Audenried No. 4, .....	Schuylkill,	Laceration of face on a mine track. Laceration of head and neck. A piece of rock fell off face of tunnel.
25	Thomas Argust, .....	English, .....	Rock man, .....	30	M.	Audenried No. 4, .....	Schuylkill,	Rock fell off face of tunnel.
29	William Cominsky, ..	Lithuanian, ..	Laborer, .....	25	S.	Vulcan, .....	Schuylkill,	Hip broken by a fall of top coal.
6	John Batchko, .....	Polish, .....	Miner, .....	35	M.	Buck Mountain, .....	Schuylkill,	Hands and face burned by an explosion of gas.
9	John Bechtel, .....	American, ..	Miner, .....	24	S.	Lehigh C. and N. Co. No. 8	Schuylkill,	Face, hands and breast cut by premature explosion of a blast.
3	Daniel O'Donnell, .....	Irish, .....	Miner, .....	52	M.	Lehigh C. and N. Co. No. 8	Schuylkill,	Hands and face burned by an explosion of gas.
17	Gobin Shillish, .....	Magyar, .....	Laborer, .....	42	M.	Honey Brook No. 5, ..	Schuylkill,	Leg injured by a rock rolling down the strippings.
17	William L. Williams, ..	American, ..	Miner, .....	28	M.	.....	Schuylkill,	Hands and face burned by an explosion of gas.
17	Charles Eisenburg, ..	American, ..	Laborer, .....	24	S.	Lehigh C. and N. Co. No. 10	Schuylkill,	Hands and face burned by an explosion of gas.
19	Patrick McFadden, ..	American, ..	Assistant machine runner, .....	37	M.	Kaska William, .....	Schuylkill,	Head and body bruised by a piece of rock falling on him from side of shaft.
19	Anthony Pchiler, ....	American, ..	Assistant machine runner, .....	20	S.	Kaska William, .....	Schuylkill,	Head cut by a piece of rock falling from side of shaft.
19	James Kellegher, ....	American, ..	Laborer, .....	31	M.	Kaska William, .....	Schuylkill,	Head cut and knee cap split by a fall of rock from side of shaft.
31	Frank Tomesaski, ..	Polish, .....	Miner, .....	28	M.	Audenried No. 4, .....	Schuylkill,	Face and hands burned by an explosion of gas.
31	Mike Ematta, .....	Polish, .....	Laborer, .....	33	M.	Audenried No. 4, .....	Schuylkill,	Hands burned by an explosion of gas.
31	James Haggerty, ....	American, ..	Miner, .....	35	M.	Oakley, .....	Schuylkill,	Two ribs broken by a piece of coal falling on him.
1	Frank Karose, .....	Italian, .....	Laborer, .....	31	M.	Honey Brook No. 5, ..	Schuylkill,	Leg broken. Struck by a piece of switch rod, broken by trailing couplings.

Sept.	3	George Gelgier, .....	German, .....	Miner, .....	48	M. Kaska William, .....	Schuykill, .....	Back and hip injured by a fall of coal from face of breast.
	10	Joseph Bocteo, .....	Hungarian, .....	Miner, .....	30	S. Eagle Hill, .....	Schuykill, .....	Hands and face burned by an explosion of gas.
	14	Bryan Tansey, .....	American, .....	Driver, .....	20	S. Vulcan, .....	Schuykill, .....	ribs fractured. Car jumped the track, the legs fell a set of timber and one of the legs fell on him.
	16	John Buckshot, .....	Russian, .....	Footman, .....	42	M. Honey Brook No. 5, ..	Schuykill, .....	Laceration of right leg. Fell along side of the track and wheel caught him.
	17	Joseph Lastus, .....	Polish, .....	Plane man, .....	20	M. Silver Creek, .....	Schuykill, .....	Collar bone broken. Empty car jumped the track and caught him against a loaded one.
	18	Paul Riffon, .....	Russian, .....	Gang laborer, ....	27	M. Honey Brook No. 5, ..	Schuykill, .....	Wrist cut. Fell against coal on a low side of gangway.
	21	Andrew Patlican, .....	Hungarian, .....	Driver, .....	54	M. Honey Brook No. 5, ..	Schuykill, .....	Face cut. Kicked by a mule.
	21	John Honula, .....	Hungarian, .....	Miner, .....	34	M. Oneida No. 2, .....	Schuykill, .....	Leg broken by a fall of top coal in breast.
Oct.	10	Jerry McDonald, .....	American, .....	Miner, .....	30	M. Kaska William, .....	Schuykill, .....	Hand and face burned by hot steam from gob fire.
	13	Joseph Karnoski, ....	Polish, .....	Laborer, .....	40	S. Audenried No. 4, .....	Schuykill, .....	Jaw fractured. Struck by a lever, putting a loaded car.
	14	Maurice Friel, .....	American, .....	Miner, .....	28	M. Buck Mountain, .....	Schuykill, .....	Hands and face burned by an explosion of gas.
	14	Michael McNiff, .....	American, .....	Brattice man, ....	27	M. Buck Mountain, .....	Schuykill, .....	Hand and face burned by an explosion of gas.
	22	John Shields, .....	American, .....	Runner, .....	20	.... Kaska William, .....	Schuykill, .....	Leg injured. Caught by the wheel of the car.
	23	Moses Finley, .....	American, .....	Miner, .....	50	M. Silver Creek, .....	Schuykill, .....	Eye injured. Struck in the eye with point of his pick.
	26	John D. Molley, .....	Irish, .....	Miner, .....	46	M. Lehigh C. and N. Co. No. 11, ..	Schuykill, .....	Hands and face burned by an explosion of gas.
	26	Mannus Breslin, .....	Irish, .....	Miner, .....	37	M. Lehigh C. and N. Co. No. 11, ..	Schuykill, .....	Hands and face burned by an explosion of gas.
	26	Mike Petecovitch, ..	Hungarian, .....	Laborer, .....	42	M. Lehigh C. and N. Co. No. 8, ..	Schuykill, .....	Hip bone broken. Caught between the bumpers of loaded trip of mine cars.
	27	Simon Sambotti, .....	Austrian, .....	Miner, .....	34	M. Oneida No. 2, .....	Schuykill, .....	Leg broken. A lump of loose coal rolled on him.
	28	Peter Clauser, .....	Hungarian, .....	Platform man, ....	41	M. Eagle Hill, .....	Schuykill, .....	Hands and arms burned with hot ashes under boilers.
Nov.	2	John Williams, .....	Welsh, .....	Miner, .....	42	M. Lehigh C. and N. Co. No. 8, ..	Schuykill, .....	Hands and face burned by an explosion of gas.
	4	John Petock, .....	Polish, .....	Laborer, .....	26	S. Audenried No. 4, .....	Schuykill, .....	Two fingers cut off. Caught between chain and pulley on a derrick.
	11	Mike Kibe, .....	American, .....	Laborer, .....	18	S. Kaska William, .....	Schuykill, .....	Foot bruised. Caught between bumper of a trip of cars.
	18	James Mulligan, .....	American, .....	Miner, .....	30	S. Lehigh C. and N. Co. No. 10, ..	Schuykill, .....	Face and hands burned by an explosion of gas.
	20	Leo Eureka, .....	Polish, .....	Driver, .....	22	S. Kaska William, .....	Schuykill, .....	Finger broken. Caught between spreader and catching plate.
	30	Paul Bender, .....	Polish, .....	Laborer, .....	35	S. Kaska William, .....	Schuykill, .....	Back and hands injured.
Dec.	1	Simon G. Krovanis, .	Polish, .....	Miner, .....	34	S. Silver Creek, .....	Schuykill, .....	Left side injured. Six dynamite caps exploded in his vest pocket.
	4	William Mulehky, ....	Polish, .....	Miner, .....	32	M. Kaska William, .....	Schuykill, .....	Head and neck burned by an explosion of gas.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Dec. 5	Andrew Brozofski, ...	Polish, .....	Miner, .....	35	S.	Silver Creek, .....	Schuykill,	Hands and face burned by an explosion of gas.
5	Peter Brozofski, .....	Polish, .....	Miner, .....	25	S.	Silver Creek, .....	Schuykill,	Hands and face burned by an explosion of gas.
12	Anthony Rodomanis,	Polish, .....	Laborer, .....	26 <sup>a</sup>	....	Silver Creek, .....	Schuykill,	Eye injured. Struck by a spike flying from an ax.
23	Hugh O. Donnel, .....	American, ..	Laborer, .....	26	M.	Buck Mountain, .....	Schuykill,	Compound fracture of the leg. Struck by a piece of coal in breast.
23	Joseph Huboski, .....	Polish, .....	Jig runner, .....	14	....	Kaska Willam, .....	Schuykill,	Chest squeezed. Caught between chain and sprocket wheel.
31	Milke Burkot, .....	Polish, .....	Miner, .....	42	S.	Kaska Willam, .....	Schuykill,	Face and head burned by an explosion of gas.



## FATAL ACCIDENTS

## By Falls of Coal, Slate and Roof

January 9. Anthony Urban, miner, killed at Audenried, No. 4. He had fired three holes across the face of the breast the evening before. It appears the shots only sprung the coal and did not blow it down. When he went into the breast the next morning, he stood in the centre of it and started to trim the loose coal down. When he took one lump out of the centre, the whole mass fell on him, killing him instantly.

January 22. George Farish, laborer, Honey Brook No. 5. He was laboring for miners who were opening up a traveling way through an old breast and they were close to the surface, coming in a breach hole. The sand rock in the top lay in joints, and a piece fell from between two of the props which they had just stood and caught Farish against a prop, injuring him severely. He died in the State Hospital at Hazleton the same day.

March 14. Michael Battersby, miner, Eagle Hill. He was robbing the East Skidmore vein and one of his partners was taking out the stump between the monkey heading and the gangway. There was a piece of top slate hanging and he tried to get it down but failed. Battersby came to his assistance and started to take more coal from under it, weakening it. He had worked but a few minutes, when it fell on him, killing him.

June 29. Mike Washkill, miner at Silver Creek. He was working breast No. 11, east bottom bench, No. 3 plane. He had finished his day's work and was walking down the centre of the breast over the gob (the vein pitches 20 degrees) and a piece of slate fell from the top and injured him severely. He died on the way home.

August 19. Thomas Williams, shift leader in new shaft, Kaskawilliam Colliery. Was killed by a fall of rock from the side of the shaft. The shaft had been idle for four or five weeks, owing to a fire in another section of the mine. When the shaft resumed work, the leaders of each shift were warned to examine the sides of the shaft, to see that there was no loose rock on them. From the evidence on the inquest, he (Williams) did examine the shaft and pronounced it safe. The timber was back 29 feet from the bottom. Behind the last set of timber, there was some loose rock that may have escaped his notice. When he fired his first round of shots, it disturbed this rock. They were in the act of loading the bucket, when it fell down and killed Williams and severely injured his three laborers.

October 27. Gomer Jones, miner, killed at Morea. He was making room for a set of timber at the face of the gangway and had fired a shot in the top coal on the low side. This loosened a piece of

coal in the centre of the gangway and when he went to dress the coal down to make room for the collar, this piece of coal fell on him and killed him.

December 18. Frank Macaluse, miner. Breast No. 13, East Lykens vein, new tunnel No. 8 strippings. This man had worked three or four days in this breast and the face was about fourteen feet away from the timber, which had been set by the chute men. The drilling a hole in the face of the breast and the top slate commenced vein carries a slate top and is considered pretty good. He was to work. He heard it and made an effort to get to the monkey heading. He had not gone more than six feet when a piece of slate four feet long, three feet wide and from three to four inches thick, fell on him and killed him.

### By Cars

January 20. Stiney Poppel, inside laborer at Kaskawilliam Colliery. He was going out to work on the night shift and a loaded car was coming down from the top of the shaft by gravity. He had his back turned to it, going towards the timber bank. Those who saw the danger he was in, shouted at him to get out of the way, but he did not understand the language and paid no attention to them. The car struck him and rolled him under it along the track, killing him. Had he worked this shift, it would have been the second he worked in this country.

February 28. John Palf, door boy, Oneida No. 1. He was riding on the front of the trip with the driver, standing on the bumper, on the high side. The platform of the breast extends outside the line of the timber. He must have pushed his body out of line with the car, and was caught between it and the platform. He was injured severely and died March 3.

March 11. Charles Sharp, driver, Kaskawilliam. He was driving to the bottom of the shaft and was coming out with a loaded trip and was caught between the timber on the high side of the gangway. Was injured severely and died the same day.

May 19. Michael Campbell, miner, Buck Mountain Colliery. He was riding up the slope on a trip of empty cars, and at a point on the slope, where the timber was low, he was caught and pulled out of the car. He was riding in the first car and when he fell out, the last car of the trip passed over his body. He was severely injured and died at his home twelve hours afterwards.

September 2. George Briggs, patcher on locomotive No. 19; hauling the coal from No. 6 slope to Oneida breaker. Killed by falling between the mine cars. He stood along side of the track to let the trip pass in order to set the switch. After setting the switch, he

got on the last car of the trip. The cars travel at a lively speed along this piece of track and he started to walk along the top of the cars and fell between them. The last half of the trip passed over his body and killed him.

December 10. Geo. Kovalick, laborer at Green Mountain, slope No. 5, Honey Brook. Smothered by a rush of fine dirt and water while loading a car out of No. 9 breast, East Lykens vein, north dip. The vein is at an angle of 75 to 80 degrees, and in order to make it convenient to load the cars, they have a check battery five to six feet above the line of the collars in the gangway. This battery turns the coal to a battery at right angle to the pitch. From this battery, there is a short chute that drops the coal down into the cars through a square hole 2x2 inches. There is another hole of the same size between the next set of timber, that acts as a traveling way to get up and down to load the cars. When he started the check battery, the water that was held back by the fine dirt, made a rush, together with the fine dirt and blocked the first hole. He must have got excited and made an effort to get through the second hole and got fast in it. The dirt rushed over on top of him, and before assistance came to him, he was smothered. If he had remained standing or stepped back a few feet, he would have been safe.

#### By Cars

December 5. Martin Billin, outside laborer at No. 2 south striping, Audenried No. 4. He was employed as foot man at the plane where the rock is hoisted from the strippings. He got on the rock dumper to ride up to the blacksmith shop, which is situated near the top of the plane. When getting off the dumper, he slipped and fell under it, and was instantly killed.

#### By Explosion of Gas

May 7. Peter Skripco, miner, Silver Creek. He was working in breast No. 28, west top bench, 4 section, No. 3 plane. He fired a blast in the face of No. 28 breast, which blew into a heading that was driven from No. 29 breast. Gas had accumulated in the heading and the shot ignited it. Skripco was standing in the monkey heading, 50 feet away, and the concussion threw him down the empty chute, injuring him severely. He died on May 10th in the State Hospital at Fountain Springs.

June 22. Dennis O'Brien, miner, killed by an explosion of gas at No. 8 colliery, Lehigh Coal and Navigation Company. He was working in stump breast No. 11, east bottom bench, lower lift. He was going up the manway in the morning with a naked lamp on his head and a fall of coal brought the gas down on it. The gas ignited and

burned him severely. He was injured otherwise by being thrown down the manway. He died the same day.

November 18. Thos. Mitchell, miner, fatally injured by an explosion of gas at No. 10 colliery, Lehigh Coal and Navigation Company. This man was working in breast No. 3, east forty foot vein new tunnel. He was cutting back through the benches to the top slate and was back about twenty feet. The vein had fallen to a considerable height over the face of the breast, and gas had accumulated in this hole. He was working with a naked lamp, when a fall of coal came from this point and brought the gas down on his lamp. It ignited and he was burned severely and injured otherwise by being thrown down the chute. He died at the Miners' Hospital, November 23.

#### Suffocation by Gas

January 19. Joseph Roskeveze, miner, Silver Creek. He was preparing a blast, and when he was ready to fire it, his partner went down the inside manway and advised him to go down the outside manway to the monkey or main headway. He ignited the fuse and went into a blind headway, 20 feet from the face of the breast. After the shot exploded, large quantities of coal were liberated. The loose coal rushed down the manway. He no doubt was expecting it to cease running and he remained until the manways got blocked, preventing the air to circulate, and allowing the gas to accumulate, suffocating him.

#### By Machinery

January 26. Robert Morgan, breaker engineer, Silver Creek. He, with several others, was making repairs of the machinery in the breaker, after quitting time. When they completed their work and were preparing to go home, Morgan went to examine some sheave wheels or to put on a rope on the sheave when the machinery was started without warning him and he was caught by the sheave wheels and killed.

July 23. William Spiedel, oiler, killed in Buck Mountain breaker. The last seen of this man was at 11.30 A. M. When he did not make his appearance at his usual place at dinner time, they made a search for him and found him dead with his clothes wrapped around the shaker shaft. The indications were that he put his arm in to put oil on the journal of the shaker shaft and was caught by a set screw which was on the shaft close to the journal.

#### By Falling Down Shafts, Slopes, Etc.

August 1. Frank Tolofski, laborer at Morea. He was helping to clean out the sump at the bottom of the shaft. He got on the cage

and the bottom man signalled to the engineer to hoist him to the first lift, a distance of 88 feet. He (Tolofski) got off the cage and signalled the engineer to let the cage back to the bottom, which he did. Shortly afterwards Tolofski was found dead at the bottom of the shaft.

#### By Blasts

October 31. Emory Kovitch, laborer, killed at Bell Colliery. He was laboring in the gangway. He and the miner drilled three short holes to make room to shift the road to the high side of the gangway. They charged two of the holes and fired them. The miner went back some distance to look after the mule they were working (it being on the night shift). He told Kovitch to sit down until he came back. He (Kovitch) went into the gangway, charged the remaining hole and in igniting the fuse the blast exploded, injuring him severely. He died in the Miners' Hospital at Fountain Spring, November 8.

#### Suffocated by Coal

March 31. Daniel Sweeney, slate picker, was smothered in a coal chute at the Carson Coal Company washery. He and four other boys were playing in the coal pocket. The car loaders started to draw the coal and two of them were carried down with the coal and before Sweeney could be rescued, he was smothered. The other boys escaped.

#### Miscellaneous

July 6. Ludwig Kochalachik, outside laborer, No. 8, Lehigh Coal and Navigation Company. This man's duty was to keep the coal moving in a chute leading from one screen to another. He was working by himself, no other person being at work close to him to give an account of how the accident occurred. There was a hose hanging upon the side of the building, put there for the purpose of putting water on a roller journal that got hot occasionally. It would appear that he took the hose down, for what purpose no one can tell. When found, he was dead, lying under the shaft with the hose wrapped around the shaft.

#### Condition of Collieries

##### COXE BROTHERS AND COMPANY, INCORPORATED

Nos. 1 and 3. The drainage and haulage are in excellent condition; the ventilation is fair. Small quantities of gas are found occasionally in No. 1, but none has been found in No. 3. On my first visit to No. 4, the ventilation was poor. With the installation of a new 20 foot fan, on my second inspection, the ventilation was good. Drainage and haulage were in fine condition.

## LEHIGH AND WILKES-BARRE COAL COMPANY

No. 5, Honey Brook. The coal of this colliery is brought from several sections: From Green Mountain, a distance of four miles, where it is partly prepared in a small breaker, built for that purpose; from Green Mountain water level tunnel; from No. 15 slope; No. 8 tunnel; No. 10 north stripping; West Shore stripping; No. 8 south stripping, and No. 8 south extension stripping. There has been a continual improvement in the sanitary condition of this colliery in the past year.

No. 4, Audenried. To this colliery coal is brought from No. 4 slope, No. 11 slope, No. 16 slope, No. 12 slope, No. 1 W. A. stripping, and No. 2 south stripping, Treskow. The drainage and haulageway are in fine condition. The ventilation is fair, and the officials are making every effort to improve it.

## DODSON COAL COMPANY

## Morea Colliery

There has been a slight improvement in the ventilation of this colliery in the past year, but the drainage is not what it might be. The conditions surrounding the colliery make it hard to keep it up to the standard in drainage.

## MILL CREEK COAL COMPANY

## Buck Mountain Colliery

The ventilation and drainage from the third level down to the sixth are in fair condition. On the third level in my last inspection, the ventilation was very poor. Since then they have installed a new 16 foot fan, and I expect to find better ventilation and a general improvement in the sanitary condition on my next visit.

## Vulcan Colliery

A new 25 foot fan has been installed at the colliery in the past year, but it has not brought the ventilation up to the standard that was expected. The ventilation is not what it should be, especially on the third level. I expect to be able to give a more favorable account in my next year's report.

## PHILADELPHIA AND READING COAL AND IRON COMPANY

## Eagle Hill Colliery

The ventilation and drainage of this colliery are in fair condition, with the exception of Skidmore vein. Here they are driving an air

tunnel from the monkey heading in Skidmore vein to the monkey heading in the bottom bench of the Mammoth. It was driven 50 feet in my last visit and it will require to be driven 50 feet more to connect the two veins. This will improve the ventilation in this section.

#### Silver Creek Colliery

The ventilation and drainage of this colliery are in fair condition. The officials are making special efforts to keep it up to the standard.

#### TRUMAN M. DODSON COAL COMPANY

##### Kaskawilliam Colliery

The ventilation of this colliery is in fair condition. The drainage is not up to the standard, but the officials have promised to put it in good condition immediately.

##### Greenwood Colliery

The condition of this colliery is fair. The principal work is robbing.

#### LEHIGH COAL AND NAVIGATION COMPANY

Nos. 8, 12, 10 and 11 collieries are in good condition.

##### West Lehigh Colliery

This is a small operation, on water level. The sanitary condition is fair.

##### East Lehigh Colliery

The condition of the colliery is fair.

##### Tuscarora Colliery

Sanitary condition of the colliery is fair.

##### Bell Colliery

Sanitary condition of the colliery is fair.

##### Sebastopol Colliery

This colliery is a small operation and is in fair condition.

##### Laurel Run Colliery

They are doing nothing at this colliery at the present time but stripping.

## Improvements

## LEHIGH COAL AND NAVIGATION COMPANY

## No. 10 Colliery

Ground was broken for two shafts, one water shaft, four compartments, on March 3, and a two compartment coal shaft on May 18. Soil was removed to rock and concrete built up for 30 feet. The water shaft will be 17x7 feet square, four compartments, and the coal shaft will be 15x11 feet, two compartments. The coal shaft has been driven 54 feet and the water shaft 159 feet in the last year. A battery of Sterling boilers 600 horse power has been placed to generate steam for this plant. A new piece of railroad has been built from the main line of the Central Railroad of New Jersey to convey supplies to the new shaft.

## No. 11 Colliery

A tunnel was driven from north dip of Mammoth vein to F vein, a distance of 207 feet from F vein to G vein, a distance of 60 feet, and is continued on to cut the H vein. A new 24 foot fan has been erected to replace the old ones. Two new airways are now being driven on Skidmore vein with an area of 72 feet each to connect to this fan.

## No. 12 Colliery

The tunnel driven across the basin from the Primrose vein south, for a distance of 2,442 feet was stopped on June 20, and an air hole is now being driven on one of the small veins to the surface. When this hole is completed, work on the tunnel will be resumed. Twin holes have been driven on G vein from this tunnel to the surface, a distance of 670 feet. One of these holes has been enlarged for a distance of 322 feet from the surface down and timbered with a 7½ foot collar and 8 foot legs to make a single track slope. Gangways have been turned off east and west and a breast opened. The vein is in fair condition with 7 to 8 feet of good coal. The remaining part of this hole down to the tunnel has been timbered with a 5½ foot collar and 7 foot legs which can be used for an airway or counter chute.

## PHILADELPHIA AND READING COAL AND IRON COMPANY

## Silver Creek Colliery

A tunnel has been started in the bottom bench, south dip shaft level, to be driven through saddle to the bottom bench on the same dip.

## Eagle Hill Colliery

Ground was broken on May 5th for a new four compartment shaft, the soil removed down the rock and concreted up for 28 feet, head frame built, engine and boilers placed, and preparations made to start on the rock work on the first of the year.



An overhead tunnel is being driven from breast No. 51, West Skidmore, south dip, to West Mammoth vein, for the purpose of bringing the return air from Mammoth vein to Skidmore vein.

#### MILL CREEK COAL COMPANY

##### Vulcan Colliery

The tunnel to the Primrose vein is being continued across the basin to strike the Primrose vein on the south dip and also the top split of the Mammoth on the south dip. A tunnel is also being driven on the fourth level from the Skidmore vein to the bottom split of the Mammoth vein. This is done to avoid a long distance in fault in the bottom split of the Mammoth vein. The No. 1 slope has been continued another lift to the fifth level. The water in the old Gorman slope in the Primrose vein, has been tapped and run off, leaving this territory safe from standing water. A new 25 foot fan has been erected which should give ample ventilation to this mine.

No. 3 slope, Buck Mountain vein, north dip, has been sunk 300 feet to the sixth level, and the gangway east and west turned off.

A tunnel has been driven from the bottom split of the main vein, north dip, to the top split of the Mammoth vein, north dip, a distance of 267 feet.

A tunnel has also been driven from the south dip of the bottom split of the Mammoth vein to the south dip of the top split of the Mammoth vein, a distance of 113 feet. Both tunnels are on the third level. The top split is 12 feet thick and in good condition.

A tunnel has also been commenced from the fourth level, north dip, Buck Mountain vein, to be driven to the bottom split of the Mammoth vein on the south dip.

A new compressed air locomotive has been purchased in addition to the other two in use, to be used on third level for collecting and distributing the cars to and from the working places. A sixteen foot fan has been erected at No. 3 slope, and new airways completed inside to connect with it. This, in connection with the sixteen foot fan at No. 1 slope, will insure good ventilation at this colliery.

At No. 3 slope, four return tubular boilers of 150 horse power each, have been installed. A pair of hoisting engines 26 by 48 with a 12 foot drum, has been completed.

##### New Boston

Work preparatory to pumping out the old workings has been going on, a boiler plant has been installed, consisting of 14 return tubular boilers of 150 horse power each, and six Goyne pumps 24x10x36

inches have been placed in position in the various slopes, and the mouths of the slopes have been timbered, ready for pumping.

#### LEHIGH AND WILKES-BARRE COAL COMPANY

##### No. 4 Colliery

Two pump rooms in rock on fourth level, each 50 feet long, 18 feet wide, 12 feet high. Three 14 inch bore holes, each 130 feet long, from the surface to Gamma vein through which water will be pumped. Two 12 inch bore holes each 130 feet long for steam lines. A sump tunnel 186 feet long one under ground, slope 12x7 feet and 260 feet long in Lykens vein from fourth level to fifth level. Extension now in progress, one tunnel 11x7 feet and 91 feet long from Buck Mountain vein to Gamma vein on second level. One tunnel 11x7 feet by 328 feet long from Lykens vein, south dip, to Lykens vein, north dip, on No. 2 plane level. One tunnel 10x7 feet by 128 feet long, from Buck Mountain vein to Gamma vein on No. 2 plane level.

A new Guibal fan 12 feet in diameter, 4 foot blades on airway at No. 16 slope. New plant at No. 2 stripping consisting of plane hoisting engines, 10x24, and one 150 horse power tubular boiler and necessary buildings, 500 horse power Babcock and Wilcox boilers, added to boiler plant at this Colliery.

##### No. 5 Colliery

One tunnel 11x7x390 feet long, from Gamma south dip to Gamma north dip, cutting the Wharton vein on south dip and north dip and the Mammoth vein close to the basin of the same. One new Guibal fan 15 feet in diameter and 4 foot blades on airway in Gamma vein. Water level tunnel at Green Mountain continued 490 feet to Seven-foot Buck Mountain and Lykens vein, south dip. One Guibal fan 8 feet in diameter 3 foot blades on air way in north dip, Lykens. One thousand horse power Babcock & Wilcox boilers complete to replace boiler plant too close to breaker. One Jeanesville 12x18 inch and 12x18 inch compound wash pump for breaker. One 25 ton Porter locomotive 12x18x36 inch drivers.

#### BUTCHER CREEK COAL COMPANY

##### Juglar Colliery

A new breaker has been erected with a capacity of 250 tons per day. A piece of railroad track has been extended to the breaker.

## MARY D. COAL COMPANY

## New Operation

Mary D. Coal Company has commenced to open a new colliery on the Kentucky bank tract, owned by the Lehigh Coal and Navigation Company. One mile east of Tuscarora a slope is now being sunk and at present is down 200 feet. The intention is to sink it to the basin, to be used when the colliery is opened up as a tender slope. A shaft will immediately be sunk in the next basin south, which will be connected by a tunnel to the slope they are now sinking. This will give them an opportunity to work both basins.

## COXE BROTHERS AND CO., INCORPORATED

A new reversible fan 20 feet in diameter, built by the Vulcan Iron Works of Wilkes-Barre, has been installed. This will furnish abundance of air for this mine. A tunnel is now being driven from the Buck Mountain vein on the south dip across the basin to the north dip of the Buck Mountain vein at breast.

## TRUMAN M. DODSON COAL COMPANY

## Kaskawilliam Colliery

The new shaft sinking is down 692 feet, a distance of 362 feet for the year. The Seven-foot vein was cut at a distance of 660 feet and the intention is to sink 200 feet more. Also a fan hole which was being driven to the surface on Skidmore vein, Northdale workings, is up 609 feet. A rock chute has been driven from the tunnel at the bottom of No. 1 slope up to the Orchard vein, a distance of 80 feet, striking the basin. Two gangways have been started in this vein. A tunnel was driven from Mammoth vein east in No. 1 slope to the Skidmore vein, a distance of 80 feet.

Preparations have been made to sink a new slope (inside) on the bottom split in Northdale basin and is now ready for contractors to start to work.

## DODSON COAL COMPANY

## Morea Colliery

A short tunnel has been driven from the east Seven-foot vein to the East Skidmore vein, on the second level. Bore holes have been drilled from the surface for ropes for No. 2 and No. 3 inside slopes. Work on the slope is still in progress. No. 2 slope is designed to take the second and third level coal, on the west side, to the present slope level, and No. 3 slope will take the third level and basin coal,

on the east side, to the present slope level, thus freeing the shaft to be used in hoisting water. Five new return tubular boilers 72x17 x6 inches, are now on the ground, but not placed. These are intended to replace the 24 cylinder boiler now in use. Plans have been completed to rebuild the breaker plane and also to build a flume to move the creek to the south side, which will release a large amount of coal.

#### Mine Foremen's Examinations

The annual examinations of candidates for mine foremen and assistant mine foremen certificates during the year 1903 resulted in the following named persons being recommended to the Chief of Department of Mines for certificates.

#### Assistant Mine Foremen

Henry Petrich, Mahanoy City; Thomas P. Maley, Cumbola; Owen J. Langton, Cumbola; Michael Ryan, Silver Creek; John Glover, Tamaqua; James Tobin, Cumbola; Edward DeLay, Tamaqua; John F. DeLay, Tamaqua; James McGovern, Silver Creek; John Curry, Silver Creek; James Larey, Silver Creek; Edward Gay, Silver Creek; Richard Large, Silver Creek; John T. Davis, Seek; William Reynolds, Silver Creek; Edward J. Stapleton, Palo Alto; John M. Callaway, Kaska William; James T. Mekley, Seek; Daniel Lloyd, Morea; D. C. Gildea, Coaldale; Patrick Hartnett, Cumbola; Peter Murray, Cumbola; Charles Duesch, Mahanoy City; John R. Davis, Lansford; Robert Parfitt, Coaldale; Maurice Friel, Mahanoy City; Jacob Rosser, Morea; Shadrach M. Davis, Tamaqua; David Lloyd, Morea; Thomas J. Richards, Lansford; John Russel, Kaskawilliam; W. H. Thomas, Kaskawilliam; William A. Moses, Broad Mountain; John O'Haren, Silver Creek; Walter Yemm, Coaldale; E. J. Flanigan, New Philadelphia; Thomas West, Coaldale; Daniel O'Donnel, Coaldale; Thomas Barrett, Coaldale; Harry Watkins, Coaldale; George H. Comley, Buck Mountain; Artemus Jones, Seek; John P. Fisher, Coaldale; Robert H. Jones, Lansford; William Minahan, Frackville; James Heeney, New Boston; Thomas O'Neil, Kaskawilliam; Frederick Stevens, Lansford; John Bowen, Seek; John Brocker, Mahanoy City; Michael Curtis, Mahanoy City; Richard Morgan, Coaldale; Rees S. William, Tamaqua; Patrick McGroarty, Morea; William M. Rosser, Morea; James Phillips, Mahanoy City; David Yemm, Coaldale; Lewis Middlekamp, Seek; William Dormer, St. Clair; Philip Richards, Coaldale; Lewis Middlekamp, Seek.

The board was composed of the following members:

John Curran, Mine Inspector, president; Mahlon A. Gerber, superintendent, Tamaqua; Nicholas Murray, miner, Cumbola; Thomas Phillips, miner, New Philadelphia.

# Fourteenth Anthracite District

NORTHUMBERLAND COUNTY

---

Mt. Carmel, Pa., February 28, 1904.

Hon. James E. Roderick, Chief of the Department of Mines:

Sir: I have the honor to submit herewith my first annual report as Inspector of Mines of the Fourteenth Anthracite District for the year ending December 31, 1903.

Statistics, as required by law, are given in the various tables, together with a brief description of the accidents that occurred during the year, and remarks regarding the condition of the collieries. Very few improvements have been made in this district during the year.

I assumed the duties of the office September 1, 1903, by appointment of the Honorable Judge of Northumberland county, upon the resignation of Mr. James Tinley.

Respectfully submitted,

BENJAMIN I. EVANS,  
Inspector.

## Fourteenth Anthracite District, 1903.

## SUMMARY OF STATISTICS

Number of mines in district, .....	27
Number of mines in operation, .....	26
Number of tons of coal produced, .....	4,927,304
Number of tons shipped to market, .....	4,337,264
Number of tons sold at mines to local trades, .....	79,180
Number of tons consumed at mines in generating steam and heat, .....	510,860
Number of persons employed inside the mines, .....	9,312
Number of persons employed outside, .....	5,268
Number of fatal accidents inside the mines, .....	35
Number of tons produced for each fatal accident inside, .....	140,780
Number of persons employed per fatal accident inside, .....	266
Number of fatal accidents outside, .....	8
Number of persons employed per fatal accident outside, .....	659
Number of wives made widows by fatal accidents, ....	21
Number of children orphaned by fatal accidents, .....	51
Number of non-fatal accidents inside of mines, .....	51
Number of persons employed per non-fatal accident inside, .....	183
Number of non-fatal accidents outside, .....	13
Number of persons employed per non-fatal accident outside, .....	405
Number of compressed air locomotives inside, .....	2
Number of electric motors used inside, .....	3
Number of fans used for ventilation, .....	57
Number of gaseous mines in operation, .....	10
Number of non-gaseous mines in operation, .....	16

TABLE A.—Fourteenth Anthracite District, 1903.

PRODUCTION OF COAL	
Names of Companies	Tons
Philadelphia and Reading Coal and Iron Company, . . .	2,087,173
Susquehanna Coal Company, . . . . .	862,359
Mineral Railroad and Mining Company, . . . . .	741,139
Excelsior Coal Company, . . . . .	239,330
Enterprise Coal Company, . . . . .	258,946
Greenough Red Ash Coal Company, . . . . .	166,290
T. M. Righter Coal Company, . . . . .	155,937
Seneca Coal Company, . . . . .	106,083
White and White, . . . . .	48,666
Shipman Coal Company, . . . . .	58,803
Llewellyn Mining Company, . . . . .	60,884
Buck Ridge Coal Company, . . . . .	11,199
Shamokin Coal Company, . . . . .	130,495
	<hr/>
<b>Total, . . . . .</b>	<b>4,927,304</b>
	<hr/> <hr/>
Production by Counties	
Northumberland, . . . . .	4,927,304
	<hr/> <hr/>

TABLE B.—Fourteenth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Companies	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside		Number of employees outside			
	Inside	Outside	Total	Inside	Outside	Total						per fatal accident	per non-fatal accident	per fatal accident	per non-fatal accident	per fatal accident	per non-fatal accident
Philadelphia and Reading Coal and Iron Co.,	17	2	19	19	4	23	122,775	109,851	3,257	1,823	5,080	191	171	362	912	456	
Mineral Railroad and Mining Co.,	4	1	5	5	.....	5	135,285	148,228	1,717	660	2,437	449	359	600	660	244	
Susquehanna Coal Co.,	5	4	9	1	6	17	172,472	78,336	2,139	1,411	3,600	428	194	365	244	244	
Excelsior Coal Co.,	3	.....	3	1	.....	1	79,777	239,330	312	312	644	164	312	.....	258	258	
Enterprise Coal Co.,	1	1	2	3	1	4	258,946	86,315	258	258	644	386	121	.....	.....	.....	
Llewellyn Mining Co.,	3	.....	3	1	.....	1	20,195	60,884	137	87	244	432	137	.....	.....	.....	
White and White,	1	.....	1	1	.....	1	48,666	48,666	137	67	204	175	175	.....	.....	.....	
Beneca Coal Co.,	1	.....	1	1	.....	1	103,083	106,083	149	168	294	175	73	.....	.....	.....	
T. M. Righter and Co.,	.....	.....	.....	.....	.....	.....	77,96	43,498	149	291	391	.....	.....	.....	.....	.....	
Shamokin Coal Co.,	.....	.....	.....	.....	.....	.....	48,498	48,498	226	114	320	.....	.....	.....	.....	.....	
Greenough Red Ash Co.,	.....	.....	.....	.....	.....	.....	41,513	41,513	.....	.....	.....	.....	.....	.....	.....	.....	
Totals and averages for district,	35	8	43	51	13	64	140,780	96,614	9,312	5,288	14,580	266	183	449	653	405	



TABLE C.—Fourteenth Anthracite District, 1903  
Classification of Fatal Accidents

	Inside of Mines										Outside of Mines					Grand total		
	By Falls of			By Falling Into							Total inside	By cars	By machinery	By suffocation	By boiler explosions		Miscellaneous causes	Total outside
	Coal	Slate	Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	Slopes								
January, .....	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
February, .....	1	1	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	4
March, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
April, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
May, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
June, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
July, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
August, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
September, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
October, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
November, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
December, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
Totals, .....	8	5	8	4	2	1	2	2	1	2	3	1	1	1	2	1	1	43

TABLE D.—Fourteenth Anthracite District, 1903  
Classification of Non-Fatal Accidents

	Inside of Mines										Outside of Mines						Grand total		
	By Falls of			By Falling Into							Total inside	By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes		Total outside	
	Coal	State	Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	Slopes									Manways, breasts, etc.
January	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	4	
February																			4
March	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
April	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8
May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8
June	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
July	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
August																			4
September																			6
October																			6
November																			2
December	1	1	1	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	11
Totals	5	4	8	15	3	2	2	4	4	2	2	8	51	6	4	3	6	13	64

TABLE E.—Fourteenth Anthracite District, 1903  
Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines

	Inside										Outside								Grand total		
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks		All other employes	Total outside
January	1	1	1	3	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	4
February	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	4
March	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	4
April	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	3
May	1	1	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1	4
June	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	4
July	1	1	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1	4
August	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	3
September	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	3
October	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	3
November	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
December	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
Totals	26	7	1	26	7	1	1	1	1	1	35	1	1	1	1	1	1	1	6	8	43



TABLE G.—Fourteenth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	English	Irish	German	Polish	Hungarian	Italian	Slavonian	Austrian	Russian	Greek	Prussian	Totals
January, .....	1			1	1				1				4
February, .....	2	1			1								4
March, .....	2	1	1		4	1							9
April, .....				1			1						3
May, .....	1				1								4
June, .....	1				3					1			5
July, .....					3	1							5
August, .....					3			1			1		5
September, .....	1							1				1	3
October, .....									1				1
November, .....				1									1
December, .....	1												1
Totals, .....	9	2	2	3	17	2	1	2	2	1	1	1	43

TABLE H.—Fourteenth Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Irish	German	Polish	Hungarian	Italian	Lithuanian	Austrian	Russian	Totals
January, .....	2				1		1				4
February, .....	2				2						4
March, .....	3				3	1					8
April, .....	4								1		5
May, .....	1		1		3						5
June, .....	1	2	1			2					6
July, .....	1				1	1	1				4
August, .....	3				1		1				5
September, .....	3			1	2	1					7
October, .....	2				1	1		1			6
November, .....					3					1	3
December, .....	6				1						7
Totals, .....	28	2	2	1	17	5	3	1	2	3	64

TABLE I.—Fourteenth Anthracite District, 1903

Operators and mines, kind of openings, kind of fans, size of furnaces, volume of air produced by fan or furnace per minute number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per person
P. and R. Coal and Iron Co.																
Henry Clay No. 1	Shaft	Gaseous	Fan	21	1	6.3	73	2.1	Guibal	Steam	11	40,000	40,000	42,500	125	319
Henry Clay No. 2	Shaft	Gaseous	Fan	18	4.8	6	80	1.25	Perfessy	Steam	2	54,000	54,000	4,000	479	221
Alaca shaft, slope No. 2	Slope	Non-gas	Fan	18	6	5.8	72	1.8	Guibal	Steam	2	49,650	49,650	47,800	308	547
Reliance, Skidmore	Slope	Non-gas	Fan	12	5	4	60	1.7	Guibal	Steam	1	50,000	50,000	52,500	308	547
Reliance, Mammoth E.	Slope	Non-gas	Fan	15	5	5	60	1.7	Guibal	Steam	1	42,000	42,000	45,000	308	547
Reliance, Mammoth W.	Slope	Non-gas	Fan	18	5.6	5.6	102	1.2	Guibal	Steam	4	84,000	80,000	75,000	129	217
Big Mountain No. 1 fan	Slope	Gaseous	Fan	12	4	3.6	70	2	Guibal	Steam	5	23,000	23,000	21,000	129	217
Big Mountain No. 2 fan	Slope	Gaseous	Fan	18	6	5.6	70	2	Guibal	Steam	4	4,575	4,575	5,000	129	217
Bear Valley	Shaft	Gaseous	Fan	18	5.10	4.11	85	2.1	Guibal	Steam	7	64,740	64,740	66,620	302	214
Sterling No. 1 fan, No. 8 & 10 veins	Slope	Gaseous	Fan	18	6	5.4	60	1.5	Guibal	Steam	4	55,000	55,000	43,275	255	543
Sterling No. 2 fan, No. 5 & 7 veins	Slope	Gaseous	Fan	21	7.2	6	50	1.5	Guibal	Steam	4	45,000	45,000	43,275	255	543
Sterling No. 3 fan, on 3d lit.	Slope	Gaseous	Fan	15	4.6	4.8	55	1.75	Guibal	Steam	2	38,000	38,000	34,000	250	212
Burnside colliery	Shaft	Gaseous	Fan	12	5	4.6	90	1.1	Guibal	Steam	3	88,500	83,000	74,760	371	219
Burnside drift, No. 1	Drift	Non-gas	Fan	12	2	4.6	70	1.2	Guibal	Steam	2	28,500	28,500	27,100	176	419
North Franklin No. 1	Slope	Gaseous	Fan	18	5.6	6	70	1.2	Guibal	Steam	2	53,000	53,000	50,000	371	419
North Franklin No. 2	Slope	Gaseous	Fan	18	5.6	6	70	1.2	Guibal	Steam	2	53,000	53,000	50,000	371	419
North Franklin No. 3	Slope	Gaseous	Fan	18	5.6	6	70	1.2	Guibal	Steam	2	53,000	53,000	50,000	371	419
Locust Gap, East	Slope	Gaseous	Fan	15	4	4.6	70	2	Guibal	Steam	4	53,000	53,000	51,000	355	225
Locust Gap, West	Slope	Gaseous	Fan	12	4	3.6	100	1.8	Guibal	Steam	3	24,700	25,700	26,000	512	212
Locust Spring No. 1 fan	Shaft	Gaseous	Fan	12	4	3.6	100	1.25	Guibal	Steam	3	55,500	55,500	59,000	512	212
Locust Spring No. 2 fan	Shaft	Gaseous	Fan	12	4	3.6	90	1.1	Guibal	Steam	2	53,000	53,000	46,300	512	212
Mineral Railroad and Mining Co.																
Cameron colliery, No. 7 vein	Slope	Gaseous	Fan	18	7	5.2	75	1.4	Guibal	Steam	9	75,000	75,000	76,500	1,102	562
Cameron colliery, No. 9 vein	Slope	Gaseous	Fan	14	3.11	4	120	1.4	Guibal	Steam	3	49,000	49,000	45,000	1,102	562

Cameron colliery, No. 11 vein.	Slope...	Shaft...	Gaseous.	Fan.....	18	5	5.2	96	2.4	Guibal.....	Steam..	8	71,000	51,000	53,000	.....
Cameron colliery, No. 11 vein.	Slope...	Shaft...	Gaseous.	Fan.....	18	5	5.1	106	2.6	Guibal.....	Steam..	9	48,750	48,750	47,000	.....
Luke Fisher shaft No. 2.	Slope...	Shaft...	Gaseous.	Fan.....	18	7	5.2	106	2.6	Guibal.....	Steam..	6	75,000	75,000	72,000	650
Luke Fisher shaft No. 1.	Slope...	Shaft...	Gaseous.	Fan.....	18	7	5.2	82	1.7	Guibal.....	Steam..	4	70,000	70,000	65,100	.....
Susquehanna Coal Co.																
Union Collieries																
Pennsylvania No. 9 vein.	Slope...		Gaseous.	Fan.....	12	3.5	3.5	100	.6	Vulcan.....	Steam..	1	25,000	25,000	22,000	680
Pennsylvania N. D. No. 10 vein.	Slope...		Gaseous.	Fan.....	14	4.5	4.1	101	.75	Mullen.....	Steam..	2	25,500	25,500	23,650	214
Pennsylvania S. D. No. 10 vein.	Slope...		Gaseous.	Fan.....	12	3.5	3.5	75	.4	Vulcan.....	St. air.	2	39,300	22,500	25,050	.....
Shaft fan.	Slope...		Gaseous.	Fan.....	W	6.2	5.11	80	1.8	Mullen.....	Steam..	3	72,500	72,500	69,000	.....
Richards No. 1 dip fan.	Slope...		Gaseous.	Fan.....	18	7.2	5.2	52	1.8	Vulcan.....	Steam..	5	120,000	120,000	121,000	765
Richards No. 2 dip fan.	Slope...		Gaseous.	Fan.....	19.4	6.8	6.4	76	2	Vulcan.....	Steam..	6	130,000	130,000	135,000	387
Richards No. 3 slope fan.	Slope...		Non-gas.	Fan.....	16	4.5	4.5	45	.2	Mullen.....	Steam..	4	23,000	23,000	24,000	.....
Richards No. 4 slope fan.	Slope...		Non-gas.	Fan.....	19	4	4	10	.5	Sturtevant	.....	3	45,000	42,000	40,570	402
Hickory Ridge No. 5 slope.	Slope...		Non-gas.	Fan.....	15	4	4.8	60	2.5	Guibal.....	Steam..	3	34,000	34,000	35,000	.....
Hickory Ridge No. 6 slope.	Slope...		Non-gas.	Fan.....	12	4	3.10	90	1.5	Vulcan.....	Steam..	3	35,000	35,000	35,000	.....
Hickory Ridge No. 7 slope.	Slope...		Non-gas.	Fan.....	12	4	3.10	90	1.5	Vulcan.....	Steam..	5	64,000	64,000	62,000	281
Hickory swamp.	Slope...		Non-gas.	Fan.....	16	5.5	4.5	96	1.3	Mullen.....	Steam..	5	64,000	64,000	62,000	281
White and White																
No. 1 fan Columbus No. 2.	Slope...		Non-gas.	Fan.....	8	4	3	95	.6	Vulcan.....	Steam..	1	23,000	23,000	21,500	137
No. 2 fan Columbus No. 2.	Slope...		Non-gas.	Fan.....	6	3	3	50	.5	Vulcan.....	Steam..	1	9,000	9,000	10,000	223
Excelsior Coal Co.																
Excelsior.	Slope...		Non-gas.	Fan.....	15	5	5	76	1.5	Beadle.....	Steam..	1	64,000	64,000	64,400	159
Corbin.	Slope...		Non-gas.	Fan.....	15	5	5	48	2.5	Beadle.....	Steam..	2	22,000	22,000	23,100	153
Corbin Brady slope.	Slope...		Non-gas.	Fan.....	13	5	5	41	1.5	Beadle.....	Steam..	1	19,000	19,000	19,750	.....
T. M. Righter and Co.																
Mount Carmel.	Slope...		Non-gas.	Fan.....	16	4.6	5	70	1.6	Guibal.....	Steam..	4	76,000	76,000	74,000	146
Seneca Coal Co.	Slope...		Non-gas.	Fan.....	16	6	5	50	1.5	Guibal.....	Steam..	4	28,000	28,000	26,400	177
Shoux No. 1.	Slope...		Non-gas.	Fan.....	16	5	5	80	1.1	Guibal.....	Steam..	.....	.....	17,000	17,500	.....
Shoux No. 3.	Slope...		Non-gas.	Fan.....	16	5	5	41	1.5	Beadle.....	Steam..	.....	.....	17,000	17,500	.....
Enterprise Coal Co.																
Enterprise No. 1 fan.	Slope...		Non-gas.	Fan.....	14	3.5	5	72	1.4	Guibal.....	Steam..	1	69,300	69,300	65,000	335
Enterprise No. 2 fan.	Slope...		Non-gas.	Fan.....	16	4.5	5	65	1.5	Guibal.....	Steam..	1	60,500	60,500	62,000	.....
Shipman Coal Co.																
Colbert.	Shaft...		Non-gas.	Fan.....	16	5	4	60	1.3	Guibal.....	Steam..	2	40,000	40,000	39,500	195
Greenough Red Ash Coal Co.																
Greenough No. 1.	Shaft...		Non-gas.	Fan.....	12	3.11	3.8	80	1	Mullen.....	Steam..	.....	55,000	25,000	26,200	236
Greenough No. 2.	Shaft...		Non-gas.	Fan.....	12	5	4	100	1.25	Mullen.....	Steam..	.....	27,500	27,500	28,800	224
Llewellyn Mining Co.																
Royal Oak.	Slope...		Non-gas.	Fan.....	18	7	6	50	1.2	Guibal.....	Steam..	.....	33,000	33,000	32,500	157
Shamokin Coal Co.																
Natalie No. 2.	Slope...		Non-gas.	Fan.....	12	5	4.6	70	1.1	Mullen.....	Steam..	2	24,000	24,000	24,500	375
Natalie No. 3.	Slope...		Non-gas.	Fan.....	12	5	4.6	75	1.3	Mullen.....	Steam..	2	28,000	28,000	29,000	202
Natalie No. 4.	Slope...		Non-gas.	Fan.....	12	5	4.6	65	.8	Mullen.....	Steam..	1	24,000	24,000	25,000	.....

TABLE 1.—Fourteenth Anthracite District, 1903  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
Burnside	North'd.	W. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Lehigh Valley	North'd.	W. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Henry Clay	North'd.	W. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Big Mountain	North'd.	W. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Sterling	North'd.	W. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
North Franklin	North'd.	W. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Alaska	North'd.	W. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Reliance	North'd.	W. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Locust Gap	North'd.	W. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
Locust Spring	North'd.	W. J. Richards	Pottsville	John Veith	Pottsville	Philadelphia and Reading
T. M. Righter and Co.						
Mount Carmel	North'd.	S. D. Warriner	Wilkes-Barre	J. M. Humphreys	Centralla	Lehigh Valley
Seneca Coal Co.						
Sloux	North'd.	S. D. Warriner	Wilkes-Barre	J. M. Humphreys	Centralla	Lehigh Valley
Susquehanna Coal Co.						
Union collieries	North'd.	R. A. Quin	Wilkes-Barre	Wm. R. Reinhardt	Shamokin	Pennsylvania (N. C.)
Pennsylvania	North'd.	R. A. Quin	Wilkes-Barre	Wm. R. Reinhardt	Shamokin	Pennsylvania (N. C.)
Hickory Swamp	North'd.	R. A. Quin	Wilkes-Barre	Wm. R. Reinhardt	Shamokin	Pennsylvania (N. C.)
Hickory Ridge	North'd.	R. A. Quin	Wilkes-Barre	Wm. R. Reinhardt	Shamokin	Pennsylvania (N. C.)
Richards	North'd.	R. A. Quin	Wilkes-Barre	Wm. R. Reinhardt	Shamokin	Pennsylvania (N. C.)
Scott shaft	North'd.	R. A. Quin	Wilkes-Barre	Wm. R. Reinhardt	Shamokin	Pennsylvania (N. C.)
Mineral Railroad and Mining Co.						
Cameron	North'd.	R. A. Quin	Wilkes-Barre	E. A. Rhoads	Shamokin	Pennsylvania (N. C.)
Luke Fidler	North'd.	R. A. Quin	Wilkes-Barre	E. A. Rhoads	Shamokin	Pennsylvania (N. C.)
Excelsior Coal Co.						
Excelsior	North'd.	Andrew Robertson	Pottsville	A. D. Robertson	Shamokin	Philadelphia and Reading
Corbin	North'd.	Andrew Robertson	Pottsville	G. W. Robertson	Shamokin	Philadelphia and Reading
Enterprise Coal Co.						
Enterprise	North'd.	W. L. Connell	Scranton	W. L. Connell	Scranton	Philadelphia and Reading
Shipman Coal Co.						
Colbert	North'd.	W. L. Connell	Scranton	E. J. Corliss	Shamokin	Pennsylvania (N. C.)



Greenough Red Ash Coal Co. Greenough, .....	North'd, .....	Edward Brennan, .....	Shamokin, .....	.....	Pennsylvania (N. C.)
White and White Columbus No. 2, .....	North'd, .....	E. E. White, .....	Mount Carmel, .....	.....	Lehigh Valley
Llewellyn Mining Co. Royal Oak, .....	North'd, .....	.....	.....	Wm. H. Llewellyn,	Shamokin, .....
Shamokin Coal Co. Natalie, .....	North'd, .....	Nathaniel Taylor, .....	Natalie, .....	Edward Brennan, .....	Shamokin, .....
Buck Ridge Coal Co. Buck Ridge washery, .....	North'd, .....	.....	.....	D. H. McGee, ....	Minersville, .....
.....	.....	.....	.....	.....	Philadelphia and Reading
.....	.....	.....	.....	.....	Philadelphia and Reading
.....	.....	.....	.....	.....	Philadelphia and Reading

TABLE 2.—Fourteenth Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number and used by employees	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.	North'd.	100,969	36,258	5,407	142,584	204	266	2	2	764	429	67
Henry Clay, .....	North'd.	.....	.....	.....	.....	.....	178	2	1	1,078	2,715	.....
Big Mountain, .....	North'd.	278,562	45,515	5,962	330,039	274	709	2	5	7,170	15,034	135
Burnside, .....	North'd.	.....	.....	.....	.....	.....	297	1	1	2,991	3,858	.....
Sterling, .....	North'd.	213,547	16,424	417	230,388	268	506	1	.....	5,132	13,769	52
Bear Valley, .....	North'd.	278,431	21,587	4,947	304,965	271	612	3	5	5,503	32,185	82
North Franklin, .....	North'd.	576,683	50,109	1,675	528,467	244	355	1	2	4,527	13,159	47
Locust Gap, .....	North'd.	38,608	.....	.....	38,608	.....	905	1	1	4,901	45,215	85
Locust Spring, .....	North'd.	257,565	21,589	219	279,384	267	714	3	1	8,126	15,211	70
Alaska, .....	North'd.	202,414	19,761	10,953	233,108	258	509	2	5	6,401	9,585	61
Reliance, .....	North'd.	1,846,350	211,253	29,890	2,087,173	255	5,051	19	23	46,613	152,141	590
Locust Spring washery, .....	North'd.	.....	.....	.....	.....	141	25	.....	.....	.....	.....	.....
Merriam washery, .....	North'd.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	1,846,350	211,233	29,890	2,087,173	.....	5,080	19	23	46,613	152,141	590
T. M. Righter and Co.	.....	135,551	18,494	1,892	155,937	215	284	.....	2	369	23,939	28
Mount Carmel colliery, .....	North'd.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seneca Coal Co.	.....	97,742	7,470	871	106,083	213	276	1	2	3,026	9,740	40
Sioux colliery, .....	North'd.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\*Totals in this column are averages

Susquehanna Coal Co. Union Collieries											
Pennsylvania, .....	268,650	27,609	5,785	302,044	202	1,094	3	4	10,785	21,040	109
Hickory Swamp, .....	83,341	17,577	802	101,723	185	565	2	2	1,291	4,276	50
Hickory Ridge, .....	145,335	43,665	978	189,998	219	729	2	2	4,259	5,659	55
Richard, .....	219,034	49,400	16	268,564	207	1,272	2	11	6,123	27,032	95
Scott shaft, .....							2				
Totals, .....	716,383	138,251	7,725	862,359	201	3,600	9	17	22,459	58,007	309
Mineral Railroad and Mining Co.											
Camequin, .....	391,672	34,252	13,954	439,848	267	1,497	3	3	12,044	33,851	142
Lake Fidler, .....	290,784	33,839	16,308	391,251	236	969	2	2	8,649	26,359	78
Totals, .....	612,456	68,221	30,162	741,139	262	2,467	5	5	20,693	60,710	220
Excelsior Coal Co.											
Excelsior, .....	116,571	7,800	259	124,630	259	255	2		3,300	2,300	36
Corbin, .....	102,510	12,190		114,700	274	229	1	1	3,580	1,700	27
Totals, .....	219,081	19,990	259	239,330	247	481	3	1	6,880	4,000	63
Enterprise Coal Co.											
Enterprise, .....	241,191	17,391	361	258,946	232	644	2	4	8,311	6,956	71
Colbert, Shipman Coal Co.											
Colbert, .....	51,705	5,857	1,241	58,803	142	330			1,765	2,400	26
Greenough, Greenough Red Ash Coal Co.											
Greenough, .....	161,972	4,000	318	166,290	278	350		4	4,636	7,000	24
Columbus No. 2, White and White											
Columbus No. 2, .....	40,560	4,875	3,231	48,666	194	204	1	1	2,775	7,000	15
Royal Oak, Llewellyn Mining Co.											
Royal Oak, .....	52,309	5,475	3,100	60,884	241	244	3	1	1,500	800	15
Natalle, Shamokin Coal Co.											
Natalle, .....	121,065	9,000	430	131,495	152	585		4	3,140	900	69
Buck Ridge Coal Co.											
Buck Ridge washery, .....	10,889	300		11,189		32					2
Grand totals, .....	4,337,254	510,560	79,180	4,927,304		14,580	43	64	122,167	338,643	1,472

TABLE 2—Recapitulation

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Not including washeries)	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.,	North'd.	1,846,850	911,223	29,590	2,087,173	255	5,080	19	23	46,613	152,141	590
Sisouehanna Coal Co.,	North'd.	716,283	138,251	7,725	862,359	201	3,600	9	17	22,459	58,007	309
Blacksburg Coal and Mining Co.,	North'd.	612,456	68,521	30,162	741,139	562	2,437	5	5	20,633	60,760	230
Excelsior Coal Co.,	North'd.	219,081	19,990	259	239,330	287	2,454	3	1	6,880	4,000	63
T. M. Righter and Co.,	North'd.	135,551	18,494	1,892	155,937	216	294	3	2	369	28,959	28
Seneca Coal Co.,	North'd.	97,742	7,470	871	106,083	213	276	1	2	3,026	9,740	40
Enterprise Coal Co.,	North'd.	241,191	17,394	361	258,946	232	644	2	4	8,311	6,956	71
Shipman Koal Co.,	North'd.	51,795	5,857	1,211	58,803	142	339	1	2	1,765	2,400	26
Greenough Red Ash Coal Co.,	North'd.	161,872	4,000	318	166,290	278	350	1	4	4,686	7,000	24
White and White,	North'd.	40,580	4,875	3,231	48,686	194	204	1	1	2,775	7,000	15
Llewellyn Mining Co.,	North'd.	52,809	6,475	3,100	60,884	241	244	3	1	1,500	800	15
Shamokin Coal Co.,	North'd.	121,065	9,800	430	130,495	152	585	1	4	3,140	900	69
Buck Run Coal Co.,	North'd.	10,859	300	.....	11,159	32	.....	.....	.....	.....	.....	2
Totals,	.....	4,337,264	510,860	79,180	4,927,304	221	14,580	43	64	122,167	338,613	1,472





Greenough Red Ash Coal Co. Greenough, .....	North'd, .....	3	225	225	.....	.....	3	100	1	250	250	.....			
White and White. Columbus No. 2, .....	North'd, .....	4	100	160	.....	.....	10	180	.....	.....	.....	.....			
Llewellyn Mining Co. Royal Oak, .....	North'd, .....	2	400	400	.....	.....	7	370	2	800	400	.....			
Shamokin Coal Co. Natalie, .....	North'd, .....	10	360	360	.....	.....	18	414	2	1,350	700	.....			
Buck Ridge Coal Co. Buck Ridge washery, .....	North'd, .....	3	450	450	.....	.....	7	285	.....	.....	.....	.....			
Grand totals, .....	.....	132	3,976	28,130	32,106	27	2	3	371	41,123	90	66,288	44,122	3	6

TABLE 2—Recapitulation

Philadelphia and Reading Coal and Iron Co., Susquehanna Coal Co., .....	North'd, .....	50	1,626	94	12,220	13,846	7	2	.....	136	17,390	41	31,445	25,488	2	
Mineral Railroad and Mining Co., Excelsior Coal Co., .....	North'd, .....	16	390	48	6,140	6,530	7	.....	.....	65	8,526	21	17,515	4,650	1	
T. M. Richter and Co., Seneca Coal Co., .....	North'd, .....	2	40	33	4,345	4,385	4	.....	.....	35	6,186	11	4,728	4,728	1	
Enterprise Coal Co., Shipman Coal Co., .....	North'd, .....	20	380	4	1,080	1,080	1	.....	.....	15	53	3	1,068	490	2	
Wilmington Red Ash Coal Co., Vernon and Natick, .....	North'd, .....	6	.....	4	690	380	3	.....	.....	26	2,899	2	3,850	3,850	.....	
Llewellyn Mining Co., Shamokin Coal Co., .....	North'd, .....	16	.....	6	1,050	1,050	1	.....	.....	25	2,367	1	588	400	.....	
Buck Ridge Coal Co., .....	North'd, .....	3	.....	2	2,000	2,000	3	.....	.....	17	1,314	4	3,274	2,456	2	
Totals, .....	.....	132	3,976	216	28,130	32,106	27	2	3	371	41,123	90	66,288	44,122	3	6

TABLE 3.—Fourteenth Anthracite District, 1903  
Number of Each Class of Employees at Each Colliery

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside							Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doer-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Book-keepers and clerks	All other employes	Total outside
<b>P. and R. Coal and Iron Co</b>																						
Henry Clay, .....	North d.	1	1	2	42	14	11	2	2	12	40	126	1	3	19	40	21	3	53	140	266	
Big Mountain, .....	North d.	1	1	1	48	22	4	2	28	20	28	129	1	1	18	18	1	1	30	49	178	
Sterling, .....	North d.	1	1	1	112	56	14	4	18	46	46	285	1	1	1	11	1	1	28	42	297	
Burnside, .....	North d.	2	1	6	221	77	27	11	32	49	436	436	1	1	25	82	27	2	131	281	719	
Bear Valley, .....	North d.	1	1	6	132	65	6	5	41	63	301	301	1	5	16	54	31	2	96	205	506	
North Franklin, .....	North d.	1	1	4	169	33	11	5	28	38	335	335	1	13	17	33	27	2	148	241	612	
Locust Spring, .....	North d.	2	1	6	208	53	50	19	37	124	519	519	1	11	52	88	35	5	211	393	905	
Reliance, .....	North d.	1	1	3	159	28	27	11	1	19	54	303	1	7	27	63	12	2	98	205	509	
Alaska, .....	North d.	1	1	5	272	44	48	16	4	25	63	479	1	8	26	67	16	2	115	235	714	
Locust Spring washery, .....	North d.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	25	
Merriam washery, .....	North d.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	25	
Totals, .....		12	2	3	1,498	488	237	76	12	265	628	3,257	11	61	222	423	159	19	925	1,823	5,080	
<b>Susquehanna Coal Co.</b>																						
Union Collieries																						
Pennsylvania, .....	North d.	1	5	14	338	111	39	9	10	153	689	689	2	1	10	29	85	20	3	264	414	
Richards, .....	North d.	1	1	3	175	79	2	8	286	705	705	2	1	12	37	88	17	5	345	507	1,272	
Hickory Ridge, .....	North d.	1	1	4	177	77	21	6	1	103	353	353	2	1	9	34	72	2	132	216	572	
Hickory Swamp, .....	North d.	1	1	4	97	60	6	2	38	291	291	2	1	5	21	40	8	2	135	214	505	
Totals, .....		4	12	31	922	347	128	30	24	641	2,159	2,159	8	4	36	121	285	68	13	926	1,461	3,600





TABLE 3—Recapitulation

Names of Operators and Collieries	County	Occupations of Persons Employed Inside										Occupations of Persons Employed Outside							Grand total inside and outside				
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Book-keepers and clerks	All other employes	Total outside	
P. and R. Coal and Iron Co.,	North d.	12	2	39	1,498	488	237	76	19	265	628	3,237	...	11	61	222	423	179	19	928	1,823	5,080	
Susquehanna Coal Co.,	North d.	4	12	31	1,822	345	28	49	34	541	2,337	2,337	8	4	36	121	235	68	13	326	1,461	3,600	
Mineral Railroad and Mining Co.,	North d.	2	8	23	750	315	110	25	10	564	1,737	1,737	2	3	42	61	246	6	12	288	669	2,457	
Buck Ridge Coal Co.,	North d.	2	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	
Excelsior Coal Co.,	North d.	1	...	...	156	80	24	1	...	14	...	312	2	1	12	22	46	8	...	77	172	487	
White and White,	North d.	1	...	...	77	23	9	3	...	24	...	137	1	1	3	4	27	...	...	50	67	204	
Llewellyn Mining Co.,	North d.	1	1	...	90	30	16	4	2	8	...	157	1	1	3	8	50	9	2	33	87	214	
Enterprise Coal Co.,	North d.	1	1	...	223	43	44	11	3	32	28	388	1	1	15	30	58	26	2	125	258	614	
Shipman Coal Co.,	North d.	1	...	...	87	31	11	1	...	44	10	189	1	1	7	11	53	22	2	44	141	330	
T. M. Righter and Co.,	North d.	1	...	...	2	30	10	3	5	25	48	146	1	1	6	20	35	7	2	76	148	294	
Seneca Coal Co.,	North d.	1	1	2	93	12	6	2	3	11	44	175	...	1	9	18	20	4	1	2	48	101	276
Greenough Red Ash Coal Co.,	North d.	1	...	...	3	98	34	1	3	15	52	236	1	1	5	8	68	...	2	29	114	350	
Shamokin Coal Co.,	North d.	1	3	3	200	58	28	8	5	35	40	381	1	1	16	35	66	38	4	43	204	585	
Totals,	.....	28	28	109	4,217	1,477	657	165	69	1,130	1,432	9,312	20	29	216	576	1,357	347	64	2,689	5,268	14,580	

TABLE 3--Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Total		
		January	February	March	April	May	June	July	August	September	October	November	December			
Philadelphia and Reading Coal and Iron Co.	North d.	.....	.....	26	26	24.8	23.5	24	25.7	16.7	16.3	18.8	14.9	17.2	18.5	204
Henry Clay, .....	North d.	26	22.5	26	24.8	23.5	24	25.7	16.7	16.3	18.8	14.9	17.2	18.5	19	274
Big Mountain, .....	North d.	24.8	21.9	24.6	21.1	24	25.8	26	24.1	23	15.9	18	18.7	18	18.7	288
Sterling, .....	North d.	24.7	22.1	25.5	24.8	23	26	27	24	22	16.7	18	19	18	19	271
Burnside, .....	North d.	23.3	19.8	25	16.6	20.4	21.9	22.4	22.6	19.8	19.4	15.7	16.7	16.7	16.7	244
Bear Valley, .....	North d.	.....	21.9	21	18.3	21.6	25.6	23.6	20.4	22.4	21.1	17.9	18.9	18.9	258	
North Franklin, .....	North d.	25.8	22.8	20.9	16	22.8	25.8	26	25	23	21.9	18	19	19	267	
Locust Gap, .....	North d.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Robust Spring, .....	North d.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rebecca, .....	North d.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Alaska, .....	North d.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Averages, .....	.....	24.9	21.8	24.1	21.1	22.8	25.2	23.5	22.5	21.7	18	17.5	18.5	18.5	255	.....
Susquehanna Coal Co. Union Collieries	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pennsylvania, .....	North d.	22.8	20.9	22.6	22.1	21.9	21.8	23.4	21.4	.....	.....	.....	.....	.....	.....	902
Richards, .....	North d.	23.1	20.4	23.8	20.3	21.8	23	24.7	20.1	.....	.....	.....	.....	.....	.....	907
Hickory Ridge, .....	North d.	19.7	21	22.3	21.3	22.1	24.4	23.1	24.3	.....	.....	.....	.....	.....	.....	908
Hickory Swamp, .....	North d.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	909
Averages, .....	.....	22.3	19.7	22.5	21.8	21.4	22.2	23.5	21.3	.....	.....	.....	.....	.....	.....	186
Mineral Railroad and Mining Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cameron, .....	North d.	23.5	21	23.5	24.7	22.1	24	24	23.2	20.1	19.8	21.8	19.2	21.8	19.2	267
Lake Fidler, .....	North d.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	256
Averages, .....	.....	22.3	21.4	23.8	23.7	21.7	23.5	23.5	23.2	20.1	18.8	21.2	18.3	21.2	18.3	262
Excelsior Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Excelsior, .....	North d.	24.9	20.8	24.2	17.2	22.2	23.5	25.1	23.7	23.3	20.1	17.3	17.3	17.3	17.9	959
Corbin, .....	North d.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	274
Averages, .....	.....	25.3	21.7	24.3	20.8	22.2	24	24.9	23.7	23.8	21.2	17.3	17.3	17.5	17.5	967
White and White	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Columbus No. 2, .....	North d.	25.1	17.6	13.6	12.6	15.3	17.5	14.9	14.2	14.7	13	15.2	20.6	20.6	194	.....

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Royal Oak, .....	North'd,.....	18	22	27	20	14	22	21	23	22	16	17	19	241
Llewellyn Mining Co. ....														
Enterprise Coal Co. ....	North'd,.....	24.8	21.9	22.3	18.1	20	21	19	19.9	19.5	16.4	14.1	15.4	232
Enterprise, .....														
Shipman Koal Co. ....	North'd,.....	22.3	19.9	20.1	17.1	6	.....	.....	.....	.....	14.1	22.2	20.4	142
Colbert, .....														
T. M. Righter and Co. ....	North'd,.....	27.1	23	26.8	22	24	24.8	18.7	13	14.4	12.4	10.2	.....	216
Mount Carmel, .....														
Seneca Coal Co. ....	North'd,.....	23.7	24.4	25.1	9.6	11.7	24.2	25.1	22	21.6	14	11.4	.....	213
Stoux, .....														
Greenough Red Ash Coal Co. ....	North'd,.....	24.2	21.2	23.8	21.7	22.3	24.8	25.1	23.9	24.7	23.4	21	21.7	278
Greenough, .....														
Shamokin Coal Co. ....	North'd,.....	19	21	18	22	20	.....	.....	12	20	20	.....	.....	152
Natalle, .....														
Averages, .....		23.3	21.3	22.6	19.2	18.5	22.9	21.9	19.9	20.3	17	16	18.8	221

TABLE 3—Recapitulation

Names of Operators and Collieries	County	Number of Days Worked in Each Month in Breaker												Totals
		January	February	March	April	May	June	July	August	September	October	November	December	
Philadelphia and Reading Coal and Iron Co., . . . . .	North d., . . . . .	24.9	21.8	24.1	21.1	22.8	25.2	23.5	22.5	21.7	18	17.5	18.5	255
Susquehanna Coal Co., . . . . .	North d., . . . . .	22.3	19.7	22.5	21.8	21.4	22.2	23.3	21.3	20.1	18.8	8.1	17.8	201
Mineral Ridge Coal Co., . . . . .	North d., . . . . .	22.3	21.4	22.8	23.7	21.7	22.2	23.5	23.2	20.1	18.8	21.2	18.3	202
Excelsior Coal Co., . . . . .	North d., . . . . .	25.3	21.7	24.3	20.8	22.2	24.3	24.9	23.7	23.8	21.2	11.3	10.8	164
White and White, . . . . .	North d., . . . . .	25.1	21.6	23.6	20.6	24.3	24.5	21.9	23.2	24.4	16	17.2	10.6	141
Llewellyn Mining Co., . . . . .	North d., . . . . .	23.3	21.7	22.7	20.7	21.4	22	21	23.2	24.7	16	17.2	10.6	211
Enterprise Coal Co., . . . . .	North d., . . . . .	21.8	21.9	22.3	18.1	20	21	19	19.9	19.5	16.4	14.1	15.4	212
Shinnecock Coal Co., . . . . .	North d., . . . . .	22.3	11.9	20.1	17.1	6	21	18.7	13	14.4	14.1	22.2	20.4	112
T. M. Richter and Co., . . . . .	North d., . . . . .	27.1	23	26.8	23	24	24.8	25.1	25.1	14.4	12.4	10.2	11.4	216
Seneca Coal Co., . . . . .	North d., . . . . .	23.1	24.4	25.1	9.6	11.7	24.9	25.1	22	21.6	14	11.4	21.6	213
Greenough Red Ash Coal Co., . . . . .	North d., . . . . .	21.2	21.2	23.8	21.7	22.3	24.8	25.1	23.9	24.7	23.4	21	21.7	278
Shamokin Coal Co., . . . . .	North d., . . . . .	19	21	18	22	20	20	20	12	20	20	20	17.7	152
Averages, . . . . .	.....	23.3	21.3	22.6	19.2	18.5	22.9	21.9	19.9	20.3	17	16	18.8	227

TABLE 4.—Fourteenth Anthracite District, 1903.  
Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 10	Martin Wilkie, .....	German, .....	Miner, .....	42	M, .....	1	8	North Franklin, ..	North'd, .....	Killed by fall of top coal.
12	William Bevsie, .....	Austrian, .....	Miner, .....	26	S, .....			Cameron, .....	North'd, .....	Smothered in breast by manway breaking strata falling down middle of breast.
20	Joseph Gessick, .....	Polish, .....	Miner, .....	46	M, .....	1	5	Bear Valley, .....	North'd, .....	Killed by fall of top coal.
27	William Haas, .....	American, ..	Laborer, ..	18	S, .....			Reliance, .....	North'd, .....	Both legs broken and injured internally by being caught in scraper line. Died next day.
Feb. 7	Jacob Labol, .....	Polish, .....	Miner, .....	33	S, .....			Excelsior, .....	North'd, .....	Killed by fall of top rock.
18	John Taby, .....	American, ..	Laborer, ..	21	S, .....			Excelsior, .....	North'd, .....	Killed between empty car and face of gangway.
25	William Price, .....	American, ..	Engineer, ..	59	M, .....	1	1	Scott, .....	North'd, .....	Injured internally and arm scalded by the heater exploding. Died same night.
25	Robert Heath, .....	English, .....	Driver, .....	20	S, .....			North Franklin, ..	North'd, .....	Killed by falling under loaded cars.
March 4	Frank Grella, .....	Hungarian, ..	Miner, .....	36	S, .....			Henry Clay, .....	North'd, .....	Seriously burnt with powder. Died same night.
4	John Lashinske, .....	Polish, .....	Miner, .....	38	S, .....			Henry Clay, .....	North'd, .....	Seriously burnt with powder. Died same night.
6	William Belcofski, .....	Polish, .....	Miner, .....	35	M, .....	1	3	Alaska, .....	North'd, .....	Killed by fall of top rock.
6	Anthony Baldes, .....	Polish, .....	Laborer, ..	24	S, .....			Alaska, .....	North'd, .....	Killed by fall of top rock.
12	John Kulick, .....	Polish, .....	Laborer, ..	34	M, .....			Scott, .....	North'd, .....	Killed by fall of top rock.
12	Benjamin Bowers, .....	American, ..	Laborer, ..	52	S, .....			Cameron, .....	North'd, .....	Smothered by rush of manure.
12	William Krigbaum, ..	American, ..	Miner, .....	25	S, .....			Sterling, .....	North'd, .....	Killed by rush of water from old work- ings.
12	Alfred Daniels, .....	English, .....	Miner, .....	36	S, .....			Sterling, .....	North'd, .....	Killed by rush of water from old work- ings.
27	Robert Boyd, .....	Irish, .....	Miner, .....	57	M, .....	1	3	Royal Oak, .....	North'd, .....	Killed by fall of top slate.
April 28	Stanley Cordack, .....	Polish, .....	Miner, .....	24	M, .....	1	2	Luke Fidler, .....	North'd, .....	Killed by fall of top coal.
28	Anthony Miller, .....	Italian, .....	Miner, .....	24	S, .....			Royal Oak, .....	North'd, .....	Killed by fall of top slate.
30	Peter Shafer, .....	German, .....	Miner, .....	50	S, .....			Royal Oak, .....	North'd, .....	Killed by fall of top coal.
May 13	Frank Rososkie, .....	Polish, .....	Miner, .....	22	M, .....		1	Henry Biders, .....	North'd, .....	Killed by fall of top coal.
14	Lawrence Kurtz, .....	American, ..	Miner, .....	44	M, .....	1	10	North Franklin, ..	North'd, .....	Top of coal piece and handle bruised by fall of coal piece and killed.
25	Joseph Vesnefski, .....	Polish, .....	Miner, .....	28	M, .....	1		Burnside, .....	North'd, .....	Killed by fall of top rock.

May	29	Steven Yanchar, .....	Polish, .....	Miner, .....	40	M.	1	.....	Big Mountain, .....	North'd, .....	Head badly bruised by premature blast. Died on the 30th.	
June	15	Ralph Helt, .....	American, .....	Tending shakers, .....	16	S.	.....	.....	Hickory Ridge, .....	North'd, .....	While going under shaker shaft his clothing caught on set screw, turning him around the shaft, striking his head on the angle iron, breaking his neck.	
July	18	Daniel Curran, .....	Irish, .....	Miner, .....	54	M.	1	.....	Burnside, .....	North'd, .....	Killed by falling down breast manway.	
	26	Stany Stancovich, .....	Polish, .....	Miner, .....	29	S.	.....	.....	Enterprise, .....	North'd, .....	Killed by fall of top coal and slate.	
	3	John Smoegers, .....	Polish, .....	Miner, .....	52	M.	1	2	.....	North'd, .....	North'd, .....	Killed by fall of top coal; was dressing off shot.
	8	Anthony Kurzan, .....	Polish, .....	Miner, .....	28	M.	1	2	.....	Sioux, .....	North'd, .....	Killed by falling down breast manway, 183 feet, while firing a blast.
17	John Consavitch, .....	Hungarian, .....	Miner, .....	40	M.	1	5	.....	Reliance, .....	North'd, .....	Killed by fall of top rock. He had fired a shot and knocked two props out; when he returned to the face the rock fell on him.	
	23	Louis Rouble, .....	Polish, .....	Loader, .....	46	M.	1	.....	Pennsylvania, .....	North'd, .....	Injured by being hit with a piece of slate from the top (on the head), while replacing empty car on gangway; died.	
Aug.	29	John Gogolinski, .....	Russian, .....	Miner, .....	34	S.	.....	.....	Corbin, .....	North'd, .....	Injured about the head by a piece of slate falling on him and driving horse shoe nail which was in his cap, as a pickler, into his skull; died same day.	
	3	Anthony Domanski, .....	Polish, .....	Laborer, .....	30	M.	1	.....	Richards, .....	North'd, .....	Killed by two empty cars running over him. They came down the slope without the rope being attached.	
	4	Kalos Molasheski, .....	Polish, .....	Laborer, .....	22	S.	.....	.....	Locust Gap, .....	North'd, .....	Killed by being caught between car and chute.	
17	John Conyock, .....	Polish, .....	Polish, .....	Slate pickler, .....	14	S.	.....	.....	Enterprise, .....	North'd, .....	Leg and arm broken and injured internally by being caught in scraper line. Died same night.	
	19	August Latspaw, .....	Slavonian, .....	Pushing coal in chute, .....	26	M.	1	.....	Richards, .....	North'd, .....	Killed by being caught by mine car on top pickler at dump chute.	
Sept.	19	Harry Wlstonofski, .....	Greek, .....	Miner, .....	35	M.	1	3	Lake Eldler, .....	North'd, .....	Killed by fall of clod.	
	23	John Krusko, .....	Prussian, .....	Miner, .....	28	M.	1	2	Alaska, .....	North'd, .....	Killed by fall of clod. The piece of clod was hanging loose four feet out over the face and while drilling in the coal under the piece of clod it fell on him.	
25	George Balash, .....	Slavonian, .....	Miner, .....	45	M.	1	2	.....	Columbus No. 2, .....	North'd, .....	and gone to a place of safety; thinking that the squib had missed fire, he went back and as he was approaching the hole it went off.	
	30	Charles Klinget, .....	American, .....	Carpenter, .....	22	S.	.....	.....	Pennsylvania, .....	North'd, .....	Killed by slipping off the roof of breaker.	
Oct.	8	Fabian Zenl, .....	Austrian, .....	Miner, .....	32	S.	.....	.....	Cameron, .....	North'd, .....	Killed by falling down breast manway.	
Nov.	3	Ernest Miller, .....	German, .....	Topman, .....	25	S.	.....	.....	Locust Spring, .....	North'd, .....	Strained himself lifting a heavy stone on the 33d.	
Dec.	18	Henry Zartman, .....	American, .....	Miner, .....	47	M.	1	2	Big Mountain, .....	North'd, .....	Killed on the explosion of gas. He entered his working place with a naked light on his head before the fire boss made an examination, and encountered a body of gas.	

TABLE 5.—Fourteenth Anthracite District, 1903  
Non-Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 9	Stany Bolaskie, .....	Polish, .....	Laborer, .....	28	S.	North Franklin, ...	North'd, .....	Hand lacerated and one ear amputated by explosion of a dynamite cap.
21	Edward Davies, .....	American, ..	Laborer, .....	21	S.	Richards, .....	North'd, .....	Three ribs broken by timber rolling on him.
30	Frank Petel, .....	Italian, .....	Laborer, .....	32	M.	Richards, .....	North'd, .....	Two teeth and one eye blown out by explosion of dynamite.
22	William Engle, .....	American, ..	Miner, .....	28	M	Burnside, .....	North'd, .....	A shock of head cut by breast man-way giving away.
Feb. 7	Herbert Hornberger, ..	American, ..	Bottom man, .....	30	M	Natalie, .....	North'd, .....	Leg broken; bumped between mine cars.
6	John Cutrocavitch, .....	Polish, .....	Miner, .....	26	S.	Columbus No. 2, ..	North'd, .....	Fracture of pelvis by fall of top slate.
17	George Strauser, .....	American, ..	Miner, .....	30	M.	Royal Oak, .....	North'd, .....	Back and legs hurt by fall of top coal.
25	John Lacoofski, .....	Polish, .....	Loader, .....	22	S.	Richards, .....	North'd, .....	Arm broken; bumped between mine car and timber.
March 3	Mottis Koposkie, .....	Polish, .....	Miner, .....	56	M	Hickory Ridge, ...	North'd, .....	Cut over eye and leg bruised by fall of top rock.
4	John Redock, .....	Polish, .....	Miner, .....	32	M	Richards, .....	North'd, .....	Badly bruised by falling down breast.
5	David Zartman, .....	American, ..	Laborer, .....	35	M.	Burnside, .....	North'd, .....	Leg broken; bumped between mine cars.
6	John Kesler, .....	American, ..	Laborer, .....	22	S.	Richards, .....	North'd, .....	Collar bone broken; caught between mine car and door frame.
7	Thomas Miles, .....	American, ..	Engineer, .....	53	M.	Richards, .....	North'd, .....	Leg broken; caught between locomotive and door frame.
14	Theodore Covailek, ....	Hungarian, ..	Miner, .....	30	M	Bellance, .....	North'd, .....	Arm broken by fall of top slate.
26	John Ciba, .....	Polish, .....	Laborer, .....	28	M	Pennsylvania, ...	North'd, .....	Arm broken by falling off railroad car.
27	George Garber, .....	Austrian, .....	Laborer, .....	43	M.	Greenough, .....	North'd, .....	Three fingers blown off by explosion of dynamite.
April 16	James F'anigan, .....	American, ..	Miner, .....	25	S.	Natalie, .....	North'd, .....	Foot broken by fall of top coal.
17	Fred. Edwards, .....	American, ..	Driver, .....	17	S.	Locust Gap, .....	North'd, .....	Both legs broken by being caught between mine cars and door.
21	Robert Balmbridge, ....	American, ..	Miner, .....	35	M.	Richards, .....	North'd, .....	Back hurt and injured internally by fall of top coal.



April	21	Joseph Valentine, .....	Austrian, .....	Miner, .....	22	S.	Pennsylvania, .....	North d., .....	Leg broken and hip dislocated by being hit over by mine cars.
May	30	John Debo, .....	American, .....	Repairman, .....	25	M.	Locust Gap, .....	North d., .....	Arm broken; run over by mine car on slope.
	8	Dale Sheltenberger, .....	American, .....	Slate picker, .....	15	S.	North Franklin, .....	North d., .....	Leg fractured by being caught in scraper line.
June	13	Patrick Dougherty, .....	Irish, .....	Laborer, .....	21	S.	Sioux, .....	North d., .....	Leg fractured by fall of top slate.
	14	Peter Savage, .....	Polish, .....	Miner, .....	33	S.	North Franklin, .....	North d., .....	Hand blown off by explosion of dynamite.
	25	Stany Bolaskie, .....	Polish, .....	Miner, .....	28	S.	Pennsylvania, .....	North d., .....	Leg broken by fall of top coal.
	27	Adam Molley, .....	Polish, .....	Oilier, .....	15	S.	Burnside, .....	North d., .....	Arm lacerated by being caught on shaft.
	5	Joseph Conrad, .....	American, .....	Miner, .....	23	M.	Burnside, .....	North d., .....	While dressing off a shot a piece of coal fell from face and broke his leg.
	8	John Smith, .....	Hungarian, .....	Miner, .....	50	M.	Reliance, .....	North d., .....	While putting coal in chute a lump rolled on him, injuring his back.
	17	Joseph Runkers, .....	Hungarian, .....	Miner, .....	42	M.	Reliance, .....	North d., .....	Injured about the body by coal from a blast; went back too soon to the hole.
	22	James Cunningham, .....	Irish, .....	Laborer, .....	55	M.	Sioux, .....	North d., .....	Dislocated hip by being run over by mine cars on top of slope.
July	22	James Eaton, .....	English, .....	Miner, .....	36	M.	Corbin, .....	North d., .....	Collar bone broken by fall of top rock.
	29	Steven Garbutt, .....	English, .....	Pumpman, .....	22	S.	Sterling, .....	North d., .....	Foot crushed by three loaded cars running over it; he went to bottom of slope and was hitching on loaded cars, when his foot caught between rail and guard rail.
July	2	Monroe Heim, .....	American, .....	Chute tender, .....	16	S.	North Franklin, .....	North d., .....	Leg broken by being caught in rope wheel.
	16	Frank Amores, .....	Italian, .....	Loader, .....	20	S.	Richards, .....	North d., .....	Severely injured about head and body while riding up slope. Was caught between mine car and timber.
Aug.	17	Joseph Keefer, .....	Polish, .....	Miner, .....	45	M.	Greenough, .....	North d., .....	Leg broken by fall of coal in breast.
	18	Joseph Milanolskie, .....	Hungarian, .....	Miner, .....	55	M.	Reliance, .....	North d., .....	Ribs broken and back bruised by fall of top slate.
	3	Just Zelinski, .....	Polish, .....	Slate picker, .....	14	S.	Natalie, .....	North d., .....	Leg at ankle, torn off by being caught on shaft internally.
	12	James Carroll, .....	American, .....	Miner, .....	33	M.	Cameron, .....	North d., .....	Injured internally by premature blast.
Sept.	20	Charles Weaver, .....	American, .....	Driver, .....	30	M.	Cameron, .....	North d., .....	Leg broken by being bumped between mine cars.
	25	John Valentine, .....	Italian, .....	Laborer, .....	33	S.	Mt. Carmel, .....	North d., .....	Arm cut and foot crushed by fall of rock.
Sept.	20	James Berry, .....	American, .....	Runner, .....	30	S.	Hickory Ridge, .....	North d., .....	Internally injured by being run over by two mine cars.
	8	Anthony Grego, .....	Polish, .....	Miner, .....	37	M.	Enterprise, .....	North d., .....	A piece of clod that he had been previously barring came down on him while working under it, crushing him about the body and hips.
10	Walter Rozinski, .....	Hungarian, .....	Miner, .....	30	S.	Reliance, .....	North d., .....	He had one hole tamped and while gathering tamping sticks, struck his lamp and set it off with the squib in the other setting it off, seriously injuring his head, arms and side.	
11	John O'Neil, .....	American, .....	Loader boss, .....	32	M.	Cameron, .....	North d., .....	Went up a chute to start coal, when the coal rushed on him, breaking his leg.	
22	George Gancofskie, .....	Polish, .....	Miner, .....	36	M.	Burnside, .....	North d., .....	Fell down breast manway, badly bruising his head and body.	

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Sept. 29	Thomas Ginley, .....	American, ..	Driver, .....	22	S.	Locust Spring, ....	North'd., .....	Flesh torn off his leg by being caught by mine cars.
Sept. 29	John Drumheller, .....	German, .....	Driver, .....	21	S.	Burnside, .....	North'd., .....	Ribs broken; hit by a piece of coal.
Sept. 30	Thomas Welker, .....	American, ..	Carpenter, .....	20	S.	Pennsylvania, .....	North'd., .....	Compound fracture of thigh, falling off
Oct. 5	Frank Cherlufskle, ..	Lithuanian, ..	Laborer, .....	29	M.	Mt. Carmel, .....	North'd., .....	Slight fracture of skull; while pulling a car off the dump it got off the track and caught his head against the rib.
Oct. 5	Dennis McLaughlin, .....	American, ..	Car runner, .....	21	S.	Greenough, .....	North'd., .....	While running along side of car with sprag in his hands he ran the sprag against a prop, the sprag striking him in the abdomen.
Oct. 9	George Yohan, .....	Polish, .....	Miner, .....	25	M.	Enterprise, .....	North'd., .....	A piece of coal rolled down slope and struck him, dislocating his ankle.
Oct. 12	Nick Maramo, .....	Russian, .....	Laborer, .....	20	S.	Enterprise, .....	North'd., .....	Arm broken. A piece of rock fell off the sinking bucket in new shaft, striking him on the arm above the elbow.
Oct. 19	Andrew Coveliskle, .....	Russian, .....	Miner, .....	45	M.	Luke Fidler, .....	North'd., .....	Leg broken; it fell on one end of drill, the other end striking him on his leg.
Oct. 22	Manuel Adams, .....	American, ..	Brattice man, .....	47	M.	Natale, .....	North'd., .....	Leg broken; he was putting in a battery in the chute, when a piece of coal slid down on the sheet iron and caught his leg against the rib.
Nov. 2	Ralph Boginskile, .....	Russian, .....	Miner, .....	40	M.	Greenough, .....	North'd., .....	Hip dislocated and scalp wound by fall of clod.
Nov. 18	Joseph Zero, .....	Polish, .....	Driver, .....	17	S.	Alaska, .....	North'd., .....	Finger cut off; bumped between cars.
Nov. 23	Mike Nowey, .....	Polish, .....	Laborer, .....	17	S.	Enterprise, .....	North'd., .....	While putting water on the ash bank that was on fire, he approached the bank too close with the nozzle and scalded himself.
Dec. 3	Henry Richold, .....	American, ..	Miner, .....	50	M.	North Franklin, .....	North'd., .....	Injured about the back and hips by fall of coal.

Dec.	7	Hugh Donaghue, .....	American, ..	Car runner, .....	21	M. Luke Fidler, .....	North'd., ..	Head and chest squeezed; caught between mine car and rib, the car jumping the track.
	11	Frank Donnelly, .....	American, ..	Miner, .....	22	Richards, .....	North'd., .....	Burned by explosion of gas in his breast.
	11	Ralph Marchant, .....	American, ..	Miner, .....	23	Richards, .....	North'd., .....	Burned by explosion of gas in his breast.
	18	Joseph Boshinski, .....	Polish, .....	Loader, .....	23	Henry Clay, .....	North'd., .....	Finger cut off while coupling cars while in motion.
	18	Edward Zartman, .....	American, ..	Miner, .....	47	Big Mountain, .....	North'd., .....	Seriously burned by explosion of gas. He went on his breast (before the fire) boss made an examination) with a naked light on his head.
	24	Daniel O'Brien, .....	American, ..	Engineer, .....	43	Henry Clay, .....	North'd., .....	Fell on the ice and broke his arm, top of shaft.

## CÔNDITION OF COLLIERIES

## PHILADELPHIA AND READING COAL AND IRON COMPANY

## Alaska Shaft

General condition of drainage fair. Ventilation requires improvement in some parts of the mines.

## Reliance

General condition of the mines satisfactory.

## Locust Gap

In fair condition as regards to drainage, but the ventilation requires improvement.

## Locust Spring

On my last visit to this colliery I found the condition as regards to drainage fair, but the ventilation in some parts of the mine was unsatisfactory. The officials however were making an effort to improve the ventilation by driving holes through to the surface.

## Sterling

I have partly inspected this mine and found the sanitary conditions fair.

## Henry Clay

Condition of this colliery as regards to drainage is good and ventilation is fair.

## Big Mountain

Condition of this colliery as regards to drainage and ventilation is fair.

## Burnside

I have partly inspected this mine and find the sanitary conditions fairly good.

## Bear Valley

I have partly inspected this colliery and find the drainage good, but the ventilation is inadequate in some parts of the mines. The officials, however, are erecting a new fan which will improve the conditions materially.

## North Franklin

On my last visit to this mine, I found the drainage good, but the ventilation in some parts of the mine was very unsatisfactory, owing entirely to the improper distribution of the air, as the quantity en-

tering the inlet is ample. I called the attention of the superintendent to the matter, and was informed by him later that it had been attended to and properly ventilated.

SUSQUEHANNA COAL COMPANY

Pennsylvania

General condition of this mine fair.

Richards

Ventilation and drainage fair.

Hickory Ridge

General condition of this mine fair.

Scott Shaft

Has not worked any since I have been in office, and is full of water.

Hickory Swamp

I have made part inspection of this mine and found the ventilation to be inadequate, but the officials are making every effort to improve the conditions. Drainage fair.

LLEWELLYN MINING COMPANY

Royal Oak

On my last visit to this colliery I found the ventilation to be inadequate, but they were driving an air hole through to surface which will better the conditions. Drainage could also be improved.

GREENOUGH RED ASH COAL COMPANY

Greenough

Ventilation and drainage good.

ENTERPRISE COAL COMPANY

Enterprise

When I visited this colliery last, the drainage was very unsatisfactory, also the ventilation was in a very bad condition, being neglected by the officials in charge. There is ample quantity of air entering the mine, but no effort made to properly distribute it. They have also neglected to put in stoppings between their intake and return airways.

## T. M. RIGHTER AND COMPANY

## Mount Carmel

On my last visit to this colliery I found the volume of air to be sufficient, but not properly distributed and not being carried to the face of the workings in some parts of the mine. Drainage fair.

## SENECA COAL COMPANY

## Sioux

Ventilation and drainage fair.

## WHITE AND WHITE

## Columbus No. 2

Ventilation and drainage fairly good.

## SHAMOKIN COAL COMPANY

## Natalie

As far as inspected I found the sanitary condition fair.

## EXCELSIOR COAL COMPANY

## Corbin

Sanitary conditions fairly good.

## Mine Foremen's Examinations

The annual examinations of applicants for mine foremen's and assistant mine foremen's certificates in the Fourteenth Anthracite district were held at Pottsville, in April and August, and the following applicants were successful in passing the examination:

## Mine Foremen

John Allen, Mt. Carmel; Michael J. Brady, Mt. Carmel.

## Assistant Mine Foremen

George Davies, Mt. Carmel; John L. Rupp, Shamokin; Patrick Walsh, Shamokin; Peter Emschweiler, Shamokin; John Duncheskie, Shamokin; John Miller, Shamokin; Maurice Cashman, Shamokin; John Stone, Mt. Carmel; Thomas Butts, Mt. Carmel; Patrick Doyle, Mt. Carmel; Alfred Martin, Mt. Carmel; Philip Gallagher, Mt. Carmel; James Manney, Mt. Carmel; John L. Manney, Mt. Carmel; Thomas Edwards, Locust Gap; Thomas J. Gallagher, Locust Gap; James Burns, Excelsior; Francis P. Kurtz, Treverton; Michael F.

Daley, Shamokin; Celeste Ecker, Shamokin; Michael Fitzpatrick, Shamokin; David Anderson, Shamokin; Michael Reiland, Burnside; Michael Moore, Bear Valley; William Quinn, Shamokin; John E. Brecker, Shamokin; Joseph Derk, Shamokin; Joseph H. Reiland, Burnside; John Schreffler, Shamokin; James Lynch, Shamokin; Richard Fetter, Shamokin; Edwin C. Jones, Shamokin; Patrick J. Cavanaugh, Shamokin; Elijah John, Shamokin; George F. Sharpe, Shamokin; William H. Jones, Shamokin; George L. Martz, Shamokin; John Moore, Shamokin; Edwin Katz, Shamokin; John Bruskie, Mt. Carmel; George Homer, Shamokin; John E. Labey, Shamokin; Herbert W. Richards, Shamokin; William McFadden, Mt. Carmel; Felix Koshinski, Shamokin; George W. Whearey, Shamokin; Daniel Jones, Shamokin; Oliver Snyder, Shamokin; James Oates, Shamokin; George Markle, Shamokin; Andrew Smith, Shamokin; William Reichwine, Hickory Ridge; John A. Schlader, Shamokin; Lewis Richards, Hickory Ridge; John Joraskie, Mt. Carmel; John Simmendinger, Shamokin; Harry T. Schrawder, Shamokin; James Scott, Shamokin; Alfred H. Gsman, Shamokin; William O'Brien, Mt. Carmel; Joseph D. Ramsey, Shamokin; John Nozisko, Mt. Carmel; William J. Waugh, Shamokin; James Golden, Shamokin; Joseph Brewer, Shamokin; Lawrence Brennen, Shamokin; John Ready, Shamokin; Thomas W. Farrell, Shamokin; George Bainbridge, Shamokin; John A. Meisberger, Shamokin; John J. McDonald, Locust Gap; Charles W. R. Henninger, Shamokin; Stacey Wyakopki, Shamokin; Isaiah F. Stoop, Shamokin; Patrick Cawley, Shamokin; W. B. Fisher, Shamokin; Thomas A. Evans, Mt. Carmel; Lewis Williams, Mt. Carmel; Harrison Bailey, Mt. Carmel; John Lafferty, Shamokin; George Kenaer, Mt. Carmel; John Carnitchel, Mt. Carmel; Austin Singley, Mt. Carmel; Thomas Price, Shamokin; Melvin Fisher, Shamokin; John Madden, Shamokin; Wally Delaware, Shamokin; Anthony Trefsger, Mt. Carmel; David J. Williams, Mt. Carmel; Edward Manning, Excelsior; John Klinger, Shamokin; Thomas Rowe, Mt. Carmel; James Pugh, Shamokin; John Clarke, Shamokin; Henry Rhoads, Mt. Carmel; W. H. Cleaver, Shamokin; Walter Walters, Treverton; Adam Bruskie, Shamokin; Anthony Brovey, Shamokin; Mandus Henninger, Shamokin; David Rowe, Mt. Carmel; Patrick H. Carroll, Mt. Carmel; David B. Williams, Mt. Carmel; George W. Rupp, Shamokin; William Lubold, Shamokin; Walter Zielinskie, Mt. Carmel; John Rodgers, Mt. Carmel; Robert Williams, Mt. Carmel; James O'Rourke, Treverton; William J. Daley, Shamokin; E. L. Snyder, Shamokin; S. E. Kulp, Shamokin; Walter Grabuski, Shamokin; John R. Jones, Shamokin; Arthur Leware, Shamokin; William X. Martin, Mt. Carmel; Andrew J. Madden, Mt. Carmel; Lawrence Sands, Shamokin; Jere W. Raker, Treverton; James E. Quinn, Shamokin; Amos Kramer, Shamokin; Thomas Shaw, Treverton; William Kelly,

Shamokin; Harry Finn, Shamokin; John J. McCabe, Shamokin; Matthew Hunt, Mt. Carmel; George Brokenshire, Mt. Carmel; Henry A. Osman, Shamokin; Oliver Zeigler, Shamokin; John Holler, Shamokin; George Schroyer, Shamokin; George Young, Shamokin; Sylvester Knorr, Shamokin; Frank Dormer, Shamokin; Francis Taby, Shamokin; Henry Trefsgger, Mt. Carmel; Andrew Carmitchel, Mt. Carmel; Harry Warfield, Mt. Carmel; John Kehoe, Mt. Carmel; E. A. Brennan, Shamokin; Jesse C. Hoover, Shamokin; Peter Summers, Mt. Carmel; John W. Sokloski, Mt. Carmel; Patrick McGrath, Mt. Carmel; Patrick Kelly, Mt. Carmel; William E. Manuey, Mt. Carmel.



# Fifteenth Anthracite District

COLUMBIA AND DAUPHIN COUNTIES

---

Ashland, Pa., February 15, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of herewith submitting my annual report for the year ending December 31, 1903. Statistics regarding production, employes, days worked, condition of collieries, etc., are given in accordance with the requirements of the law. There were 11 fatal and 46 non-fatal accidents during the year, a brief account of which is embodied in the report.

Respectfully submitted,  
MARTIN KELLY,  
Inspector.

## Fifteenth Anthracite District, 1903.

## SUMMARY OF STATISTICS

Number of mines in district, .....	7
Number of mines in operation, .....	6
Number of tons of coal produced, .....	1,863,280
Number of tons shipped to market, .....	1,556,439
Number of tons sold at mines to local trade, .....	31,379
Number of tons consumed at mines in generating steam and heat, .....	275,462
Number of persons employed inside the mines, .....	2,710
Number of persons employed outside, .....	1,666
Number of fatal accidents inside the mines, .....	8
Number of tons produced for each fatal accident inside, .....	232,910
Number of persons employed per fatal accident inside, .....	339
Number of fatal accidents outside, .....	3
Number of persons employed per fatal accident outside, .....	555
Number of wives made widows by fatal accidents, ...	5
Number of children orphaned by fatal accidents, ...	13
Number of non-fatal accidents inside of mines, .....	33
Number of persons employed per non-fatal accident inside, .....	82
Number of non-fatal accidents outside, .....	13
Number of persons employed per non-fatal accident outside, .....	128
Number of steam locomotives used inside, .....	1
Number of electric motors used inside, .....	5
Number of fans used for ventilation, .....	15
Number of gaseous mines in operation, .....	4
Number of non-gaseous mines in operation, .....	2

TABLE A.—Fifteenth Anthracite District, 1903

PRODUCTION OF COAL	
Names of Companies	Tons
Lehigh Valley Coal Company, .....	365,662
Midvalley Coal Company, .....	463,822
Philadelphia and Reading Coal and Iron Company, ...	379,359
Summit Branch Mining Company, .....	306,461
Lykens Valley Coal Company, .....	347,976
	<hr/>
Total, .....	1,863,280
	<hr/> <hr/>
Production by Counties	
Columbia, .....	1,208,843
Dauphin, .....	654,437
	<hr/>
Total, .....	1,863,280
	<hr/> <hr/>

TABLE B.—Fifteenth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Companies	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh Valley Coal Co. ....	3	.....	3	11	8	19	33,242	480	249	729	160	44	.....	.....	31
Midvalley Coal Co. ....	.....	3	3	5	.....	5	92,764	600	225	825	.....	130	.....	.....	.....
Philadelphia and Reading Coal and Iron Co. ....	.....	.....	.....	4	3	7	94,840	374	308	682	.....	93	.....	.....	103
Summit Branch Mining Co. ....	2	.....	2	6	2	8	51,077	339	534	933	.....	67	.....	.....	267
Lykens Valley Coal Co. ....	3	.....	3	7	.....	7	115,962	857	350	1,207	.....	122	.....	.....	.....
Totals and averages for district, .....	8	3	11	33	13	46	56,463	2,710	1,665	4,376	339	82	555	.....	123

TABLE C.—Fifteenth Anthracite District, 1903  
Classification of Fatal Accidents

	Inside of Mines										Outside of Mines					Grand total							
	Coal	Slate	Roof	By mine cars	By explosion of gas	Smothered by gas	Powder and dynamite	By blasts, etc.	Shafts	Slopes	Manways, breasts, etc.	Crushed at batteries	By mules	Suffocated by coal, etc.	Miscellaneous causes		Total inside	By cars	By machinery	By suffocation	By boiler explosions	Miscellaneous causes	Total outside
January, .....	1															1							1
February, .....																							1
March, .....										1													1
April, .....																							
May, .....																							
June, .....																							
July, .....																							1
August, .....										1													2
September, .....																							
October, .....		1																					2
November, .....																							1
December, .....																							
Totals, .....	1	2				2				2					1	8	2					1	11



TABLE E.—Fifteenth Anthracite District, 1903  
Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines

	Inside											Outside							Grand total			
	Mine foremen	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Book-keepers and clerks	All other employes	Total outside
January, .....					1							1										1
February, .....																						
March, .....		1										1										1
April, .....																						
May, .....									1			1										1
June, .....																						
July, .....																1						1
August, .....									1			1										2
September, .....																						
October, .....		1			1						1	3										5
November, .....												1										1
December, .....																						
Totals, .....		2			3		3		2		1	8				1					2	11

TABLE F.—Fifteenth Anthracite District, 1903  
Occupations of Persons Injured Inside and Outside the Mines

	Inside											Outside								Grand total	
	Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes		Total outside
January, .....	.....	.....	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February, .....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
May, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
June, .....	.....	.....	.....	1	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
July, .....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
August, .....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
September, .....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
October, .....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December, .....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	.....	.....	12	6	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
								8			33			2		4			7	13	46



TABLE G.—Fifteenth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	Irish	German	Lithuanian	Austrian	Totals
January, .....	1					1
February, .....		1				1
March, .....						
April, .....						
May, .....						
June, .....	1					1
July, .....						
August, .....	3					3
September, .....						
October, .....	1		1		1	3
November, .....	1					1
December, .....						
Totals, .....	7	1	1	1	1	11

TABLE H.—Fifteenth Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Irish	German	Polish	Lithuanian	Austrian	Russian	Totals
January, .....		1	1					1	3
February, .....	1	1			1				4
March, .....									2
April, .....	1			1	1		1		4
May, .....				1	1				1
June, .....	4	1	1			1			7
July, .....	3	2			1		1		6
August, .....	3			1			1		5
September, .....	4			1	2				7
October, .....	3								3
November, .....	3								3
December, .....	3			1					1
Totals, .....	24	5	2	4	6	1	2	2	46

TABLE I.—Fifteenth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

Names of Operators and Mines	Kind of opening	Gasous or non-gasous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
Lehigh Valley Coal Co. Central colliery, .....	Shaft & slope, Slope, .....	Gasous, Gasous,	3 Fans, Steam jet	20	6-8	5-1 <sup>1</sup> / <sub>2</sub>	70	1½	Guibal..	Steam..	15	147,842	141,586	152,789	483	213
Locust Run colliery, .....																
Midvalley Coal Co. Midvalley No. 2 colliery, .....	Slope, .....	Non-gas. Non-gas.	Fan, .....	25	8	7	70	1.8	Vulcan..	Steam..	8	98,563	94,388	101,860	455	407
Midvalley No. 1 colliery, † .....	Drift & slope, Slope, .....	Non-gas. Gasous,	Fan, .....	25	8	7	60	1.4	Vulcan..	Steam..	8	49,380	47,108	50,939	145	225
P. and R. Coal and Iron Co. Potts colliery, .....	Slope, .....	Gasous,	4 Fans, ..	18	6	4¼	120	2%	Whiting, Guibal..	Steam..	10	133,120	152,846	146,750	371	328
Summit Branch Mining Co. Williamstown colliery, .....	Shaft & slope, Slope, .....	Gasous,	3 Fans, ..	25	8	7	72	1.4	Guibal..	Steam..	9	124,480	122,350	136,316	319	317
Lykens Valley Coal Co. Short Mountain colliery, .....	Slope & drift, Slope, .....	Gasous,	3 Fans, ..	25	8	7	60	1.7	Guibal..	Steam..	8	150,000	178,375	192,306	557	268

†Coal prepared at No. 2 breaker

\*Pumping station

TABLE I.—Fifteenth Anthracite District, 1903  
Operators, Location of Collieries, Railroads, Etc.

Names of Operators and Collieries	County	Name of General Superintendent	P. O. Address	Name of Superintendent	P. O. Address	Railroad to Mine
Lehigh Valley Coal Co. Centralia, .....	Columbia, .....	S. D. Warriner, ..	Wilkes-Barre, ..	J. M. Humphrey, ..	Centralia, .....	Lehigh Valley
Locust Run, .....	Columbia, .....	S. D. Warriner, ..	Wilkes-Barre, ..	J. M. Humphrey, ..	Centralia, .....	Lehigh Valley
Midvalley Coal Co. Midvalley No. 1, .....	Columbia, .....	John S. Wentz, ...	Philadelphia, ...	T. E. Snyder, .....	Wilburton, ....	Lehigh Valley
Midvalley No. 2, .....	Columbia, .....	John S. Wentz, ...	Philadelphia, ...	T. E. Snyder, .....	Wilburton, ....	Lehigh Valley
Summit Branch Mining Co. Williamstown, .....	Dauphin, ...	R. A. Quinn, .....	Wilkes-Barre, ..	Hood McKay, .....	Lykens, .....	Summit Branch and Lykens Valley
Lykens Valley Coal Co. Short Mountain, .....	Dauphin, ...	R. A. Quinn, .....	Wilkes-Barre, ..	Hood McKay, .....	Lykens, .....	Lykens Valley
Philadelphia and Reading Coal and Iron Co. Potts, .....	Columbia, ..	W. J. Richards, ..	Pottsville, .....	John Veith, .....	Pottsville, ....	Philadelphia and Reading

TABLE 2.—Fifteenth Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lehigh Valley Coal Co.	Columbia	328,539	29,920	7,222	365,662	237 <sup>†</sup>	710	3	19	3,982	132,350	92
Centralia colliery	Columbia	.....	.....	.....	.....	.....	19	.....	.....	.....	43	2
Locust Run colliery,*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals,	.....	328,539	29,920	7,222	365,662	237	729	3	19	3,982	132,392	94
Midvalley Coal Co.	Columbia	444,918	17,000	1,904	463,822	263	825	1	4	5,771	80,900	111
Midvalley No. 2 colliery,	Columbia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Midvalley No. 1 colliery,†	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals,	.....	444,918	17,000	1,904	463,822	263	825	3	5	5,771	80,900	135
Philadelphia and Reading Coal and Iron Co.	Columbia	330,191	44,435	4,733	379,359	273	682	.....	7	12	90,791	83
Potts colliery,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Summit Branch Mining Co.	Dauphin	175,653	136,729	4,079	306,461	247	933	2	8	3,873	24,115	70
Williamstown,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

†Totals in this column are averages

\*Pumping station  
†Coal prepared at No. 2 breaker

Lykens Valley Coal Co. ....	277,157	57,378	13,441	347,976	283	1,207	3	7	2,918	13,550	144
Short Mountain colliery, .....	1,556,439	275,402	31,379	1,863,280	261	4,376	11	46	16,556	341,788	526
Grand totals, .....											

TABLE 2—Recapitulation

Lehigh Valley Coal Co., .....	328,320	29,920	7,222	365,662	237	729	3	19	3,982	132,390	94
Midvalley Coal Co., .....	414,318	17,000	1,904	461,822	283	825	3	5	5,271	80,806	133
Philadelphia and Reading Coal and Iron Co., .....	339,111	41,455	4,733	374,859	273	682	7	12	12	90,791	183
Summit Branch Mining Co., .....	175,423	126,729	4,079	3,646,1	217	933	.....	8	3,873	24,115	70
Lykens Valley Coal Co., .....	277,157	57,378	13,441	347,976	283	1,207	3	7	2,918	13,590	144
Totals, .....	1,556,439	275,402	31,379	1,863,280	261	4,376	11	46	16,556	341,788	526

\*Not including washeries

TABLE 2—Continued

Names of Operators and Collieries	County	Number of Boilers			Total horse power	Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—Gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Tubular	Horse power		Steam	Air	Electric							
Leitch Valley Coal Co.	Columbia	15	16	2,500	2,590	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Centralia colliery, .....	Columbia	300	.....	300	300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Locust Run colliery, .....	Columbia	15	16	2,500	2,800	.....	.....	3	.....	.....	.....	.....	.....	.....	.....
Totals, .....		15	16	2,500	2,800	.....	.....	3	.....	.....	.....	.....	.....	.....	.....
Midvalley Coal Co.	Columbia	.....	10	2,400	2,400	.....	.....	.....	9	839	4	4,500	3,830	.....	1
Midvalley No. 2 colliery, .....	Columbia	.....	3	750	1,050	.....	.....	.....	5	360	.....	.....	.....	.....	.....
Midvalley No. 1 colliery, .....	Columbia	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....		16	13	3,150	3,470	.....	.....	.....	14	1,199	4	4,500	3,830	.....	1
Philadelphia and Reading Coal and Iron Co.	Columbia	.....	14	1,850	1,850	.....	.....	.....	13	2,420	4	4,720	4,500	.....	.....
Potts colliery, .....	Columbia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Williamstown, .....	Dauphin	66	25	4,905	8,205	5	.....	.....	24	2,700	10	7,207	4,878	.....	2
Summit Branch Mining Co.	Dauphin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lykens Valley Coal Co.	Dauphin	30	12	2,540	3,440	5	.....	.....	21	3,230	4	3,692	2,120	.....	2
Short Mountain colliery, .....	Dauphin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand totals, .....		127	80	14,315	19,735	19	.....	5	72	9,558	22	20,179	13,328	.....	3



TABLE 3.—Fifteenth Anthracite District, 1903  
Number of Each Class of Employes at Each Colliery

Names of Operators and Collieries	County	Occupations of Persons Employed Inside											Occupations of Persons Employed Outside							Grand totals, inside and outside		
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks		All other employes	Total outside
Lehigh Valley Coal Co.	Columbia	4	1	...	132	81	34	3	2	27	135	480	1	3	20	31	43	11	3	137	249	729
Centralia colliery, .....	Columbia																					
Locust Run, .....	Columbia																					
Philadelphia and Reading Coal and Potts colliery, .....	Columbia	2	..	10	88	76	32	22	...	28	116	374	...	1	12	27	96	48	3	121	308	682
Midvalley Coal Co.	Columbia																					
Midvalley No. 1 colliery, .....	Columbia	2	1	3	200	151	76	12	4	43	42	600	1	2	19	24	70	12	5	92	225	825
Midvalley No. 2 colliery, .....	Columbia																					
Summit Branch Mining Co.	Dauphin	2	4	1	150	26	27	2	23	...	161	389	1	1	25	82	44	...	4	377	551	933
Williamstown colliery, .....	Dauphin																					
Lykens Valley Coal Co.	Dauphin	2	6	5	261	97	97	1	15	...	352	877	1	1	30	52	67	...	5	194	370	1,207
Short Mountain colliery, .....	Dauphin																					
Totals, .....		12	17	22	966	437	263	52	44	98	807	2,710	4	8	106	216	320	71	20	921	1,666	4,376



TABLE 3—Recapitulation

Names of Operators and Collieries	County	Occupations of Persons Employed Inside											Occupations of Persons Employed Outside											Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door-boys and helpers	Funnelmen	Company men	All other employes	Total inside	Superintendents	Outside foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Book-keepers and clerks	All other employes	Total outside			
Lehigh Valley Coal Co., .....	Columbia,	4	1	.....	193	81	34	3	27	135	480	1	3	20	31	43	11	3	137	249	729			
Philadelphia and Reading Coal and Iron Co., .....	Columbia,	2	.....	10	88	32	22	.....	28	116	374	.....	1	12	97	96	48	2	121	298	682			
Midvalley Coal Co., .....	Columbia,	2	1	3	266	157	76	4	43	42	600	1	2	10	24	70	12	2	16	162	295	885		
Summit Branch Mining Co., .....	Dauphin,...	2	4	4	150	26	27	2	23	161	339	1	1	23	82	44	.....	4	27	152	477	835		
Lykens Valley Coal Co., .....	Dauphin,...	2	6	5	250	97	97	13	15	353	837	1	1	30	52	67	.....	5	194	330	1,207			
Totals, .....	.....	12	12	22	960	437	266	44	98	807	2,710	4	8	106	216	320	71	20	321	1,666	4,376			

TABLE 3—Continued

Names of Operators and Collieries	County	Number of Days Worked Each Month in Breaker												Total	
		January	February	March	April	May	June	July	August	September	October	November	December		
Lehigh Valley Coal Co.	Columbia,...	25.7	23.4	23.9	22.2	20.2	22.3	22.9	24.3	21.8	15.9	14.4	.....	.....	237
Centralia colliery, .....	Columbia,...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Locust Run colliery, .....	Columbia,...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Philadelphia and Reading Coal and Iron Co.	Columbia,.....	25	23	25	19	24	25	26	24.9	23.1	21.8	18	18.1	18.1	273
Potts colliery, .....	Columbia,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Midvalley Coal Co.	Columbia,.....	24.3	22.9	23.8	23.9	22.7	25.7	24.8	24.4	22.4	17.3	12.3	18.8	18.8	203
Midvalley No. 1 colliery, .....	Columbia,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Midvalley No. 2 colliery, .....	Columbia,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Summit Branch Mining Co.	Dauphin,.....	16.6	18.4	19.8	22	21.3	22.4	22.9	22.7	18.4	19.6	21.1	21.9	21.9	247
Williamstown colliery, .....	Dauphin,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lykens Valley Coal Co.	Dauphin,.....	20.8	20.7	25.2	25.9	24.3	25.9	25.2	24.3	20.6	21.6	23	25	25	283
Short Mountain colliery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Averages, .....	.....	22.5	21.7	23.5	22.6	22.5	24.3	24.4	24.1	21.3	19.2	17.8	21	21	261

TABLE 3—Recapitulation

Lehigh Valley Coal Co., .....	Columbia,.....	25.7	23.4	23.9	22.2	20.2	22.3	22.9	24.3	21.8	15.9	14.4	.....	.....	27
Philadelphia and Reading Coal and Iron Co., ..	Columbia,.....	25	23	25	19	24	25	26	24.9	23.1	21.8	18	18.1	18.1	273
Midvalley Coal Co., .....	Columbia,.....	24.3	22.9	23.8	23.9	22.7	25.7	24.8	24.4	22.4	17.3	12.3	18.8	18.8	203
Summit Branch Mining Co., .....	Columbia,.....	16.6	18.4	19.8	22	21.3	22.4	22.9	22.7	18.4	19.6	21.1	21.9	21.9	247
Lykens Valley Coal Co., .....	Dauphin,.....	20.8	20.7	25.2	25.9	24.3	25.9	25.2	24.3	20.6	21.6	23	25	25	283
Averages, .....	.....	22.5	21.7	23.5	22.6	22.5	24.3	24.4	24.1	21.3	19.2	17.8	21	21	261

TABLE 4.—Fifteenth Anthracite District, 1903  
Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 14	Andrew Brown, .....	American, ..	Miners' laborer	35	M.	1	2	Williamstown, .....	Dauphin, ..	Killed by a fall of slate from high side of roadway.
Feb. 15	Peter Gibbons, .....	Lithuanian, ..	Miner, .....	36	S.	.....	.....	Midvalley No. 1, .....	Columbia, ..	Fell under trip of mine cars on which he was riding, in going home from work.
March 21	John Finley, .....	Irish, .....	Miner, .....	52	M.	1	4	Williamstown, .....	Dauphin, ..	By falling down a manway.
June 23	William P. Doyle, .....	American, ....	Repairman, ..	28	S.	.....	.....	Centralia, .....	Columbia, ..	Attempting to cross from one side of the shaft to the other he was caught by descending cage.
Aug. 4	Isaac Lazalere, .....	American, ....	Fireman, .....	21	S.	.....	.....	Midvalley No. 1, .....	Columbia, ..	Mine locomotive upon which he was firing was thrown from the track, catching him in the wreck. Was scalded to death by escaping steam.
4	Ben Row, .....	American, ....	Laborer, .....	23	S.	.....	.....	Short Mountain, .....	Dauphin, ..	By falling down a counter-chute.
7	Frank Ferenze, .....	American, ....	Laborer, .....	33	M.	1	3	Midvalley No. 2, .....	Columbia, ..	Attempting to uncouple mine cars while they were in motion, he was caught between them.
Oct. 16	John Ferenzy, .....	Austrian, .....	Miner, .....	33	M.	1	1	Centralia, .....	Columbia, ..	Killed by an explosion of dynamite through carelessness on part of Ferenzy.
16	Henry Wenk, .....	German, .....	Blacksmith, ..	53	M.	1	3	Centralia, .....	Columbia, ..	By a fall of slate at face of breast.
25	William Hawk, .....	American, ....	Miners' laborer	21	S.	.....	.....	Short Mountain, .....	Dauphin, ..	By a fall of coal while crossing a breast in which he was working.
Nov. 25	Alvin Hoke, .....	American, ....	Miners' laborer	17	S.	.....	.....	Short Mountain, .....	Dauphin, ..	

TABLE 5.—Fifteenth Anthracite District, 1903  
Non-Fatal Accidents in and about the Mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 1	Patrick Gaugher, .....	Irish, .....	Chute boss, .....	35	S.	Centralia, .....	Columbia,	Back and ankle sprained by falling from a trestle, the hand-fall of which he was fixing.
23	George Waseoski, .....	Russian, ....	Miner, .....	23	S.	Midvalley No. 2, .....	Columbia,	Foot injured by piece of slate falling on it.
27	Edward Bagin, .....	English, .....	Minet, .....	43	M.	Potts, .....	Columbia,	Arm broken. While starting a battery a bump on the arm from above, striking him on the arm.
Feb. 13	William Winkle, .....	American, ..	Carpenter, .....	40	M.	Centralia, .....	Columbia,	Head crushed. A plank broke, upon which he was walking, throwing him to the ground, his head striking against an iron pipe.
16	Fred. Leverence, .....	American, ..	Slate picker, .....	16	S.	Potts, .....	Columbia,	Sight of an eye lost by being struck with a fragment of a window pane which was broken by a piece of flying coal.
16	John Dorish, .....	Polish, .....	Miner's laborer, ..	38	M.	Centralia, .....	Columbia,	Foot bruised by fall of coal from high side of gangway, while in act of loading a car.
23	George Wiles, .....	English, .....	Miner, .....	20	S.	Centralia, .....	Columbia,	Head and body bruised by fall of coal.
26	George Kellar, .....	American, ..	Jig tender, .....	20	S.	Centralia, .....	Columbia,	Arm broken; slipped and fell into the legging.
31	Albert Smith, .....	American, ..	Repairman, .....	25	M.	Centralia, .....	Columbia,	Leg crushed attempting to throw rope off wheel while it was in motion.
13	Edward Hewig, .....	American, ..	Laborer, .....	20	S.	Centralia, .....	Columbia,	Collar bone broken while dumping an ash dumper, the box of which was pivoted too far, causing it to fall backward upon him.
April 16	John Beck, .....	German, .....	Starter, .....	25	S.	Potts, .....	Columbia,	Fell from a chute, the battery of which he was starting, into a mine car, bruising his body and legs.
30	Charles Balashie, .....	Austrian, .....	Driver, .....	21	S.	Midvalley No. 2, .....	Columbia,	Rib fractured by being caught between chute and car upon which he was riding.

April	30	Joseph Douse, .....	Polish, .....	Driver, .....	16	S.	Midvalley No. 2, .....	Columbia, .....	Fingers mashed. Caught between pulling bar and coupling while trying to uncouple a trip of cars, in motion. Fell into machinery while at work on a coal-jig and had his wrist broken. Body and head bruised by premature discharge of a shot.
May	22	Edward Blochman, ...	Polish, .....	Slate picker, .....	16	S.	Potts, .....	Columbia, .....	Shot on face and head by premature blast. (Part of hands bruised by a coal-jig.)
June	6	Edward J. Lavelle, ...	Irish, .....	Miner, .....	32	M.	Centralia, .....	Columbia, .....	Death caused by one of the victims who worked in adjoining breast going up with naked light while the fire boss and others were removing the gas.
	8	James Jennings, .....	American, .....	Miner's laborer, ...	35	M.	Centralia, .....	Columbia, .....	Leg broken, being caught with a rush of coal from high side of gangway.
	8	John E. Buckley, .....	English, .....	Fire boss, .....	40	M.	Short Mountain, .....	Dauphin, ...	Head cut. While in the act of drilling a hole, piece of slate fell on him from the top.
	8	William Mahoney, .....	American, .....	Miner, .....	40	M.	Short Mountain, .....	Dauphin, ...	Bruised about the hips, being caught between mine cars while trying to uncouple them.
	8	William Callahan, .....	American, .....	Miner, .....	43	M.	Short Mountain, .....	Dauphin, ...	Each of wrists and internally injured by a fall of slate.
	8	John McAuliff, .....	American, ...	Miner, .....	33	M.	Short Mountain, .....	Dauphin, ...	Burned by powder. They were preparing charges in heading, when one of them, discarding an ignited wick, set fire to some loose powder and the charges they had prepared.
July	20	Charles Pushko, .....	Lithuanian, .....	Miner's laborer, ...	42	S.	Centralia, .....	Columbia, .....	Back bruised by a fall of coal.
	8	George Jurgie, .....	Polish, .....	Miner's laborer, ...	20	S.	Centralia, .....	Columbia, .....	Compound fracture of leg by falling under mine cars.
	13	Herbert Greager, .....	American, ...	Laborer, .....	20	S.	.....	.....	Compound fracture of leg by a fall of slate.
	16	Joseph Stancofski, .....	Russian, ...	Miner's laborer, ...	30	S.	Midvalley No. 1, .....	Columbia, .....	Leg bruised by being caught between mine cars and a motor.
Aug.	16	John Crozier, .....	English, .....	Miner, .....	46	M.	Williamstown, .....	Dauphin, ...	Head, leg and ribs injured by a fall of slate.
	16	Henry Umholtz, .....	American, ...	Miner, .....	32	M.	Williamstown, .....	Dauphin, ...	Arm torn off above elbow. While climbing a post he fell into machinery.
	28	George James, .....	English, .....	Miner, .....	52	M.	Centralia, .....	Dauphin, ...	Scalded with live steam by the breaking of a flange of a steam line which they were end-avoring to straighten.
	6	Thomas Novack, .....	German, .....	Driver, .....	18	S.	Short Mountain, .....	Dauphin, ...	Leg broken by a fall of coal.
	4	Anton Plätzen, .....	American, ...	Laborer, .....	20	S.	Short Mountain, .....	Dauphin, ...	Eye injured. He was working with a pick, which glanced off the coal, striking him in the eye.
	10	Lawrence Minich, .....	American, ...	Track layer, .....	22	M.	Centralia, .....	Columbia, .....	Body injured by falling under mine cars. Internally injured by falling down a shaft while attempting to jump off bucket during his descent.
	20	Michael Yacobick, .....	Austrian, ...	Miner, .....	43	M.	Centralia, .....	Columbia, .....	Leg broken by falling under mine cars in attempting to jump on a rapidly moving trip.
	31	Samuel Hughes, .....	American, ...	Slate picker, .....	16	S.	Potts, .....	Columbia, .....	
Sept.	4	William Yodel, .....	American, ...	Laborer, .....	30	S.	Centralia, .....	Columbia, .....	
	9	Michael Korask, .....	Polish, .....	Miner, .....	45	M.	Centralia, .....	Columbia, .....	
	12	Jacob Blotch, .....	German, .....	Miner, .....	45	M.	Potts, .....	Columbia, .....	
	16	John Cotschall, .....	American, ...	Plane runner, ...	28	M.	Williamstown, .....	Dauphin, ...	
	23	Harry Wagner, .....	American, ...	Laborer, .....	21	S.	Williamstown, .....	Dauphin, ...	
	30	Stanley Duda, .....	Polish, .....	Laborer, .....	19	S.	Midvalley No. 2, .....	Columbia, .....	

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Oct. 1	Albany Chester, .....	American, ..	Blacksmith, .....	42	M.	Williamstown, .....	Dauphin, ..	Foot crushed in attempting to get onto a wagon which was being drawn up a plane.
6	Harper Kinsey, .....	American, ..	Slate picker, .....	15	S.	Williamstown, .....	Dauphin, ..	Compound fracture of arm and finger cut off by being wound around a shafting, while playing with it.
23	John W. Hawk, .....	American, ..	Miner, .....	33	M.	Short Mountain, .....	Dauphin, ..	Legs and body bruised by a fall of slate.
Nov. 7	James Brennan, .....	American, ..	Laborer, .....	27	S.	Williamstown, .....	Dauphin, ..	These men received bodily injuries simultaneously by being caught between the rib and a trip of mine cars, along side which they were running to uncouple them.
7	Michael Mullen, .....	American, ..	Laborer, .....	26	S.	Williamstown, .....	Dauphin, ..	
25	Lewis Winters, .....	American, ..	Assistant transit man.	23	S.	Centralla, .....	Columbia,	Skull fractured. Struck by a piece of coal which rolled down the slope on which he was making a survey.
Dec. 21	Mattes Minrod, .....	German, .....	Miner, .....	45	M.	Potts, .....	Columbia,	Bone of right arm splintered by a fall of coal.

## FATAL ACCIDENTS

## By Falls of Coal, Slate and Roof

Andrew Brown, a laborer in a gangway at Williamstown colliery was fatally injured on January 14, by a fall of slate. Having taken out the cut, Brown, who was cleaning up the track to enable the car to be brought close to the face, was caught by a piece of slate which slid out from the high side of the gangway, crushing the life out of him.

William Hawk, a laborer in a breast at Short Mountain colliery, was instantly killed October 23 by a fall of slate, and his brother for whom he labored, was seriously injured. An investigation disclosed the fact, that the breast was not properly timbered and that although warned of the danger by those who understood the nature of the roof, owing to their stupidity or dullness of perception, they persisted in working under it until it fell on them with the above mentioned result.

Alvin Hoke, a young man, working in a breast with his father at Short Mountain Colliery was fatally injured November 25 by a fall of coal. At the time of the accident, they were on each side of the breast and the boy remarked that "he thought he heard something working." "You had better come over to this side," the father replied, and the young fellow, watching what he considered a favorable opportunity, attempted to cross over, but only succeeded in getting to the centre of the breast when a large slip of coal, the full thickness of the vein, slid out upon him hurling him some distance down the breast and injuring him so severely that he died a few hours after being taken to his home.

## By Falling Down Shafts, Etc.

John Finley, a miner in Bear Valley shaft of the Williamstown colliery, was fatally injured on March 21 by falling down a breast manway. After igniting a shot, in which it was alleged there were 26 inches of powder, he and his partner repaired to a heading some 10 yards distant from the face to await the result of the blast. In the heading at the same time were the two men from an adjoining breast who had sought this place of retreat for a similar reason. The amount of powder discharged in both places almost simultaneously, the smoke from which had to pass through that opening, and their close proximity to the point of explosion, made it very uncomfortable for the men in the heading; so much so that one of the number was momentarily overcome and fell over in the heading. On seeing this, Finley who was of an irritable temperament, and generally did things by impulses, jumped out into the manway which

at this point pitches 65 degrees and losing his foot hold, was precipitated to the bottom a distance of 150 feet and almost instantly killed. We do no injustice to his memory by expressing the opinion that although he was above the average as workman, had he been less impetuous his life would have been saved, as the men who remained in the heading experienced the bad effects of the smoke for a short time only and were able to go to Finley's rescue five minutes after he had fallen.

Ben Row, a laborer, came to his death on August 4, by walking into a counter chute in the White vein at the Short Mountain Colliery, operated by the Lykens Valley Coal Company.

On the day of the accident, Row and another man were walking along the gangway in the direction of the counter chute, the latter some yards in advance, but within talking distance. On arriving at the opening, around which is a traveling way protected by a balustrade, Row's partner passed over to the other side, keeping up the conversation meanwhile. Noticing that Row had ceased talking and turning around to ascertain the cause, he was horrified to find that he was nowhere to be seen. Hastily summoning aid they descended the counter chute by means of a rope and found Row lying apparently dead, having fallen about 60 yards. Though he lived some hours after the accident he never regained consciousness.

### By Explosions

John Pereney, shift leader, and Henry Wenk, blacksmith, were instantly killed by an explosion of dynamite on Sunday night August 16, about 9.30 P. M., at the Centralia Colliery, operated by the Lehigh Valley Coal Company. The accident occurred in what is known as the "Drainage Tunnel," used as a haulage road for that part of the colliery and through which all the water of the mine passes to Big Mine Run.

Pereney was engaged with three others in driving a cross-cut and Wenk was employed to sharpen the steel. Leaving his three partners at work at the face of the cross-cut, Pereney repaired to the box in which the explosives were kept to prepare a charge, and according to his partners' statements, had only been gone a few moments when there was a terrific explosion by which Pereney was literally blown to fragments and the blacksmith, who must have been close to the scene of the explosion, was instantly killed. It is evident that the accident was due to the carelessness of Pereney in handling the explosives; but in what manner the dynamite was ignited or the amount exploded will never be known, as there was no one in the vicinity of the explosion but the two victims.



### By Mine Cars

Peter Gibbons, a miner at Midvalley No. 2 Colliery, was fatally injured on February 12, by falling under a rapidly moving trip of empty mine cars. On completing his day's work and after being hoisted to the surface, he with several others, got on the trip drawn by a mine locomotive on its way to Midvalley No. 1 and about two and one-half miles distant. Arriving at the latter place, one of the men, on looking around discovered Gibbons lying on the track, and on investigation it was found that part of the trip had passed over him, injuring him so seriously, that he died while being borne to his home.

On August 7, Frank Ferenze, an outside laborer employed at the bottom of a plane at Midvalley No. 2 Colliery, in attempting to uncouple a trip of mine cars while in motion was caught between them and squeezed so badly that he died the following day at the State Hospital, whither he had been taken after the accident.

### Miscellaneous

Isaac Lazalere, a fireman on a locomotive engaged in hauling coal from No. 1 to No. 2 Midvalley collieries, was scalded to death in a wreck which occurred August 4. At the time of the accident, there were two locomotives attached to the trip, one pulling, the other pushing, and Lazalere was in the cab of the first engine. While running at a high rate of speed, a cow, which had been running along side the track for a considerable distance, suddenly leaped in front of the first engine, throwing it off the track, unknown to the engineer at the rear end of the trip, whose engine continued to push until the front locomotive was thrown over the bank and the front wagon entering the cab, broke the steam connections. Lazalere, who was pinned fast in the wreck was so badly scalded before being liberated, that he died in great agony the following day.

William P. Doyle, repairman at the Continental Shaft of the Centralia Colliery, was instantly killed on June 23. Doyle, whose duties were of a variable character, was on the day of the accident, filling the place of one of the bottom men who had not reported for work that morning. In attempting to cross over from one side of the shaft to the other, instead of going around the shaft as he should have done, he was caught by the descending cage and crushed to death.

### Condition of Collieries

At Centralia Colliery the Continental shaft has been sunk from the first to the second lift, and a tunnel driven from the Mammoth Leader on the first lift of the Holmes Plane to the Skidmore vein.

A new electric haulage plant has been installed, consisting of two 10 ton motors and one 6 ton motor, to accommodate which six miles of gangway have been equipped with electric appliances of the most modern type.

The general condition of the colliery as to drainage and ventilation is good, with the exception of the Logan Slope, in which there are parts, being robbed out preparatory to being abandoned, in which the ventilation is inadequate.

For some reason unknown to the writer, this colliery suspended indefinitely about the middle of November.

#### Midvalley No. 1 Colliery

This colliery consists of two water level drifts and two slopes in which are opened the Holmes, Mammoth and Buck Mountain veins.

In the slope working the gangways have nearly all reached the boundary and are being robbed backward.

A twenty-five foot fan furnishes a good supply of fresh air; but the drainage at the time of my last visit was not up to the standard. This is through no fault of the management, however, but is due to the fact that the colliery had been drowned out for months and there was not sufficient time after the water was taken out to get the ditches in proper condition.

There were no improvements made during the year other than making a new pump house in which a 12 inch duplex pump is to be placed.

#### Williamstown Colliery

This colliery comprises No. 3 slope and Biglick slope on the Williamstown side; Bear Valley slope and Bear Valley shaft on the Bear Valley side, the two latter being reached by a 3,600 foot tunnel through the Locust mountain.

Little or no coal worthy of mention was mined during the year on the Williamstown side owing to the fire at Biglick slope, which has been burning for over a year, but which from present indications is now under control, and the flooding of No. 3 slope, covering about the same period of time. The colliery had, therefore, to depend entirely upon Bear Valley for its supply, which had hitherto been considered but an auxiliary.

The ventilation and drainage are fairly good.

The improvements consisted of the sinking of No. 2 shaft and the erection of a boiler house and two pairs of 36x60 direct-acting engines.

The development of this shaft by tunnelling north and south will

be continued during 1904, the intention being to push this work as rapidly as possible.

### Short Mountain Colliery

The general condition of this colliery is good. In some parts, however, while the ventilation is not bad, it is not exactly what it should be.

This applies to places that were abandoned years ago; supposed to have been worked out, according to the methods then prevailing, and from which 25 per centum more coal could have been won had ordinary care been taken, and which are now being re-opened for the purpose of getting the coal which at that time was not deserving of notice. To conduct the air through these broken strata, in order to remove the coal from the upper portion of the pillars (the lower portion being invariably removed, regardless of what remained above) the present management finds to be no easy task.

Practically no improvements were made during the year, except that two new pumps were put in place to deliver water to the surface and others are to follow shortly.

### Potts Colliery

At this colliery three seams are being worked: the Diamond, Primrose and Mammoth. And while it is the most gaseous colliery under my charge, it is, at the same time, one of the best, if not the best ventilated in the district. Two 18 foot fans on the Mammoth, a 12 foot fan on the Primrose and a 15 foot fan on the Diamond are found necessary to ventilate and keep in a safe condition these extensive workings.

With the exception of an under-ground slope and a tunnel to the north dip of the Mammoth, both of which are now well under way, no improvements worthy of note have been made during the year just closed.

### Mine Foremen's Examinations

The annual examination for the positions of mine foreman and assistant mine foreman was held in the court house at Pottsville, April 28th and 29th, at which six inspection district boards were represented and conducted the examination jointly.

Five applicants from the 15th district appeared before the board two of whom (Boyd Minnich and James Flynn), were given certificates as assistant mine foremen.

Previous to this year the law in regard to the qualification of fire

bosses was viewed from a different standpoint by the inspectors of the northern and southern coal fields.

In the former no person could hold the position of fire boss unless he had passed a successful examination and was in possession of an assistant mine foreman's certificate; while in the latter it was only necessary to furnish the inspector of the district with satisfactory proof of one's having worked a certain time in a gaseous mine as a miner.

The men in the southern field were evidently wrong, but why or upon whose authority the method, which became a general law in this region, was established, does not appear.

Their attention was called to this violation of the law by the Chief of the Department of Mines at a meeting of all the mine inspectors of the Anthracite region held at Hazleton, at which Mr. Roderick presided, and where it was decided that no person could legally hold the position unless he held an assistant mine foreman's certificate.

At that time there were in this region holding the position of fire boss, quite a number who, although being good practical men, were incapable of standing a rigid examination, because they had held their positions under an entirely different tenure which required no theoretical knowledge of mining.

Apart from its being an ex-post-facto law, as applied to this particular case, it would be a hardship to compel these parties to undergo a rigid examination at such short notice, and for this reason the rule requiring applicants "to answer correctly a certain percentage of the questions, before being entitled to a certificate," was not strictly adhered to, in the case of those who had held the position of fire boss prior to the Hazleton meeting, in the examination which followed.

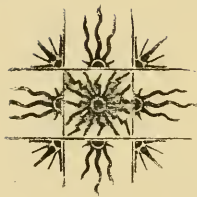
As a result of that meeting, the inspectors of this region were instructed by the Chief to hold another examination.

In obedience to these instructions the examining board for the Fifteenth District held an examination at Ashland on August 14, and at Williamstown August 19, at which forty-eight applicants passed successfully and were recommended for certificates as follows:

#### Assistant Mine Foremen

John Evans, Ashland; Martin Lynch, Ashland; James Kealy, Centralia; Nicholas Ditchey, Locust Dale; William Reilly, Williamstown; Charles H. Harman, Wiconisco; Patrick Fahey, Lykens; William Crook, Williamstown; F. J. Knapp, Ashland; William Singleton, Wilburton; Joseph Goddard, Ashland; Alpheus Barr, Wilburton;

Phelix Wolfgang, Ashland; John Carr, Ashland; John Fineral, Ashland; Henry Cleaver, Ashland; William F. Turnow, Ashland; George E. Raker, Wilburton; Robert H. James, Lykens; John Smiles, Wiconisco; Williams M. Hunter, Lykens; William G. Zerbe, Lykens; S. J. Beaver, Aristes; Arnold Trefsgger, Mount Carmel; Thomas James, Ashland; Patrick Golden, Williamstown; John Lynch, Ashland; August Blank, Locust Dale; Thomas E. Davis, Ashland, George H. Hunter, Lykens; Harry L. Shamper, Lykens; Francis M. Schindler, Wiconisco; Isaac J. Cole, Wiconisco; Benjamin F. Jones, Centralia; Edwin S. Jasper, Wilburton; Theodore D. Berry, Wilburton; Meyrick Jones, Centralia; Emil Ermert, Ashland; John Herbert, Ashland; Patrick Kelly, Locust Dale; Henry Geating, Ashland; Michael Hanerahan, Wilburton; Charles H. Zimmerman, Wiconisco; Edward A. Schlein, Williamstown; Robert Graham, Williamstown; Isaac P. Bretz, Wiconisco; James McDonald, Ashland; Peter Haley, Ashland.



# ANTHRACITE MINING LAWS

OF

## PENNSYLVANIA

### AN ACT

To provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania and for the protection and preservation of property connected therewith.

#### ARTICLE I

Section 1. Be it enacted, &c., That this act shall Application of act. apply to every anthracite coal mine or colliery in the Commonwealth, provided the said mine or colliery employs more than ten (10) persons.

#### ARTICLE II

##### Inspectors and Inspection Districts

Section 1. The counties of Susquehanna, Wayne, Counties and their division into eight districts. Luzerne, Lackawanna, Carbon, Schuylkill, Northumberland, Columbia, Lebanon and Dauphin, or so much of them as may be included under the provisions of this act, shall be divided into eight (8) inspection districts as follows:

Section 2. First. All that portion of the Lackawanna coal field lying northeast of East and West Market streets in the city of Scranton, and of Slocum and Drinker streets in the borough of Dunmore, including the coal fields of Susquehanna and Wayne counties. First district.

Second, That portion of the Lackawanna coal field in Lackawanna county lying southwest of East and West Market streets in the city of Scranton, and west of Slocum and Drinker streets in the borough of Dunmore. Second district.

Third. That portion of the Wyoming coal field situ- Third district.

ated in Luzerne county, east of and including Plains and Kingston townships.

Fourth district.

Fourth. The remaining portion of the Wyoming coal field west of Plains and Kingston townships, including the city of Wilkes-Barre and the boroughs of Kingston and Edwardsville.

Fifth district.

Fifth. That part of Luzerne county lying south of the Wyoming coal field together with Carbon county.

Sixth district.

Sixth. That part of the Schuylkill coal field in Schuylkill county lying north of the Broad Mountain and east of a meridian line through the centre of the borough of Girardville.

Seventh district.

Seventh. That part of the Schuylkill coal field in Schuylkill county lying north of the Broad Mountain and west of a meridian line through the centre of the borough of Girardville, together with Columbia, Northumberland and Dauphin counties.

Eighth district.

Eighth. All that part of the Schuylkill coal field in Schuylkill county lying south of the Mahanoy Valley, and the county of Lebanon.

How vacancies shall be filled.

Section 3. In order to fill any vacancy that may occur in the office of Inspector of Mines by reason of expiration of term, resignation, removal for cause or from any other reason whatever, the judges of the court of Lackawanna county shall appoint an examining board for the counties of Susquehanna, Wayne and Lackawanna, and the judges of the court of Luzerne county shall appoint an examining board for the counties of Sullivan, Carbon and Luzerne, and the judges of Schuylkill county shall appoint an examining board for the counties of Schuylkill, Northumberland, Lebanon, Columbia and Dauphin.

Board of examiners, and when appointed.

Section 4. The said Board of Examiners shall be composed of three reputable coal miners in actual practice and two reputable mining engineers, all of whom shall be appointed at the first term of court in each year, to hold their places during the year. Any vacancies that may occur in the Board of Examiners shall be filled by the court as they occur. The said Board of Examiners shall be permitted to engage the services of a clerk, and they, together with the clerk, shall each receive the sum of five dollars per day for every day they are actually engaged in the discharge of their duties under this appointment, and mileage at the rate of six cents per mile from their home to

Vacancies to be filled by the court.

May engage clerk.

Compensation and mileage allowed.



the place of meeting and return by the nearest practicable railway route.

Section 5. Whenever candidates for the office of inspector are to be examined, the said examiners shall give public notice of the fact in not more than five papers published in the inspection district and at least two weeks before the meeting, specifying the time and place where such meeting shall be held. The said examiners shall be sworn to a faithful discharge of their duties, and four of them shall agree in their recommendation of all candidates to the Governor who have answered ninety per centum of the questions; the names of the applicants, the questions asked and answers thereto shall be sent to the Secretary of the Commonwealth, and published in at least two local papers, daily or weekly, and shall recommend only such applicants as they find qualified for the office.

Notice of examination of inspectors to be published.

Examiners to be sworn.

Recommendations, etc., to be sent to the Secretary of the Commonwealth.

Should the Board of Examiners not be able to agree in their selection and recommendation of a candidate, the judges of the court of common pleas shall dissolve the said board and appoint a new board of like qualifications and powers.

If Board of Examiners fail to agree, court may dissolve Board.

Upon the recommendation of the Board of Examiners as aforesaid, the Governor shall appoint such person or persons to fill the office of inspector of mines under this act, and shall issue to him a commission for the term of five years, subject, however, to removal for neglect of duty or malfeasance in office as hereinafter provided for.

Governor shall appoint inspectors on recommendation of Board.

Removal.

Section 6. The person so appointed must be a citizen of Pennsylvania and shall have attained the age of thirty years. He must have a knowledge of the different systems of working coal mines, and he must produce satisfactory evidence to the Board of Examiners of having had at least five (5) years' practical experience in anthracite coal mines of Pennsylvania. He must have had experience in coal mines where noxious and explosive gases are evolved.

Inspectors must be citizens of Pennsylvania and thirty years old.

Experience required.

Before entering upon the duties of his office he shall take an oath or affirmation before an officer properly qualified to administer the same, that he will perform his duties with fidelity and impartiality; which oath or affirmation shall be filed in the office of the prothonotary of the county. He shall also pro-

Must be sworn or affirmed.

Filing of oath.

Shall have modern instruments.

vide himself with the most modern instruments and appliances for carrying out the intentions of this act.

Salary.

Section 7. The salary of each of the said inspectors shall be three thousand dollars per annum, which salary, together with the expense incurred in carrying out the provisions of this act, shall be paid by the State Treasurer out of the Treasury of the Commonwealth upon the warrant of the Auditor General.

How payable.

When and how deputy may be appointed.

Section 8. In case the inspector becomes incapacitated to perform the duties of his office, for a longer period than two weeks, it shall be the duty of the judges of the court of common pleas to deputize some competent person recommended by the Board of Examiners to fill the office of inspector until the said inspector shall be able to fulfill the duties of his office and the person so appointed shall be paid in the same manner as is provided for the Inspector of Mines.

Must reside in district for which appointed.

Section 9. Each of the said inspectors shall reside

Shall examine collieries.

in the district for which he is appointed, and shall give his whole time and attention to the duties of the office. He shall examine all the collieries in his district as often as his duties will permit or as often as the exigencies of the case or the condition of the mines require it; see that every necessary precaution is taken to secure the safety of the workmen and that the provisions of this act are observed and obeyed;

Shall attend every inquest.

attend every inquest held by the coroner, or his deputy, upon the bodies of persons killed in or about the collieries in his district; visit the scene of the accident for the purpose of making an examination into the particulars of the same whenever loss of life or serious personal injury occurs as elsewhere herein provided for, and make an annual report of his proceedings to the Secretary of Internal Affairs of the Commonwealth at the close of every year, enumerating all the accidents in and about the collieries of his district, marking in tabular form those accidents causing death or serious personal injury, the condition of the workings of the said mines with regard to the safety of the workmen therein and the ventilation thereof, and the result of his labors generally shall be fully set forth.

Shall make an annual report to Secretary of Internal Affairs.

Contents of report.

attend every inquest held by the coroner, or his deputy, upon the bodies of persons killed in or about the collieries in his district; visit the scene of the accident for the purpose of making an examination into the particulars of the same whenever loss of life or serious personal injury occurs as elsewhere herein provided for, and make an annual report of his proceedings to the Secretary of Internal Affairs of the Commonwealth at the close of every year, enumerating all the accidents in and about the collieries of his district, marking in tabular form those accidents causing death or serious personal injury, the condition of the workings of the said mines with regard to the safety of the workmen therein and the ventilation thereof, and the result of his labors generally shall be fully set forth.

Board may readjust districts.

Section 10. The Board of Examiners, each for its respective district as hereinbefore provided for, in order to divide more equitably among the several

mine inspectors the labor to be performed and the territory to be covered by them in the performance of the duties of the office, may, at any time when they shall deem it desirable or necessary, readjust the several districts by the creation of new boundary lines, thereby adding to or taking from, as the case may be, the districts as at present bounded and described, if the court having jurisdiction approve the same.

Court must approve same.

And in case it shall be deemed desirable or necessary to readjust any contiguous district, comprised of more than one judicial district, by the creation of new boundary lines, then in such case the examining boards, of the territory affected or requiring such adjustment, shall, in joint session, make such change or readjustment as they shall jointly agree upon, if the nearest court having jurisdiction in the territory affected to whom the said joint examining boards shall submit the matter, shall approve the same.

District comprising more than one judicial district.

Section 11. The mine inspector shall have the right, and it is hereby made his duty, to enter, inspect and examine any mine or colliery in his district and the workings and machinery belonging thereto, at all reasonable times, either by day or night, but not so as to impede or obstruct the working of the colliery, and shall have power to take one or more of his fellow inspectors into or around any mine or colliery in the district for which he is appointed, for the purpose of consultation or examination.

Duty of mine inspector.

Shall not impede the working of the colliery.

He shall also have the right and it is hereby made his duty, to make inquiry into the condition of such mine or colliery workings, machinery, ventilation, drainage, method of lighting or using lights, and into all matters and things connected with or relating to, as well as to make suggestions providing for the health and safety of persons employed in or about the same, and especially to make inquiry whether the provisions of this act have been complied with.

Shall inquire into condition of mine or colliery.

The owner, operator or superintendent of such mine or colliery is hereby required to furnish the means necessary for such entry, inspection, examination, inquiry and exit.

Owner required to furnish means necessary for entry of inspectors, etc.

The inspector shall make a record of the visit, noting the time and material circumstances of the inspection.

Must record visit.

Inspector shall not be pecuniarily interested in colliery.

Section 12. No person who shall act or practice as a land agent or as the manager or agent of any coal mine or colliery, who is pecuniarily interested in operating any coal mine or colliery in his district, shall at the same time, hold the office of inspector of mines under this act.

How charges of incompetency, etc., of inspector shall be presented.

Section 13. Whenever a petition signed by fifteen or more reputable coal operators or miners or both, setting forth that any inspector of mines neglects his duties, or is incompetent, or is guilty of malfeasance in office, it shall be the duty of the court of common pleas of the proper county to issue a citation in the name of the Commonwealth to the said inspector to appear at not less than five days' notice, on a day fixed, before said court and the court shall then proceed to inquire into and investigate the allegations of the petitioners. If the court find that said inspector is neglectful of his duties or that he is incompetent to perform the duties of the office, for any cause that existed previous to his appointment or that has arisen since his appointment, or that he is guilty of malfeasance in office, the court shall certify the same to the Governor of the Commonwealth, who shall declare the office of inspector for the district vacant and proceed, in compliance with the provisions of this act, to appoint a properly qualified person to fill the office.

Investigation of charges.

How inspector may be removed.

How vacancy shall be filled.

Costs of investigation.

The cost of said investigation shall be borne by the removed inspector; but if the allegations in the petition are not sustained the costs shall be paid by the petitioners.

Inspector shall keep maps, etc., in a convenient place.

Section 14. The maps and plans of the mines and the records thereof, together with all the papers relating thereto, shall be kept by the inspector, properly arranged and preserved, in a convenient place in the district for which each inspector has been appointed, and shall be transferred by him with any other property of the Commonwealth that may be in his possession to his successor in office.

Inspectors now acting shall continue until term expires.

Section 15. The persons who, at the time this act goes into effect, are acting as inspectors of mines under the acts hereby repealed shall continue to act in the same manner as if they had been appointed under this act, and until the term for which they were appointed has expired.

## ARTICLE III

## Maps and Plans

Section 1. The owner, operator or superintendent of every coal mine or colliery shall make, or cause to be made, an accurate map or plan of the workings or excavations of such coal mine or colliery, on a scale of one hundred feet to the inch, which map or plan shall exhibit the workings or excavations in each and every seam of coal and the tunnels and passages connecting with such workings or excavations. It shall state in degrees the general inclination of the strata with any material deflection therein in said workings or excavations, and shall also state the tidal elevations of the bottom of each and every shaft, slope, tunnel and gangway, and of any other point in the mine or on the surface where such elevation shall be deemed necessary by the inspector. The map or plan shall show the number of the last survey station and date of each survey on the gangways or the most advanced workings. It shall also accurately show the boundary lines of the lands of the said coal mine or colliery and the proximity of the workings thereof, and in case any mine contains any water dammed up in any part thereof, it shall be the duty of the owner, operator or superintendent to cause the true location of the said dam to be accurately marked on said map or plan, together with the tidal elevation, inclination of strata and area of said workings containing water, and whenever any workings or excavations are approaching the workings where such dam or water is contained or situated, the owner, operator or superintendent shall notify the inspector of the same without delay.

A true copy of which map or plan the said owner, operator or superintendent shall deposit with the inspector of mines for the district in which the said coal mine or colliery is situated, showing the workings of each seam, if so desired by the inspector, on a separate sheet of tracing muslin. One copy of the said map or plan shall be kept at the colliery.

Section 2. The said owner, operator or superintendent shall, as often as once in every six months, place, or caused to be placed, on the said inspector's map or

Owner shall have accurate maps made of mines.

What shall be shown on maps.

Shall give copy of map to inspector and keep one at colliery.

Shall record changes on maps every six months.

Extensions shall be placed on inspector's maps within two months from date of last survey.

plan of said coal mine or colliery, the plan of the extensions made in such coal mine or colliery during the preceding six months. The said extensions shall be placed on the inspector's map and the map returned to the inspector within two months from the date of the last survey.

Maps of worked-out or abandoned colliery must include all excavations, etc.

Section 3. When any coal mine or colliery is worked out preparatory to being abandoned, or when any lift thereof is about to be abandoned, the owner, operator or superintendent of such coal mine or colliery shall have the maps or plans thereof extended to include all excavations, as far as practicable, and such portions thereof as have been worked to the boundary lines of adjoining properties; or any part or parts of the workings of which it is intended to be allowed to fill with water, must be surveyed in duplicate and such surveys must practically agree, and certified copies be filed with the inspector of the district in which the mines are situated.

Neglect or refusal of owner to make map.

Section 4. Whenever the owner, operator or superintendent of any coal mine or colliery shall neglect or refuse, or from any cause not satisfactory to the inspector, shall fail, for a period of three months, to furnish to the inspector the map or plan of said colliery or of the extensions thereto, as provided for in this act, the inspector is hereby authorized to cause an accurate map or plan of such coal mine or colliery to be made at the expense of the owner thereof, which cost shall be recoverable from said owner as other debts are by law recoverable.

Inspector shall make map and recover costs from owner.

How an inaccurate map may be corrected.

Section 5. If the inspector finds or has reason to believe, that any map or plan of any coal mine or colliery, furnished under the provisions of this act, is materially inaccurate, it shall be his duty to make application to the court of common pleas of the county in which such colliery is situated for an order to have an accurate map or plan of said colliery prepared, and if such survey shall prove that the map furnished was materially inaccurate or imperfect, such owner, operator or superintendent shall be liable for the expense incurred in making the same.

Owner liable for costs.

When Commonwealth is liable for costs.

Section 6. If it shall be found that the map or plan furnished by the owner, operator or superintendent was not materially inaccurate or imperfect, the Com-

monwealth shall be held liable for the expense incurred in making such test survey.

Section 7. If it shall be shown that the said owner, operator or superintendent has knowingly or designedly caused or allowed such map or plan, when furnished, to be incorrect or false, such owner, operator or superintendent thus offending, shall be guilty of a misdemeanor and upon conviction thereof, shall be punished by a fine not exceeding five hundred dollars or imprisonment not exceeding three months, at the discretion of the court.

Penalty for knowingly furnishing incorrect map.

Section 8. The maps or plans of the several coal mines or collieries in each district and which are placed in the custody of the inspector, shall be the property of the Commonwealth, and shall remain in the care of the inspector of the district in which the said collieries are situated to be transferred by him to his successor in office; and in no case shall a copy of the same be made without the consent of the owner, operator or superintendent.

Maps shall be property of Commonwealth and shall be in custody of inspector.

Section 9. The inspector's map or plan of any particular colliery shall be open for inspection, in the presence of the inspector, to any miner or miners of that colliery, whenever said miner or miners shall have cause to fear that his or their working place or places are becoming dangerous, by reason of the proximity to other workings which may be supposed to contain water or dangerous gases. Said map shall also be open to the inspection and examination of any citizen interested during business hours.

Inspector's map shall be open for inspection.

Section 10. It shall be obligatory on the owners of adjoining coal properties to leave, or cause to be left, a pillar of coal in each seam or vein of coal worked by them, along the line of adjoining property, of such width, that taken in connection with the pillar to be left by the adjoining property owner, will be a sufficient barrier for the safety of the employes of either mine in case the other should be abandoned and allowed to fill with water; such width of pillar to be determined by the engineers of the adjoining property owners together with the inspector of the district in which the mine is situated, and the surveys of the face of the workings along such pillar shall be made in duplicate and must practically agree. A copy of such duplicate surveys, certified to, must be filed with

Owner shall leave pillar of coal in each seam along the line of adjoining property.

How width of pillar shall be determined.

Copy of surveys certified to must be filed with owners and inspectors.

the owners of the adjoining properties and with the inspector of the district in which the mine or property is situated.

## ARTICLE IV

### Shafts, Slopes, Openings and Outlets

Employes must be in connection with every seam, etc.

Section 1. It shall not be lawful for the owner, operator or superintendent of any mine to employ any person or persons in such mine or permit any person or persons to be in such mine for the purpose of working therein, unless they are in connection with every seam or stratum of coal; and from every lift thereof, worked in such mine, not less than two openings or outlets, separated by a stratum of not less than sixty (60) feet in breadth underground, and one hundred and fifty (150) feet in breadth at the surface, at which openings or outlets safe and distinct means of ingress and egress are at all times available for the person or persons employed in the said mine, but it shall not be necessary for the said two openings to belong to the same mine if the persons employed therein have safe, ready and available means of ingress and egress by not less than two openings. This section shall not apply to opening a new mine or to opening any new lift of a mine while being worked for the purpose of making communication between said two outlets, so long as not more than twenty persons are employed at any one time in such mine or new lift of a mine; neither shall it apply to any mine or part of a mine in which the second outlet has been rendered unavailable by reason of the final robbing of pillars previous to abandonment, so long as not more than twenty persons are employed therein at any one time. The cage or cages and other means of egress shall, at all times, be available for the persons employed where there is no second outlet.

Must be two openings from every lift.

Safe means of ingress and egress.

Shall not apply to opening a new mine, etc., if not more than twenty persons are employed.

Cages shall be available.

How owner shall proceed where there is only one outlet.

Petition and contents.

Section 2. The owner, operator or superintendent of any mine to which there is only one shaft, slope or outlet may petition the court of common pleas in which such mine is situated, which said court is hereby empowered to act in the premises, setting forth that, in consequence of intervening lands between the working of his mine and the most practicable point, or the only practicable point, as the case may be, at



which to make or bring to the surface from the working of his mine, he is unable to make an additional shaft, slope or outlet in accordance with the requirements of this act, whereupon the court may make an order of reference and appoint three disinterested persons, residents of the county, viewers, one or more of whom shall be a practical mining engineer, all of whom, after being sworn to a faithful discharge of their duties, shall view and examine the premises and determine as to whether the owner shall have the privilege of making an additional outlet through or upon any intervening lands, as the case may require, and report in writing to the court, which report shall be entered and filed of record. If the finding of the viewers, or any two of them, is in favor of the owner of such coal mine or colliery, he may make an additional shaft, slope or outlet under, through or upon intervening lands, as may be determined upon and provided for by the award. If the finding of the viewers is against the owner, or if no award be made by reason of any default or neglect on the part of the owner, he shall be bound to comply with the provisions of this act in the same manner as if this section had not been enacted. In case the said owner, operator or superintendent desires to, and claims that he ought to make an additional opening under, through or upon any adjoining or intervening lands, to meet the requirements of this act, for the ingress and egress of the men employed in his or their mine, he or they shall make a statement of the facts in the petition, with a survey, setting forth the point of commencement and the point of termination of the proposed outlet which he or they, their engineers, agents or employes may enter upon said intervening lands and survey and mark, as he or they shall find it proper to adopt for such additional outlet, doing as little damage as possible to the property explored; and the viewers shall state in their report what damage will be sustained by the owner or owners of the intervening lands by the opening, constructing and using of the outlet, and if the report is not appealed from, it shall be confirmed or rejected by said court, and any further and all proceedings in relation thereto shall be in conformity with like proceedings as in the case of a lateral railroad across or under intervening lands,

Court shall appoint three viewers.

They shall be sworn and shall examine the premises.

Shall report to the court.

Owner may make additional opening if report is favorable.

Must comply with provisions of this act.

Proceedings where owner desires to make additional opening.

Shall make a statement of facts, etc.

Proceedings in relation to opening shall be same as for lateral railroad.

under the act in relation to lateral railroads, approved the fifth day of May, Anno Domini one thousand eight hundred and thirty-two, and the supplements thereto, so far as the provisions of the same are applicable hereto; and the notices to the owner of intervening lands, of the intention to apply for the privilege of making an outlet and meeting of the viewers shall be given, and the costs of the case shall be paid as provided in the said act of fifth day of May, Anno Domini one thousand eight hundred and thirty-two, and the supplements thereto.

How notice shall be given and costs paid.

Section 3. The escapements, shafts or slopes shall be fitted with safe and available appliances by which the persons employed in the mine may readily escape in case an accident occurs deranging the hoisting machinery at the main outlets.

Appliances for escape in case of accident.

Section 4. In slopes where the angle of inclination is fifteen degrees or less there must be provided a separate traveling way, which shall be maintained in a safe condition for travel and kept free from steam and dangerous gases.

Separate traveling way.

Section 5. No inflammable structure, other than a frame to sustain pulleys or sheaves, shall be erected over the entrance of any opening connecting the surface with the underground workings of any mine, and no "breaker" or other inflammable structure for the preparation or storage of coal shall be erected nearer than two hundred (200) feet to any such opening, but this act shall not be construed to prohibit the erection of a fan drift for the purpose of ventilation, or of a trestle for the transportation of cars from any slope to such breaker or structure; neither shall it apply to any shaft or slope until the work of development and shipment of coal has commenced: Provided, That this section shall not apply to breakers that are now erected.

No inflammable structures shall be erected over openings.

Structures permitted.

Section 6. The top of each shaft and also of each slope, if dangerous, or any intermediate lift thereof, shall be securely fenced off by railing or by vertical or flat gates.

Top of shaft shall be securely fenced.

Section 7. Every abandoned slope, shaft, air-hole and drift shall be properly fenced around or across its entrance.

Abandoned slope shall be fenced.

Section 8. All underground entrances to any places not in actual course of working or extension shall be

Underground entrances shall be fenced.

properly fenced across the whole width of such entrances, so as to prevent persons from inadvertently entering the same.

Section 9. The owner, operator or superintendent of any coal mine or colliery which is worked by shaft or slope, shall provide and maintain a suitable appliance by or through which conversation can be held by and between persons at the bottom and at the top of the shaft or slope, and also an efficient means of signaling from the bottom of such shaft or slope to the engineer in charge of the hoisting engine.

Speaking tubes shall be provided.

Signals shall be provided.

Section 10. Hand rails and efficient safety catches shall be attached to, and a sufficient cover overhead shall be provided on every cage used for lowering or hoisting persons in any shaft.

Hand rails shall be attached to every cage.

Section 11. Whenever practicable, every cage or gun-boat used for lowering or hoisting persons in any slope, shall be provided with a proper protector, so constructed that persons, while on such cage or gun-boat, shall not be struck by anything which may fall or roll down said slope.

Cages, etc., shall be protected.

Section 12. The main link of the chain connecting the rope to the cage, gun-boat or car in any shaft or slope, shall be made of the best quality of iron. Bridle chains made of the same quality of iron shall be attached to the main link, rope or rope socket from the cross-head of the cage or gun-boat when persons are being lowered or hoisted thereon.

Main link, etc., shall be of best quality of iron.

Section 13. The ropes, safety catches, links and chains shall be carefully examined every day they are used, by a competent person delegated for that purpose and any defects therein found, by which life or limb may be endangered, shall be immediately remedied.

Ropes, etc., shall be examined every day.

Section 14. An efficient brake shall be attached to every drum that is used for lowering or raising persons or material in any mine.

Efficient brake to every drum.

Section 15. Flanges or horns of sufficient dimensions to prevent the rope from slipping off the said drum shall be provided and properly attached to the drum, and all machines used for lowering or hoisting persons in mines shall be provided with an indicator to show the position of the cage, car or gun-boat in the shaft or slope.

Flanges to prevent rope from slipping off drum.

Indicators.

Substantial structure to sustain pulley.

Section 16. Over all shafts which are being sunk or shall hereafter be sunk, a safe and substantial structure shall be erected to sustain the sheaves or pulleys, at a height of not less than twenty (20) feet above the tipping-place, and the top of such shaft shall be arranged in such manner that no material can fall into the shaft while the bucket is being emptied.

Material must not fall into shaft.

When structure for pulley shall be erected.

Section 17. The said structure shall be erected as soon as a substantial foundation is obtained, and in no case shall a shaft be sunk to a depth of more than fifty (50) feet without such structure.

How truck for landing buckets shall be constructed.

Section 18. If provision is made to land the bucket upon truck, the said truck shall be constructed in such manner that material cannot fall into the shaft.

Rock and coal to be raised in buckets.

Section 19. All rock and coal from shafts as they are being sunk, shall not be raised except in a bucket or on a cage, and such bucket or cage must be connected to the rope or chain by a safety hook, clevis or other safe attachment.

Safety hook.

Guides to prevent bucket from swinging.

Section 20. Such shafts shall be provided with guides and guide attachments applied in such manner as to prevent the bucket from swinging while descending or ascending therein, and such guides and guide attachments shall be maintained at a distance of not more than seventy-five (75) feet from the bottom of such shaft, until its sinking shall have been completed, but this section shall not apply to shafts one hundred (100) feet or less in depth.

If strata are not safe shaft shall be cased.

Section 21. Where the strata are not safe every shaft shall be securely cased, lined or otherwise made secure.

Rules to be observed in mines.

Section 22. The following rules shall be observed, as far as practicable, in every shaft to which this act applies.

First. After each and every blast the chargeman must see that all loose material is swept down from the timbers before the workmen descend to their work.

Second. After a suspension of work, and also after firing a blast in a shaft where explosive gases are evolved, the person in charge must have the said shaft examined and tested with a safety lamp before the workmen are allowed to descend.

Third. Not more than four persons shall be lowered or hoisted in any shaft on a bucket at the same time, and no person shall ride on a loaded bucket.

Fourth. Whenever persons are employed on platforms in shafts the person in charge must see that the said platforms are properly and safely constructed.

Fifth. While shafts are being sunk all blasts therein must be exploded by an electric battery.

Sixth. Every person who fails to comply with or who violates the provisions of this article shall be guilty of an offense against this act.

## ARTICLE V

### Boilers and Connections, Machinery, &c.

Section 1. All boilers used for generating steam in and about mines and collieries shall be kept in good order, and the owner, operator or superintendent shall have them examined and inspected by a qualified person as often as once in six months, and oftener if needed. The result of such examination, under oath, shall be certified in writing to the inspector for the district within thirty (30) days thereafter.

Boilers shall be kept in good order and shall be examined, etc.

Section 2. It shall not be lawful to place any boiler or boilers, for the purpose of generating steam, under or nearer than one hundred (100) feet to any coal breaker or other structure in which persons are employed in the preparation of coal: Provided, That this section shall not apply to boilers or breakers already erected.

Boilers shall not be nearer the breaker than 100 feet.

Proviso.

Section 3. Each nest of boilers shall be provided with a safety valve of sufficient area for the steam to escape and with weights or springs properly adjusted.

Safety valve for boilers.

Section 4. Every boiler house shall be provided with a steam gauge properly connected with the boilers, to indicate the steam pressure, and another steam gauge shall be attached to the steam pipe in the engine house and placed in such position that the engineer or fireman can readily examine them and see what pressure is carried. Such steam gauges shall be kept in good order, tested and adjusted as often as once in every six months and their condition reported to the inspector in the same manner as the report of boiler inspection.

Steam gauges.

Gauges must be tested every six months and reported to inspector.

Section 5. All machinery used in or about the mines and collieries, and especially in breakers, such as engines, rollers, wheels screens, shafting and belting shall be protected by covering or railing so as to pre-

All machinery must be protected or covered.

Stairs, etc., shall have guard rail.

vent persons from inadvertently walking against or falling upon the same. The sides of stairs, trestles and dangerous plank walks in and around the collieries shall be provided with hand and guard railing to prevent persons from falling over their sides. This section shall not forbid the temporary removal of a fence, guard rail or covering for the purpose of repairs or other operations, if proper precautions are used, and the fence, guard rail or covering is replaced immediately thereafter.

Temporary removal of fence.

Engineer shall be competent and over eighteen years old.

Section 6. A sober and competent person, not under eighteen (18) years of age, shall be engaged to run the breaker engine and he shall attend to said engine while the machinery is in motion.

Signal apparatus on breaker.

Section 7. A signal apparatus shall be established at important points in every breaker so that in case of an accident the engineer can be promptly notified to stop the machinery.

Oiling machinery.

Section 8. No person under fifteen (15) years of age shall be appointed to oil the machinery, and no person shall oil dangerous parts of such machinery while it is in motion.

Loitering around or interfering with machinery prohibited.

Section 9. No person shall play with, loiter around or interfere with any machinery in or about any mine or colliery.

Offense against this act.

Section 10. Failure to comply with the provisions of this article shall be deemed an offense against this act.

## ARTICLE VI

### Wash Houses

Wash house shall be provided at request of twenty or more miners.

Section 1. It shall be the duty of the owner, operator or superintendent of each mine or colliery, at the request in writing of twenty or more men employed in any of the mines, to provide a suitable building, not an engine or boiler house, which shall be convenient to the principal entrance of such mine, for the use of the persons employed therein for the purpose of washing themselves and changing their clothes when entering the mine and returning therefrom. The said building shall be maintained in good order, be properly lighted and heated, and supplied with pure cold and warm water, and shall be provided with facilities for persons to wash. If any person or persons shall

How wash house shall be kept and supplied.

neglect or fail to comply with the provisions of this article, or maliciously injure or destroy, or cause to be injured or destroyed, the said building, or any part thereof, or any of the appliances or fittings used for supplying light, heat and water therein, or doing any act tending to the injury or destruction thereof, he or they shall be deemed guilty of an offense against this act.

Penalty for failure to comply with this provision.

## ARTICLE VII

### Ambulances and Stretchers

Section 1. The owner, operator or superintendent of every mine or colliery, except as hereinafter provided, shall provide and keep at such mine or colliery an ambulance and also at least two (2) stretchers, for the purpose of conveying to their places of abode, any person or persons who may be injured while in the discharge of his or their work at such mine or colliery.

Owner shall keep ambulance and stretchers at mine.

Section 2. The said ambulance shall be constructed upon good, substantial and easy springs. It shall be covered and closed and shall have windows on the sides or ends. It shall be of sufficient size to convey at least two (2) injured persons with two (2) attendants at one time, and shall be provided with spring mattresses or other comfortable bedding to be placed on rolled frames, together with sufficient covering and protection for convenient movement of the injured. It shall also be provided with seats for the attendants. The stretchers shall be constructed of such material and in such manner as to afford the greatest ease and comfort in the carriage of the injured person.

Construction of ambulance.

Construction of stretchers.

Section 3. Whenever any person or persons employed in or about a mine or colliery shall receive such injury by accident or otherwise, while so employed, as would render him or them unable to walk to his or their place of abode, the owner, operator or superintendent of such mine or colliery shall immediately cause such person or persons to be removed to his or their place of abode or to a hospital as the case may require.

Person Injured shall be removed to his home or to hospital.

Section 4. It is provided, however, that the owner, operator or superintendent of any mine or colliery shall be excepted from the requirements of an ambu-

When ambulance need not be provided.

lance, as aforesaid, if the places of abode of all the workmen at such mine or colliery be within a radius of a half mile from the principal entrance to such mine.

When one ambulance may supply two collieries.

Section 5. It is provided further, that where two or more mines or collieries are located within one mile of each other, or the ambulance is located within one mile of each colliery, but one ambulance, as aforesaid, shall be required, if the said mines or collieries have ready and quick means of communication, one with the other, by telegraph or telephone.

If less than 20 persons employed no ambulance required.

Section 6. An ambulance, as aforesaid, shall not be required at any mine or colliery at which less than twenty (20) persons are employed.

When railway may be used instead of ambulance.

Section 7. In case the distance from any mine or colliery to the place of abode of the person injured, is such as to permit his conveyance to his home or to a hospital more quickly and conveniently by railway, such mode of conveyance shall be permitted, but in such case the conveyance must be under cover and the comfort of the injured person must be provided for.

### ARTICLE VIII

#### Certified Mine Foremen

Mine foreman or assistant must have certificate.

Section 1. It shall not be lawful, neither shall it be permitted, for any person or persons to act as mine foreman or assistant mine foreman of any coal mine or colliery, unless they are registered as a holder of a certificate of qualification or service under this act.

Certificate shall be granted by Secretary of Internal Affairs after satisfactory examination by the Examiners.

Section 2. Certificates of qualification to mine foremen and assistant mine foremen shall be granted by the Secretary of Internal Affairs to every applicant who may be reported by the examiners, as hereinafter provided, as having passed a satisfactory examination and as having given satisfactory evidence of at least five years' practical experience as a miner, and of good conduct, capability and sobriety.

Experience.

Form and record of certificates.

The certificate shall be in manner and form as shall be prescribed by the Secretary of Internal Affairs, and a record of all certificates issued shall be kept in his department.

Board of Examiners in each district.

Section 3. For the purpose of examination of candidates for such certificates, a board of examiners shall



be appointed in each of the inspection districts provided for by this act. The said board shall consist of the district inspector of mines, two (2) practical miners and one owner, operator or superintendent of a mine. The said inspector shall act ex-officio, and the said engineer and owner, operator or superintendent shall be appointed in like manner and at the same time as the boards of examiners for candidates for mine inspectorship under this act are now appointed. The said board shall act as such for the period of one year from the date of their appointment. Meetings of the board may be held at any time, and they may make such rules and conduct such examinations as in their judgment may seem proper for the purpose of such examinations. The said board shall report their action to the Secretary of Internal Affairs, and at least three (3) of the members thereof shall certify to the qualification of each candidate who has passed such examination. The traveling expenses of the members of such board to and from their place of meeting, together with the sum of five dollars per day each to the said two (2) practical miners and owner, operator or superintendent, members of each board, for each day they are actually engaged therein, not exceeding ten (10) days in all, during the year, shall be paid by the Commonwealth on an order of the Auditor General drawn on the State Treasurer upon the certificate of the mine inspector, member of such board.

Who shall serve on such board.

Term of board.

Meetings and rules.

Report.

Compensation.

How paid.

Section 4. Certificates of qualification to mine foremen and assistant mine foremen shall be granted by the Secretary of Internal Affairs to every applicant who may be reported by the examiners, as heretofore provided, as having passed a satisfactory examination and as having given satisfactory evidence of at least five (5) years' practical experience as a miner, and of good conduct, capability and sobriety. The certificate shall be in manner and form as shall be prescribed by the Secretary of Internal Affairs, and a record of all certificates issued shall be kept in the department. Certificates of qualification and certificates of service shall contain the full name, age and place of birth of the applicant, as also the length and nature of his previous service in or about the mines.

Certificates of mine foremen.

Contents of certificate.

Fees for certificate.

Section 5. Before certificates as aforesaid shall be granted applicants for same shall pay to the Secretary of Internal Affairs the following fee, namely:

For examination, one dollar; for registration of certificate, one dollar, for certificate, one dollar. All fees so received shall be covered into the treasury of the Commonwealth.

Penalty for operating mine without a foreman.

Section 6. No mines shall be operated for a longer period than thirty days without the supervision of a mine foreman. In case any mine is worked a longer period than thirty (30) days without such certified mine foreman, the owner, operator or superintendent thereof shall be subject to a penalty of twenty dollars per day for each day over the said thirty (30) days during which the said mine is operated.

When copy of certificate may issue.

Section 7. In case of the loss or destruction of a certificate the Secretary of Internal Affairs may supply a copy thereof to the person losing the same upon the payment of the sum of fifty (50) cents: Provided, It shall be shown to the satisfaction of the Secretary that the loss has actually occurred.

Forgery of a certificate or making a false statement in same shall be a misdemeanor.

Section 8. If any person or persons shall forge or counterfeit a certificate or knowingly make or cause to be made any false statement in any certificate under this act, or in any official copy of the same, or shall urge others to do so, or shall utter or use any such forged or false certificate, or unofficial copy thereof, or shall make, give, utter, produce or make use of any false declaration, representation or statement in any such certificate of copy thereof, or any document containing the same, he or they shall be guilty of a misdemeanor, and upon conviction thereof, shall be fined two hundred dollars, or imprisoned for a term not exceeding one (1) year, or both, at the discretion of the court trying the case.

Penalty.

Fire boss must have five years' experience, etc.

Section 9. And no person shall be permitted to act as fire boss in any coal mine or colliery, unless he has had five (5) years' practical experience in mines as a miner, three (3) of which he shall have had as a miner in mines wherein noxious and explosive gases are evolved, and the said fire boss shall certify to the same before entering upon his duties, before an alderman, justice of the peace or other person authorized to administer oaths, and a copy of said deposition shall

He shall certify to experience.

be filed with the district inspector of mines wherein said person is employed.

ARTICLE IX

Employment of Boys and Females

Section 1. No boy under the age of fourteen (14) years, and no woman or girl of any age, shall be employed or permitted to be in any mine for the purpose of employment therein. Nor shall a boy under the age of twelve years or a woman or girl of any age, be employed or permitted to be in or about the outside structures or workings of a colliery for the purpose of employment, but it is provided, however, that this prohibition shall not affect the employment of a boy or female of suitable age in an office or in the performance of clerical work at a colliery.

No boy under 14 years and no female shall be employed in mines.

Shall not apply to clerical work.

Section 2. When an employer is in doubt as to the age of any boy or youth applying for employment in or about a mine or colliery, he shall demand and receive proof of the said lawful employment age of such boy or youth, by certificate from the parent or guardian, before said boy or youth shall be employed.

How age shall be determined.

Section 3. If any person or persons contravene or fail to comply with the provisions of this act in respect to the employment of boys, young male persons or females, or if he or they shall connive with or permit others to contravene or fail to comply with said provisions, or if a parent or guardian of a boy or young male person make or give a false certificate of the age of such boy or young male person, or knowingly do or perform any other act for the purpose of securing employment for a boy or young male person under the lawful employment age and in contravention of the provisions of this act, he or they shall be guilty of an offense against this act.

Penalty.

ARTICLE X

Ventilation

Section 1. The owner, operator or superintendent of every mine shall provide and maintain a constant and adequate supply of pure air for the same, as hereinafter provided.

Pure air shall be provided in mines.

Use of furnaces prohibited in certain mines.

Section 2. It shall not be lawful to use a furnace for the purpose of ventilating any mine wherein explosive gases are generated.

Minimum quantity of air to be produced.

Section 3. The minimum quantity of air thus produced, shall not be less than two hundred (200) cubic feet per minute for each and every person employed in any mine, and as much more as the circumstances may require.

Ventilating currents, how distributed.

Section 4. The ventilating currents shall be conducted and circulated to and along the face of each and every working place throughout the entire mine, in sufficient quantities to dilute, render harmless and sweep away smoke and noxious or dangerous gases, to such an extent that all working places and traveling roads shall be in a safe and fit state to work and travel therein.

Abandoned parts of mine in operation shall be kept free of gas.

Section 5. All worked-out or abandoned parts of a mine in operation, so far as practicable, shall be kept free of dangerous bodies of gases or water, and if found impracticable to keep the entire mine free from an accumulation of gases or water, the mine inspector must be immediately notified.

Mine shall be divided into districts.

Section 6. Every mine employing more than seventy-five (75) persons must be divided into two or more districts. Each district shall be provided with a separate split of pure air and the ventilation shall be so arranged, that not more than seventy-five persons shall be employed at the same time in any one current or split of air.

Not more than 75 persons shall have the same current of pure air.

When inlet and return air passages shall be separated.

The inlet and return air passages for any particular district must be separated by a pillar of coal or stone, if the thickness and dip of the vein will permit, except where it is necessary to cut through said dividing pillar for the purposes of ventilation, traffic or drainage.

Area of air passages.

Section 7. All air passages shall be of sufficient area to allow the free passage of not less than two hundred (200) cubic feet of air per minute for every person working therein; and in no case, in mines generating explosives gases, shall the velocity exceed four hundred and fifty (450) lineal feet per minute, in any opening through which the air currents pass, if gauze safety lamps are used, except in the main inlet or outlet air ways.

Velocity.

Section 8. All cross-cuts connecting the main inlet and outlet air passages of every district, when it becomes necessary to close them permanently, shall be substantially closed with brick or other suitable building material, laid in mortar or cement whenever practicable, but in no case shall said air stoppings be constructed of plank except for temporary purposes.

Cross-cuts to be substantially closed.

Section 9. All doors used in assisting or in any way affecting the ventilation shall be so hung and adjusted that they will close automatically.

Doors must close automatically.

Section 10. All main doors shall have an attendant whose constant duty it shall be to open them for transportation and travel and prevent them from standing open longer than is necessary for persons or cars to pass through.

Main doors must have an attendant.

Section 11. All main doors shall be so placed that when one door is open, another, which has the same effect upon the same current, shall be and remain closed and thus prevent any temporary stoppage of the air current.

How main doors shall be placed.

Section 12. An extra main door shall be so placed and kept standing open, as to be out of reach of accident, and so fixed that it can be at once closed in the event of an accident to the doors in use.

Extra main door.

Section 13. The frame work of such main doors shall be substantially secured in stone or brick, laid in mortar or cement unless otherwise permitted in writing by the inspector.

Frame work of main doors.

Section 14. All permanent air bridges shall be substantially built of such material and such strength as the circumstances may require.

Permanent air bridges, how built.

Section 15. The quantities of air in circulation shall be ascertained with an anemometer or other efficient instrument; such measurements shall be made by the inside foreman or his assistant once a week at the inlet and outlet airways, also at or near the face of each gangway and at the nearest cross-heading to the face of each gangway and at the nearest cross-heading to the face of the inside and outside chamber or breast where men are employed, and the heading shall not be driven more than sixty (60) feet from the face of each chamber or breast and shall be entered in the colliery report book.

Air measurements.

By whom made.

Headings shall not be driven more than 60 feet.

Report of air measurements to be sent to inspectors, also number employed in each district.

Section 16. A report of these air measurements shall be sent to the inspector before the twelfth day of each month, for the preceding month, together with a statement of the number of persons employed in each district.

Ventilators must have recording instruments.

Section 17. All ventilators used at mines shall be provided with recording instruments by which the speed of the ventilators or the ventilating pressure shall be registered for each hour, and such data shall be preserved at the colliery for future reference, for a period of three months.

Penalty.

Section 18. Any person or persons who shall neglect or fail to comply with the provisions of this article, or who shall make any false report in regard to air measurements, shall be guilty of an offense against this act.

## ARTICLE XI

### Props and Timbers

Props and timbers must be furnished workmen.

Section 1. It shall be the duty of the owner, operator, superintendent or mine foreman of every mine to furnish to the miners all props, ties, rails and timbers necessary for the safe mining of coal and for the protection of the lives of the workmen. Such props, ties, rails and timbers shall be suitably prepared and shall be delivered to the workmen as near to their working places as they can be conveyed in ordinary mine cars, free of charge.

Workman shall notify mine foreman of timbers needed.

Section 2. Every workman in want of props, ties, rails or timbers shall notify the mine foreman or his assistant of the fact at least one day in advance, giving the length of the props or timber required; and in case of danger from loose roof or sides, he shall not continue to cut or load coal until the said props and timber have been properly furnished and the place made secure.

Work shall stop in certain cases.

Failure to comply shall be deemed an offense.

Section 3. A failure to comply with the provisions of this article shall be deemed an offense against this act, and shall be taken to be negligence per se on the part of the owner, operator, superintendent or mine foreman, as the case may be, of such mine, in action for the recovery of damages for accidents resulting from the insufficient propping of such mine, through failure to furnish the necessary props or timbers.

## ARTICLE XII

## General Rules

The following general rules shall be observed in every mine to which this act applies:

Rule 1. The owner, operator or superintendent of a mine or colliery shall use every precaution to ensure the safety of the workmen in all cases, whether provided for in this act or not, and he shall place the underground workings thereof, and all that is related to the same, under the charge and daily supervision of a competent person who shall be called "mine foreman."

Must have mine foreman.

Rule 2. Whenever a mine foreman cannot personally carry out the provisions of this act so far as they pertain to him, the owner, operator or superintendent shall authorize him to employ a sufficient number of competent persons to act as his assistants, who shall be subject to his orders.

Assistant mine foreman.

Rule 3. The mine foreman shall have charge of all matters pertaining to ventilation, and the speed of the ventilators shall be particularly under his charge and direction; and any superintendent who shall cause the mine foreman to disregard the provisions of this act shall be amenable in the same manner as the mine foreman.

Ventilation.

When superintendent shall be amenable.

Rule 4. All accessible parts of an abandoned portion of a mine in which explosive gases have been found, shall be carefully examined by the mine foreman or his assistants at least once a week, and all danger found existing therein shall be immediately removed. A report of said examination shall be recorded in a book kept at the colliery for that purpose and signed by the person making the same.

Abandoned portions of mine shall be examined.

Report shall be kept.

Rule 5. In mines generating explosive gases, the mine foreman or his assistant shall make a careful examination every morning of all working places and traveling roads and all other places which might endanger the safety of the workmen, before the workmen shall enter the mine, and such examination shall be made with a safety lamp within three (3) hours at most, before time for commencing work, and a workman shall not enter the mine or his working place until the said mine or part thereof and working place

Examination of mines generating gases.

Report shall be kept.

are reported to be safe. Every report shall be recorded without delay in a book which shall be kept at the colliery for the purpose and shall be signed by the person making the examination.

Proof of examination must be marked on face.

Rule 6. The person who makes said examination shall establish proof of the same by marking plainly the date thereof at the face of each working place and all other places examined.

Stations to be established.

Rule 7. A station or stations shall be established at the entrance to each mine or different parts of each mine, as the case may require, and a workman shall not pass beyond any such station until the mine or part of the mine beyond the same has been inspected and reported to be safe. It shall be the duty of the fire boss to remain at the danger station until relieved by some person authorized by himself or the mine foreman, who shall stand guard until said mine or part of mine shall be reported safe, and he shall not let any person pass without permission from the fire boss.

Fire boss shall have charge of danger stations.

No one shall pass until mine is reported safe.

When noxious gases are found all workmen to be withdrawn until reported safe.

Rule 8. If at any time it is found by the person for the time being in charge of the mine or any part thereof, that by reason of noxious gases prevailing in such mine or such part thereof, or of any cause whatever the mine or the said part is dangerous, every precaution shall be used to ensure the safety of the workmen; and every workman, except such persons as may be required to remove the danger, shall be withdrawn from the mine, or such part thereof as is so found dangerous, until the said mine or said part thereof is examined by a competent person and reported by him to be safe.

Only safety lamps to be used in certain mines.

Rule 9. In every working approaching any place where there is likely to be accumulation of explosive gases, or in any working in which danger is imminent from explosive gases, no light or fire other than a locked safety lamp shall be allowed or used. Whenever safety lamps are required in any mine they shall be the property of the owner of said mine, and a competent person, who shall be appointed for the purpose, shall examine every safety lamp immediately before it is taken into the workings for use, and ascertain it to be clean, safe and securely locked, and safety lamps shall not be used until they have been so examined and found safe, clean and securely



locked, unless permission be first given by the mine foreman to have the lamps used unlocked.

Rule 10. No one, except a duly authorized person, shall have in his possession a key or any other contrivance for the purpose of unlocking any safety lamp in any mine where locked lamps are used. No lucifer matches or any other apparatus for striking light shall be taken into said mine or parts thereof.

Keys for safety lamps.

Rule 11. No blast shall be fired in any mine where locked safety lamps are used except by permission of the mine foreman or his assistants, and before a blast is fired, the person in charge must examine the place and adjoining places and satisfy himself that it is safe to fire such blast before such permission is given.

Firing of blasts.

Rule 12. The mine foreman or his assistant shall visit and examine every working place in the mine at least once every alternate day, while the men of such place are or should be at work, and shall direct that each and every working place is properly secured by props or timbers, and that safety in all respects is assured by directing that all loose coal or rock shall be pulled down or secured, and that no person shall be permitted to work in an unsafe place unless it be for the purpose of making it secure.

Mine foreman shall visit mine.

Rule 13. The mine foreman, or some other competent person or persons to be designated by him, shall examine at least once every day all slopes, shafts, main roads, traveling ways, signal apparatus, pulleys and timbering and see that they are in safe and efficient working condition.

Mine foreman shall examine slopes, etc.

Rule 14. Any person having charge of a working place in any mine shall keep the roof and sides thereof properly secured by timber or otherwise so as to prevent such roof and sides from falling, and he shall not do any work or permit any work to be done under loose or dangerous material except for the purpose of securing the same.

Roofs and sides must be properly secured.

Rule 15. Whenever a place is likely to contain a dangerous accumulation of water, the working approaching such place shall not exceed twelve (12) feet in width and there shall be constantly kept at a distance of not less than twenty (20) feet in advance, at least one (1) bore hole near the center of the working and sufficient flank bore holes on each side.

Accumulation of water.

Riding on loaded cars prohibited.

Rule 16. No person shall ride upon or against any loaded car, cage or gun-boat in any shaft, slope or plane in or about a mine or colliery.

Number of persons to be hoisted or lowered at one time.

Rule 17. Not more than ten (10) persons shall be hoisted or lowered at any one time in any shaft or slope, and whenever five persons shall arrive at the bottom of any shaft or slope in which persons are regularly hoisted or lowered they shall be furnished with an empty car or cage and be hoisted, except however, in mines where there is provided a traveling way having an average pitch of fifteen (15) degrees or less and not more than one thousand (1,000) feet in length. This, however, shall not prohibit the hoisting or lowering of twenty (20) persons at one time on slopes where two (2) or more loaded cars are regularly hoisted: Provided, That not less than thirty (30) workmen working therein, make such request in writing, to the inspector of the district, and if, in his judgment, the hoisting appliances in every respect are of sufficient strength, he may comply with the request of the workmen.

Twenty persons may be hoisted or lowered in mine where two cars are used, if thirty workmen make request.

May reduce the number of persons to be hoisted or lowered.

Provided, That in any coal mine or colliery where the hoisting appliances are not of sufficient strength to hoist or lower the number of persons named, he shall have the power to reduce the number of persons to be hoisted or lowered.

Qualifications of engineer.

Rule 18. An engineer placed in charge of an engine whereby persons are hoisted or lowered in any mine, shall be a sober and competent person of not less than twenty-one (21) years of age.

How engineer shall work engine.

Rule 19. Every engineer shall work his engine slowly and with great care when any person is being lowered or hoisted in a shaft or slope and no one shall interfere with or intimidate him while in the discharge of his duties.

Duty of engineer in charge of hoisting apparatus.

Rule 20. An engineer who has charge of the hoisting machinery by which persons are lowered or hoisted in a mine, shall be in constant attendance for that purpose during the whole time any person or persons are below ground, and he shall not allow any person or persons, except such as may be deputed by the owner, operator or superintendent, to handle or meddle with the engine under his charge or any part of its machinery.

Rule 21. When any person is about to descend or ascend a shaft or slope, the headman or footman, as the case may be, shall inform the engineer by signal or otherwise of the fact, and the engineer shall return a signal before moving or starting the engine. In the absence of a headman or footman the person or persons about to descend or ascend shall give and receive the signals in the same manner.

Signals for ascending or descending.

Rule 22. The owner, operator or superintendent of a colliery shall place a competent person to be called "outside foreman," in charge of the breaker and the outside work of such colliery, who shall direct and as far as practicable, see that the provisions of this act are complied with in respect to the breakers, outside machinery, ropes, cages and all other things pertaining to the outside work, unless otherwise provided for in this act.

Outside foreman.

Rule 23. In all coal breakers where the coal dust is so dense as to be injurious to the health of persons employed therein, the owner, operator or superintendent of said breaker shall, upon the request of the inspector, immediately adopt measures for the removal of the dust as far as practicable.

Dust in breaker.

Rule 24. Any miner or other workman who shall discover anything wrong with the ventilating current or with the condition of the roof, side, timber or roadway, or with any other part of the mine in general, such as would lead him to suspect danger to himself or his fellow workmen or to the property of his employer, shall immediately report the same to the mine foreman or other person, for the time being in charge of that portion of the mine.

Ventilating current or roof, etc., out of order must be reported to mine foreman.

Rule 25. Any person or persons who shall knowingly or wilfully damage, or without proper authority, remove or render useless any fencing, means of signaling, apparatus, instrument or machine, or shall throw open or obstruct any airway, or open a ventilating door and not have the same closed, or enter a place in or about a mine against caution, or carry fire, open lights or matches in places where safety lamps are used, or handle without proper authority, or disturb any machinery or cars, or do any other act or thing whereby the lives or health of persons or the security of the property in or about a mine or colliery

Wilful damage to any mine or equipment.

Carrying fire or open lights.

are endangered, shall be guilty of an offense against this act.

Care of explosives.

Rule 26. Gunpowder or any other explosive shall not be stored in a mine, and a workman shall not have at any time in any one place, more than one keg or box containing twenty-five (25) pounds, unless more is necessary for a person to accomplish one day's work.

How explosives shall be kept.

Rule 27. Every person who has gunpowder or other explosive in a mine, shall keep it in a wooden or metallic box securely locked, and such box shall be kept at least ten (10) feet from the tracks in all cases where room at such a distance is available.

Manner of handling explosives.

Rule 28. Whenever a workman shall open a box containing explosive or while in any manner handling the same, he shall first place his lamp not less than five (5) feet from such explosive and in such a position that the air current cannot convey sparks to it, and a workman shall not approach nearer than five (5) feet to an open box containing powder, with a lamp, lighted pipe or any other thing containing fire.

Storage, etc., must be in accordance with special rules by manufacturers of explosives.

Rule 29. When high explosives other than gun powder are used in any mine, the manner of storing, keeping, moving, charging and firing or in any manner using such explosives, shall be in accordance with special rules as furnished by the manufacturers of the same. The said rules shall be endorsed with his or their official signature and shall be approved by the owner, operator or superintendent of the mine in which such explosives are used.

And approved by owner.

Manner of charging holes for blasting.

Rule 30. In charging holes for blasting in slate or rock in any mine, no iron or steel-pointed needle shall be used, and a tight cartridge shall not be rammed into a hole in coal, slate or rock with an iron or steel tamping bar, unless the end of the tamping bar is tipped with at least six (6) inches of copper or other soft metal.

Tamping bar.

When a charge misses fire.

Rule 31. A charge of powder or any other explosive in slate or rock which has missed fire shall not be withdrawn or the hole reopened.

Must not shorten the match, etc.

Rule 32. A miner or other person who is about to explode a blast by the use of patent or other squibs or matches, shall not shorten the match, nor saturate it with mineral oil, nor turn it down when placed in the hole, nor ignite it except at its extreme end, nor do

anything tending to shorten the time the match will burn.

Rule 33. When a workman is about to fire a blast he shall be careful to notify all persons who may be in danger therefrom, and shall give sufficient alarm before and after igniting the match so that any person or persons who may be approaching shall be warned of the danger.

Before firing blast all persons must be notified.

Rule 34. Before commencing work and also after the firing of every blast, the miner working a breast or any other place in a mine, shall enter such breast or place to examine and ascertain its condition, and his laborer or assistant shall not go to the face of such breast or place until the miner has examined the same and found it to be safe.

Must examine after each blast.

Rule 35. No person shall be employed to blast coal or rock unless the mine foreman is satisfied that such person is qualified, by experience and judgment, to perform the work with ordinary safety.

Blaster must be qualified to do such work.

Rule 36. A person who is not a practical miner shall not charge or fire a blast in the absence of an experienced miner, unless he has given satisfactory evidence of his ability to do so with safety, and has obtained permission from the mine foreman or person in charge.

Inexperienced miners shall not fire a blast.

Rule 37. An accumulation of gas in mines shall not be removed by brushing where it is practicable to remove it by brattice.

Removal of gas.

Rule 38. When gas is ignited by blast or otherwise, the person igniting the same shall immediately extinguish it, if possible, and notify the mine foreman or his assistant of the fact, and workmen must see that no gas blowers are left burning upon leaving their working places.

Ignited gas must be extinguished.

Rule 39. Every fireman in charge of a boiler or boilers for the generation of steam, shall keep a constant watch of the same. He shall see that the steam pressure does not at any time exceed the limit allowed by the outside foreman or superintendent. He shall frequently try the safety valve, and shall not increase the weight on the same. He shall maintain a proper depth of water in each boiler, and if anything should happen to prevent this, he shall report the same without delay to the foreman, for the time be-

Duties of fireman in charge of boilers.

ing in charge, and take such other action as may under the particular circumstances be necessary for the protection of life and preservation of property.

Headman and footman.

Rule 40. At every shaft or slope in which provision is made in this act for lowering and hoisting persons, a headman and footman shall be designated by the superintendent or foreman to be at their proper places from the time that persons begin to descend, until all the persons who may be at the bottom of said shaft or slope when quitting work shall be hoisted. Such headman and footman shall personally attend to the signals and see that the provisions of this act, in respect to lowering and hoisting persons in shafts or slopes, shall be complied with.

Duties.

Jumping on cars after signal prohibited.

Rule 41. No person, except the man giving the signal, shall jump on a car, cage or gun boat after the signal to start has been given, and if any person should enter a car, cage or gunboat in excess of the lawful number the headman or footman shall notify him of the fact and request him to get off, which request must be immediately complied with. Any violation of this rule must be reported promptly to the mine foreman.

Empty trip must be hoisted after engine has been idle one hour.

Rule 42. An empty trip shall be hoisted in any shaft or slope where the engine has been standing idle for an hour or more, before men are hoisted or lowered in said shafts or slopes, and no person or persons shall ascend any shaft or slope when working on the night turn, until one trip shall first be hoisted therein.

Construction of passage way.

Rule 43. Every passage-way used by persons in any mine and also used for transportation of coal or other material, shall be made of sufficient width to permit persons to pass moving cars with safety, but if found impracticable to make any passage-way of sufficient width, then holes of ample dimensions, and not more than one hundred and fifty (150) feet apart, shall be made on one side of said passage-way. The said passage-way and safety holes shall be kept free from obstructions and shall be well drained; the roof and sides of the same shall be made secure.

Safety holes.

Speed of locomotives.

Rule 44. When locomotives are used in any mine their speed shall not exceed six (6) miles per hour, and an efficient alarm shall be provided and attached to the front end of every train of cars pushed by a locomotive in any mine or part of a mine.

Rule 45. Locomotives propelled by steam, if using fire, shall not be used in any passage-way which is also used as an intake air-way to any mine or part of a mine where persons are employed, unless there be a sufficient quantity of air circulating therein to maintain a healthy atmosphere.

Locomotives using fire prohibited in certain passage-ways.

Rule 46. No person shall couple or uncouple loaded or empty cars while the same are in motion: Provided however, That this shall not apply to the top or bottom men of slopes, planes or shafts.

Coupling or uncoupling cars.

Rule 47. When cars are run on gravity roads by brakes or sprags, the runner shall only ride on the rear end of the last car, and when said cars are run by sprags, a space of not less than two (2) feet from the body of the car shall be made on one or both sides of the track, wherever it may be necessary for the runner to pass along the side of the moving car or cars, and said space or passage-way shall always be kept free from obstructions.

Cars on gravity roads run by brakes or sprags.

Passage-way of two feet shall be kept free.

Rule 48. No miner or laborer shall run cars out of any breast or chamber or on any gravity road unless he is a suitable person, employed by the mine foreman for that particular work; and no person shall be employed by any mine foreman to perform such work, under the age of sixteen (16) years.

Cars shall be run by suitable persons only.

Rule 49. Safety holes shall be made at the bottom of all slopes and planes and be kept free from obstruction to enable the footman to escape readily in case of danger.

Safety holes at bottom of slopes, etc.

Rule 50. Safety blocks or some other device for the purpose of preventing cars from falling into a shaft or running away on a slope or plane, shall be placed at or near the head of every shaft, slope or plane, and said safety blocks or other device must be maintained in good working order.

Safety blocks.

Rule 51. No person shall travel on any gravity train while cars are being hoisted or lowered thereon. Whenever ten (10) persons arrive at the bottom or top of any plane on which it is necessary for men to travel, traffic thereon shall be suspended for a period of time long enough to permit them to reach the top or bottom of said plane.

Travel on gravity train prohibited.

When traffic shall be suspended on plane.

Rule 52. No mine cars shall be used in any mine unless the bumpers are of sufficient length and width to keep the bodies of said cars separated by not less

Bumpers on mine cars.

than twelve (12) inches when the cars stand on a straight level road and the bumpers touch each other.

Coal breakers shall be heated.

Rule 53. It shall be the duty of the owner, operator or superintendent of any or all coal breakers, to have them properly heated in order to prevent injury to the health of persons employed therein.

Abstract of rules shall be posted up.

Rule 54. For the purpose of making known the rules and the provisions of this act to all persons employed in or about such mine or colliery to which this act applies, an abstract of the act and rules shall be posted up in legible characters in some conspicuous place or places at or near the mine or colliery, where they may be conveniently read by the persons employed, and so often as the same become obliterated or destroyed the owner, operator or superintendent shall cause them to be renewed with all reasonable dispatch. Any person who pulls down, injures or defaces such abstract of the act or rules when posted up in pursuance of the provisions of this act, shall be guilty of an offense against this act.

Penalty for destroying rules.

Cutting of props and timbers prohibited.

Rule 55. No person or persons working in any coal mine or colliery shall cut any props or timbers while the same are in position to support the roof or sides. When it becomes necessary to remove any of the said props or timbers for the purpose of mining coal that may be supported by the same, to dislodge any of the said props or timbers, it must be done by blasting.

Must be removed by blasting.

Who shall be employed in mine evolving gases.

Rule 56. It shall not be lawful for any mine foreman or superintendent of any mine or colliery to employ any person who is not competent to understand the regulations of any mine evolving explosive gases: Provided, That this rule will not apply to a section of mine free from the said explosive gases.

Exceptions.

Penalty for not giving car to men.

Rule 57. Any superintendent or mine foreman who prevents the footman from giving an empty car or cage to the number of men designated in a former rule, shall, upon information by any person engaged in the mines, given the mine inspector, be fined the sum of fifty dollars for each offense.

Penalty for failure to comply with foregoing rules.

Rule 58. Every person who fails to comply with any of the foregoing rules or any of the provisions of this article, shall be guilty of an offense against this act.



## ARTICLE XIII

## Inquests

Section 1. Whenever loss of life to a miner or other employe occurs in or about a mine or colliery, notice thereof shall be given promptly to the inspector of mines for the district in which the accident occurred, by the mine foreman or outside foreman or other person having immediate charge of the work at the time of the accident; and when death results from personal injury such notice shall be given promptly after the knowledge of death comes to the said foreman or person in charge.

Inspector to be promptly notified of loss of life.

Section 2. Whenever loss of life occurs or whenever the lives of persons employed in a mine or at a colliery are in danger from any accident, the inspector of mines shall visit the scene of the accident as soon as possible thereafter and offer such suggestions, as in his judgment shall be necessary, to protect the lives and secure the safety of the persons employed. In case of death from such accident, and after examination he finds it necessary that a coroner's inquest shall be held, he shall notify the coroner to hold such inquest without delay, and if no such inquest be held by the coroner within twenty-four (24) hours after such notice, the inspector shall institute a further and fuller examination of such accident, and for this purpose he shall have power to compel the attendance of witnesses at such examination and to administer oaths and affirmations to persons testifying thereat. The inspector shall make a record of all such investigations and accidents, which record shall be preserved in his office. The costs of such investigation shall be paid by the county in which the accident occurred in like manner as costs of inquests held by coroners or justices of the peace are now paid.

Inspector shall visit scene of accident.

Shall notify coroner.

If coroner fail to hold inquest inspector shall investigate.

Record shall be kept.

Costs of investigation.

Section 3. An inquest held by the coroner upon the body of a person killed by explosion or other accident, shall be adjourned by the coroner if the inspector of mines be not present to watch the proceedings, and the coroner in such case shall notify the inspector, in writing, of such adjourned inquest, and the time and place of holding the same, at least three (3) days previous thereto.

Coroner shall adjourn inquest if inspector is not present.

Notice of inquest.

Section 4. Due notice of an intended inquest to be held by the coroner, shall be given by the coroner to the inspector, and at any such inquest the inspector shall have the right to examine witnesses.

If accident occur from neglect coroner shall notify inspector.

Section 5. If, at any inquest held over the body or bodies of persons whose death was caused by an accident in or about a mine or colliery, the inspector be not present, and it is shown by the evidence given at the inquest that the accident was caused by neglect or by any defect in or about the mine or colliery, which in the judgment of the jury, requires a remedy, the coroner shall send notice in writing to said inspector of such neglect or default.

Qualifications of jurors.

Section 6. No person who is interested personally nor a person employed in the mine or a colliery in or at which loss of life has occurred by accident, shall be qualified to serve on a jury empaneled on the inquest, and a constable or other officer shall not summon such a person so disqualified as juror, but the coroner shall empanel a majority of the jury from miners who are qualified to judge of the nature of the accident; every person who fails to comply with the provisions of this article shall be guilty of an offense against this act.

## ARTICLE XIV

### Returns, Notices, Et Cetera

Notices of death, etc., shall be sent to inspector.

Section 1. Notices of death or serious injuries resulting from accidents in or about mines or collieries, shall be made to the inspector of mines, in writing, and shall specify the name, age and occupation of the person killed or injured, and also the nature and character of the accident and of the injury caused thereby.

Contents of notice.

When owner shall give notice to inspector.

Section 2. The owner, operator or superintendent of a mine or colliery, shall, without delay, give notice to the inspector of the district in which said mine or colliery is situated in any or all of the following cases:

New work commenced.

First. Where any working is commenced for the purpose of opening a new slope or mine to which this act applies.

Mine abandoned.

Second. Where any mine is abandoned or the workings thereof discontinued.

Work recommenced after abandonment.

Third. Where the working of any mine is recommenced after any abandonment or discontinuance for a period exceeding three months.

Fourth. Where any new coal breaker is completed and work commenced therein for the purpose of preparing coal for market.

When new breaker is completed.

Fifth. Where the pillars of a mine are to be removed or robbed.

Removal of pillars.

Sixth. Where a squeeze or crush or any other cause or change may seem to affect the safety of persons employed in any mine, or where fire occurs or a dangerous body of gas is found in any mine.

Squeeze, crush, fire or gas.

Section 3. On or before the first day of February in each year, the owner, operator or superintendent of every mine or colliery, shall send to the inspector of the district, a correct report specifying with respect to the year ending December thirty-first, previously, the name of the operator and officials of the mine, with his postoffice address; the quantity of coal mined, the amount of powder or other explosives consumed; the number of persons employed above and below ground in or about such colliery, classifying the persons so employed. The report shall be in such form as may be from time to time prescribed by the inspector of the district. Blank forms for said reports shall be furnished by the Commonwealth.

Annual report by owner.

Contents of report.

Form.

## ARTICLE XV

### Injunctions

Section 1. Upon application of the inspector of mines of the proper district, acting in behalf of the Commonwealth, any of the courts of law or equity having jurisdiction where the mine or colliery proceeded against is situated, whether any proceedings have or have not been taken, shall prohibit, by injunction or otherwise, the working of any mine or colliery in which any person is employed or is permitted to be for the purpose of working in contravention of the provisions of this act, and may award such costs in the matter of the injunction or other proceedings as the court may think just; but this section shall be without prejudice to any other remedy permitted by law for enforcing the provisions of this act. Written notice of the intention to apply for such injunction in respect to any mine or colliery, shall be made to the owner, operator or superintendent of such mine or col-

By injunction the court may stop work in mine.

Costs.

Written notice must be served on owner.

liery not less than twenty-four (24) hours before the application is made.

## ARTICLE XVI

### Arbitration

When arbitration may be had.

How notices shall be given.

Right of owner.

Costs.

Arbitrators, how chosen.

Decision shall be final.

Section 1. Whenever an inspector finds any mine or colliery or part thereof, or any matter, thing or practice connected with such mine, which in any respect thereof is not covered by or provided against by any provisions of this act or by any rule, to be dangerous or defective, or in his judgment tends to bodily injury to a person, he shall give notice thereof in writing to the owner, operator or superintendent of such mine or colliery, stating in such notice the particular matter or defect requiring remedy and may demand that the same be remedied; but the owner, operator or superintendent of said mine or colliery shall have the right to refer the demand of the inspector to a board of arbitration, and the matter shall then be arbitrated within forty-eight (48) hours of the time such complaint or demand be made. And the party against whom the award is given shall pay all cost attending the case. The said board of arbitration shall be composed of three (3) persons, one of whom shall be chosen by the inspector, one by the said owner, operator or superintendent and a third by the two thus selected, and the decision of a majority of such board shall be final and binding in the matter.

## ARTICLE XVII

### Penalties

On complaint of citizen the judge of quarter sessions court is authorized to hear and determine charges.

Section 1. Any judge of the court of quarter sessions of the peace of the county in which the mine or colliery, at which the offense, act or omission as hereinafter stated has occurred, is situated, is hereby authorized and required, upon the presentation to him of the affidavit of any citizen of the Commonwealth setting forth that the owner, operator or superintendent, or any other person employed in or about such mine or colliery had been negligently guilty of an offense against the provisions of this act, whereby a dangerous accident had resulted or might have re-

sulted to any person or persons employed in such mine or colliery, to issue a warrant to the sheriff of said county directing him to cause such person or persons to be arrested and brought before said judge, who shall hear and determine the guilt or innocence of the person or persons so charged; and if convicted he or they shall be sentenced to pay a fine not exceeding five hundred dollars, in all cases not otherwise provided for in this act, or an imprisonment in the county jail for a period not exceeding three (3) months, or both, at the discretion of the court: Provided, That any defendant may waive trial before a judge as herein provided and at any time, at or before the time of such trial, demand a trial by a jury in the court of quarter sessions, in which case he may enter into a recognizance before said judge with such surety or sureties and in such sum as said judge may approve, conditioned for his appearance at the next court of quarter sessions to answer the charge against him and abide the orders of the court in the premises, meanwhile to be of good behavior and keep the peace, or in default of such recognizance to be committed to the county jail to await such trial.

Judge of court shall issue warrant.

Penalty.

Defendant may waive trial before judge and demand trial by jury.

Recognizance.

Section 2. If any person shall feel himself aggrieved by such conviction and sentence before a judge as aforesaid, he may appeal therefrom subject to the following conditions, namely: The appellant shall, within seven days after the decree has been made, give notice to the prosecutor of his intention to appeal, and within the same time enter into a recognizance, with such surety or sureties and in such sum as shall be approved by said judge, conditioned to appear and try such appeal before the next court of quarter sessions of the peace and to abide the judgment of the court thereon and to pay all such costs and penalties as may be there awarded, and upon the compliance with such conditions the judge shall release the appellant from custody pending the appeal.

May appeal from conviction before judge.

Conditions of appeal.

Section 3. Nothing in this act shall prevent any person from being indicted or liable under any other act, to any higher penalty or punishment than is herein provided, and if the court before whom any such proceeding is had shall be of the opinion that proceedings ought to be taken against such persons under

Shall not be a bar to indictment.

any other act, or otherwise, he may adjourn the case to enable such proceedings to be taken.

Offenses under this act declared misdemeanors and penalty prescribed.

Section 4. All offenses under this act are declared to be misdemeanors and in default of payment of any penalty or cost by the party or parties sentenced to pay the same, he or they may be imprisoned for a period not exceeding three (3) months and not less than thirty (30) days.

Violation by mine inspector a misdemeanor.

Section 5. For any violation of duty by the mine inspector prescribed by this act, he shall be deemed guilty of a misdemeanor, and upon conviction, be sentenced to pay a fine of not more than three hundred dollars or be imprisoned for a period not exceeding three months, or either, or both, at the discretion of the court.

Penalty.

Disposition of fines.

Section 6. All fines imposed under this act shall be paid into the county treasury for the use of the county.

Conviction or acquittal shall not be evidence in action for damages.

Section 7. No conviction or acquittal under this act, in any complaint, shall be received in evidence upon the trial of any action for damages arising from the negligence of any owner, operator or superintendent or employe in any mine or colliery.

Right of action shall accrue for injury to person or property by violation of act by owners, etc.

Section 8. That for any injury to person or property occasioned by any violation of this act or any failure to comply with its provisions by any owner, operator, superintendent, mine foreman or fire boss of any coal mine or colliery, a right of action shall accrue to the party injured against said owner or operator for any direct damages he may have sustained thereby; and in case of loss of life by reason of such neglect or failure aforesaid, a right of action shall accrue to the widow and lineal heirs of the person whose life shall be lost, for like recovery of damages for the injury they shall have sustained.

May accrue to widow.

## ARTICLE XVIII

### Definition of Terms

Coal mine or colliery.

In this act, unless the context otherwise requires, the term "coal mine or colliery" includes every operation and work, both under and above ground, used or to be used for the purpose of mining and preparing coal.

The term "workings" includes all the excavated parts of a mine, those abandoned as well as the places actually at work. Workings.

The term "mine" includes all underground workings and excavations and shafts, tunnels and other ways and openings; also all such shafts, slopes, tunnels and other openings in course of being sunk or driven, together with all roads, appliances, machinery and materials connected with the same below the surface. Mine.

The term "shaft" means a vertical opening through the strata and which is or may be used for the purpose of ventilation or drainage or for hoisting men or material in connection with the mining of coal. Shaft.

The term "slope" means any inclined way or opening used for the same purpose as a shaft. Slope.

The term "breaker" means the structure containing the machinery used for the preparation of coal. Breaker.

The term "owners" and "operators" means any person or body corporate who is the immediate proprietor or lessee or occupier of any coal mine or colliery or any part thereof. Owners and operators.

The term "owner" does not include a person or body corporate who merely receives a royalty, rent or fine from a coal mine or colliery or part thereof, or is merely the proprietor of the mine subject to any lease, grant or license for the working or operating thereof, or is merely the owner of the soil and not interested in the minerals of the mine or any part thereof. But any "contractor" for the working of a mine or colliery or any part or district thereof shall be subject to this act as an operator or owner, in like manner as if he were the owner. Who are not included in term "owner."

Contractor shall be subject to this act as if he were owner.

The term "superintendent" means the person who shall have, on behalf of the owner, general supervision of one or more mines or collieries. Superintendent.

### ARTICLE XIX

All laws or parts of laws inconsistent or in conflict with the provisions of this act are hereby repealed. Repeal.

Approved—The 2d day of June, A. D. 1891.

ROBT. E. PATTISON.

AN ACT

Equalizing and fixing the compensation and mileage of the members of the several boards appointed under the provisions of the act approved June second, one thousand eight hundred and ninety-one, to examine candidates for appointment as inspectors, foremen and fire bosses, respectively, in the anthracite coal mines, and providing for the employment and compensation and mileage of a clerk to each of said boards.

Compensation and mileage of boards of examiners of mine inspectors and foremen.

Section 1. Be it enacted, &c., That from and after the passage of this act the members of the several boards appointed under the provisions of the act approved June second, one thousand eight hundred and ninety-one, to examine candidates for appointment respectively as inspectors and foremen of anthracite coal mines, shall receive in lieu of all compensation, mileage, expenses, emoluments or allowances heretofore paid them, as follows: Six dollars per day for each day during which the said members shall be actually in attendance on the sessions of the board, and mileage at the rate of five cents for each mile actually traveled going from the home of the member to the place of meeting of the board and returning from said place to his said home by the shortest practicable railway route: Provided, That mileage shall be paid but once for each continuous session of the board, and by a continuous session shall be meant a session during the course of which no adjournment for a longer period than forty-eight hours shall take place.

Proviso.

Boards may employ clerk.

Section 2. Each of the boards enumerated or described in the first section of this act shall be and the same is hereby authorized to employ a clerk, whose compensation and mileage shall be the same as that of a member of the board. So much of section four of the act of June second, one thousand eight hundred and ninety-one, as authorizes the boards of examiners of candidates for inspectors of anthracite coal mines to engage the services of a clerk is hereby repealed, and all clerks hereafter appointed by the several boards hereinbefore mentioned shall be appointed under the provisions of this act.

Section 4, act of June 2, 1891, repealed.

Clerks shall be appointed hereafter under provisions of this act.

Members of board shall submit sworn statements of expenses to Auditor General.

Section 3. The members of the said boards shall, on the final adjournment of each session of their respective boards, submit to the Auditor General sworn



statements approved by the president or chairman of their respective boards, setting forth the number of days during which each member shall have been actually in attendance on the sessions of the board of which he is a member during said session, as well as the distance from the home of the member to the place of meeting of his board as aforesaid, by the nearest practicable railway route, and the number of miles actually traveled by him; and the clerks of said boards shall submit like statements, and the Auditor General shall, upon the receipt of such sworn statements draw his warrant upon the State Treasurer in favor of each of such members and clerks for such sums as shall appear to be properly due each.

Clerks shall submit like statements.

Section 4. All acts and parts of acts or supplements thereto in conflict herewith are hereby repealed.

Repeal.

Approved—The 26th day of June, A. D. 1895.

DANIEL H. HASTINGS.

AN ACT

To protect the lives and limbs of miners from the dangers resulting from incompetent miners working in the anthracite coal mines of this Commonwealth, and to provide for the examination of persons seeking employment as miners in the anthracite region, and to prevent the employment of incompetent persons as miners in anthracite coal mines, and providing penalties for a violation of the same.

Section 1. Be it enacted, &c., That hereafter no person whosoever shall be employed or engaged in the anthracite coal region of this Commonwealth, as a miner in any anthracite coal mine, without having obtained a certificate of competency and qualification so to do from the "Miners' Examining Board" of the proper district, and having been duly registered as herein provided.

Employment of miners without certificate of competency, etc., prohibited.

Section 2. That there shall be established in each of the eight inspection districts in the anthracite coal region, a board to be styled the "Miners' Examining

Miners' examining board established in each inspection district.

Number of mem-  
bers and how ap-  
pointed.

Board" of the ..... district, to consist of nine miners who shall be appointed in the same manner as the boards to examine mine inspectors are now appointed from among the most skillful miners actually engaged in said business in their respective districts, and who must have had five years' practical experience in the same. The said persons so appointed shall each serve for a term of two years from the date on which their appointment takes effect, and they shall be appointed upon or before the expiration of the term of the present members of the "Miners' Examining Board," and they shall be and constitute the "Miners' Examining Board" for their respective districts, and shall hold the office for the term for which they were appointed, or until their successors are duly appointed and qualified, and shall receive as compensation for their services three dollars per day for each day actually engaged in this service, and all legitimate and necessary expenses incurred in attending the meetings of said board under the provisions of this act, and no part of the salary of said board or expenses thereof shall be paid out of the State Treasury.

Qualifications.

Term of office.

When they shall be appointed.

Compensation and necessary ex-  
penses.

Shall not be paid out of the State Treasury.

Organization of boards.

Each of said boards shall organize by electing one of their members president, and one member as secretary, and by dividing themselves into three sub-committees for the more convenient discharge of their duties, each of said committees shall have all powers hereinafter conferred upon the board; and whenever in this act the words "Examining Board" are used, they shall be taken to include any of the committees thereof.

Sub-committees.

What the words "Examining Board" include.

Board shall take an oath of office.

Every member of said board shall, within ten days of their appointment or being apprised of the same, take and subscribe an oath or affirmation before a properly qualified officer of the county in which they reside, that they will faithfully and impartially discharge the duties of their office.

How vacancies shall be filled.

Any vacancies occurring in said board shall be filled in the manner hereinbefore provided from among such only as are eligible for original appointment.

Examining boards shall designate place of meeting of committees.

Section 3. Each of said examining boards shall designate some convenient place within their districts for the meeting of the several committees thereof, and

of which due notice shall be given by advertisement in two or more newspapers of the proper county, and so divided as to reach as nearly as practicable all the mining districts therein; but in no case shall such meeting be held in a building where any intoxicating liquors are sold.

Notice to be given.

Each of said committees shall open at the designated place of meeting a book of registration, in which shall be registered the name and address of each and every person duly qualified under this act to be employed as a miner in an anthracite coal mine. And it shall be the duty of all persons employed as miners to be properly registered, and in case of a removal from the district in which a miner is registered, it shall be his duty to be registered in the district to which he removes.

Shall not be held in building where liquors are sold.

Committee shall open book of registration.

Miners shall register.

Registration in case of removal.

Application for registration only may be sent by mail to the board after being properly attested before any person authorized to administer an oath or affirmation in the county in which the applicant resides. The form of application shall be subject to such regulation as may be prescribed by the boards, but in no case shall any applicant be put to any unnecessary expense in order to secure registration.

Applications for registration.

Form of application.

Section 4. Each applicant for examination and registration and for the certificate hereinafter provided, shall pay a fee of one dollar to the said board, and a fee of twenty-five cents shall be charged for registering any person who shall have been examined and registered by any other said board, and the amount derived from this source shall be held by said boards and applied to the expenses and salaries herein provided and such as may arise under the provisions of this act; and the said boards shall report annually, to the court of common pleas of their respective counties and the Bureau of Mines and Mining all moneys received and disbursed under the provisions of this act, together with the number of miners examined and registered under this act and the number who failed to pass the required examination.

Fee for examination and registration.

How amounts received shall be expended.

Boards shall report to court and Bureau of Mines and Mining.

Section 5. That it shall be the duty of each of the said boards to meet once every month and not oftener, and said meeting shall be public, and if necessary, the meeting shall be continued to cover whatever portion may be required of a period of three days in succes-

Boards shall meet once every month.

Length of meeting

Board shall grant certificate of competency, etc.

Holder can be registered in other districts.

Qualifications of applicant for certificate of competency.

Applicant must appear in person and answer.

And be properly identified.

Board shall keep record of all proceedings.

Contents of said record.

Certificates shall not be transferable.

Issuing of certificates.

Persons shall not engage as miners without certificate.

Nor shall persons employ such.

sion, and examine under oath all persons who shall desire to be employed as miners in their respective districts; and said board shall grant such persons as may be qualified, certificates of competency or qualification which shall entitle the holders thereof to be employed as and to do the work of miners as may be expressed in said certificate, and such certificates shall be good and sufficient evidence of registration and competency under this act; and the holder thereof shall be entitled to be registered without an examination in any other of the anthracite districts upon the payment of the fee herein provided.

All persons applying for a certificate of competency, or to entitle them to be employed as miners, must produce satisfactory evidence of having had not less than two years' practical experience as a miner, or as a mine laborer in the mines of this Commonwealth, and in no case shall an applicant be deemed competent unless he appear in person before the said board and answer intelligently and correctly at least twelve question in the English language pertaining to the requirements of a practical miner, and be properly identified under oath, as a mine laborer by at least one practical miner holding miner's certificate. The said board shall keep an accurate record of the proceedings of all its meetings, and in said record shall show a correct detailed account of the examination of each applicant, with the questions asked and their answers, and at each of its meetings the board shall keep said record open for public inspection. Any miner's certificate granted under the provisions of this act, and the hereinafter mentioned act approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-nine, shall not be transferable to any person or persons whatsoever, and any transfer of the same shall be deemed a violation of this act. Certificates shall be issued only at meetings of said board, and said certificates shall not be legal unless then and there signed in person by at least three members of said board.

Section 6. That no person shall hereafter engage as a miner in any anthracite coal mine without having obtained such certificate as aforesaid. And no person shall employ any person as a miner who does not hold such certificate as aforesaid, and no mine fore-

man or superintendent shall permit or suffer any person to be employed under him, or in the mines under his charge and supervision as a miner, who does not hold such certificate. Any person or persons who shall violate or fail to comply with the provisions of this act, shall be guilty of a misdemeanor, and on conviction thereof shall be sentenced to pay a fine not less than one hundred dollars and not to exceed five hundred dollars, or shall undergo imprisonment for a term not less than thirty days and not to exceed six months, or either, or both, at the discretion of the court.

Violation of act declared a misdemeanor.

Penalty.

Section 7. The persons who are now serving as members of the Miners' Examining Board as created by the act approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-nine, entitled "An act to provide for the examination of miners in the anthracite region of this Commonwealth, and to prevent the employment of incompetent persons as miners in anthracite coal mines," shall continue under the provisions of this act to serve as members of the "Miners' Examining Board" until the terms for which they were appointed under the provisions of the said act approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-nine, shall have expired, and in the performance of the duties of their office they shall be subject to the provisions and requirements of this act.

Members of Miners' Examining Board appointed under act of May 9, 1889, shall continue until the expiration of their terms.

But shall be subject to the provisions of this act.

Section 8. Nothing in this act shall be construed to in any way, excepting as herein provided, affect miners' certificates which have been lawfully issued under the provisions of the herein mentioned act, approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-nine.

Construction of this act.

Section 9. It shall be the duty of the several Miners' Examining Boards to investigate all complaints or charges of non compliance or violation of the provisions of this act, and to prosecute all persons so offending; and upon their failure so to do, then it shall become the duty of the district attorney of the county wherein the complaints or charges are made to investigate the same and prosecute all persons so offending, and it shall at all times be the duty of the district attorney to prosecute such members of the Miners' Examining Board as have failed to perform their duty under the provisions of this act; but nothing herein

Board shall investigate complaints and prosecute offenders.

Duty of district attorney.

Citizens of this Commonwealth may prosecute.

contained shall prevent any citizen a resident of this Commonwealth, from prosecuting any person or persons violating this act, with power to employ private counsel to assist in the prosecution of the same; upon conviction of any member of the Miners' Examining Board for any violation of this act, in addition to the penalties herein provided, his office shall be declared vacant, and he shall be deemed ineligible to act as a member of the said board.

Office may also be declared vacant.

Miners' Examining Board shall administer oath.

Section 10. For the purposes of this act the members of the said "Miners' Examining Board" shall have power to administer oaths.

Repeal.

Section 11. All acts or parts of acts inconsistent herewith are hereby repealed.

Approved—The 15th day of July, A. D. 1897.

DANIEL H. HASTINGS.

---

## AN ACT

To amend the tenth section of article ten of an act, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," approved the second day of June, Anno Domini one thousand eight hundred and ninety-one, providing that self-acting doors are used.

Section 1. Be it enacted, etc., That the tenth section of article ten of an act, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," approved the second day of June, Anno Domini one thousand eight hundred and ninety-one, which reads as follows:

Section 10 of article X of act of June 2, 1891, cited for amendment.

"All main doors shall have an attendant whose constant duty it shall be to open them for transportation and travel and prevent them from standing open longer than is necessary for persons or cars to pass through," be and the same is hereby amended to read as follows:

All main doors shall have an attendant whose constant duty it shall be to open them for transportation and travel and prevent them from standing open longer than is necessary for persons or cars to pass through, unless a self-acting door is used which is approved by the inspector of the district.

Main doors, unless self-acting, must have an attendant.

Approved—The 20th day of April, A. D. 1899.

WILLIAM A. STONE.

AN ACT

To regulate the weight of all black blasting powder used, made, or sold in kegs, for use in the coal mines within the Commonwealth of Pennsylvania, and providing for the proper stamping of the kegs containing said powder, and making it unlawful for the use of any such kegs for containing said black blasting powder save only by the person, firm or corporation whose name is stamped on said kegs, and providing penalties for the violation of any of the provisions of this act.

Section 1. Be it enacted, &c., That on and after the first day of August, Anno Domini one thousand nine hundred and one, each and every keg of black blasting powder used, manufactured or sold in and around the coal mines of this Commonwealth, shall contain twenty-five pounds of said black blasting powder, standard weight; every one-half keg shall contain twelve and a half pounds of said black blasting powder, standard weight, and every quarter keg shall contain six and one-quarter pounds of said black blasting powder, standard weight; each of said kegs to be plainly stamped with the name of the person, firm or corporation manufacturing said powder, and also the number of pounds of powder contained in said keg.

Weight of kegs of blasting powder regulated.

Kegs to be stamped with weight of powder and name of manufacturer.

Section 2. Any manufacturer or dealer in said black blasting powder, making or selling, or causing to be made or sold, any keg, half-keg or quarter-keg of said black blasting powder containing less weight of said powder than specified in this act, or which keg shall not be stamped as required in section one of this act,

Violation of act.

## Penalty.

shall be subject to a penalty of five dollars for each and every keg, half-keg or quarter-keg, manufactured or sold, which does not contain the respective weights of black blasting powder set forth in the foregoing section.

## Wrongful use of kegs.

Section 3. It shall not be lawful for any other person, firm or corporation, save only such person, firm or corporation whose name shall be stamped on said kegs, to use any such stamped keg for the purpose of containing said black blasting powder.

## Fine.

Section 4. Any person, firm or corporation violating the provisions of section three of this act shall be subject to a fine of not less than five hundred (\$500) dollars nor more than one thousand (\$1,000) dollars.

## Repeal.

Section 5. All acts or parts of acts inconsistent herewith are hereby repealed.

Approved—The 24th day of April, A. D. 1901.

WILLIAM A. STONE.

---

 AN ACT

Relating to anthracite mines, and providing for the care and life and attention of employes injured in and about said mines.

## Emergency supplies.

Section 1. Be it enacted, &c., That within six (6) months after the passage of this act, it shall be unlawful to operate any anthracite mine, employing ten (10) men or more, in the State of Pennsylvania, unless said mine is provided with a sufficient quantity of linseed or olive oil bandages, linen, splints, woolen and waterproof blankets. Said articles shall be stored in a room, erected at convenient place in the mine, which room shall not be less than eight by twelve feet, and sufficiently furnished, lighted, clean and ventilated so that therein medical treatment may be given injured employes in case of emergency. The furnishings shall be sufficient to accommodate two or more persons, in a reclining and sitting posture.

## Medical room.

## Duty of foreman and his assistants.

Section 2. It shall be the duty of the mine foreman or his assistants, in case of injury to any employe by explosion of gas or powder, or by any cause while said miners are at work in said mines, to at once visit the



scene of accident, see that the injured is carefully wrapped in woolen blankets and removed to the "medical room," and so treated with oils or other remedies as will add to the comfort and care of the patient. After being treated with all the skill known to the foreman or his assistants, the injured person shall be carefully wrapped up and sent to the surface, to be taken home in an ambulance or to the mining hospital, as may be desired, without expense to the injured party.

Care and treatment of the injured.

Section 3. Where accident to any employe involves injury to limbs or causes loss of blood, the foreman or his assistants shall see that the bandages, splints and linen shall be applied where necessary to prevent loss of blood and relieve pain. The foreman shall, in all cases, see that the injured person is sent to the surface without delay. He shall also keep a book showing required articles on hand, name of persons injured, nature of injury, treatment, and by whom treated at time of accident.

Record to be kept.

Section 4. It shall be the duty of the mine inspector to visit each of the medical rooms in his district at least once in six months; see that the law is complied with; examine records of the medical room. He shall notify the county coroner of any neglect or non-compliance with the provisions of this act by any operator, which information shall be regarded as evidence on any inquest that may be held on employes dying from injuries received while working in such anthracite mine.

Duty of inspector.

Section 5. The neglect or refusal to perform the duties required to be performed by any section of this act, by the parties therein required to perform them, or the violation of any of the requirements hereof, shall be deemed a misdemeanor, and shall, upon, conviction thereof in the court of quarter sessions of the county wherein the misdemeanor was committed, be punishable by a fine not exceeding five hundred dollars, or imprisonment in the county jail for a period not exceeding six months, or both, at the discretion of the court.

Misdemeanor.

Fine and penalty.

Section 6. That for any injury to employes, occasioned by any violation of the act, or any failure to comply with its provisions, by any owners, operators or superintendent of any coal mine or colliery, a right

Right of action.

of action shall accrue to the party injured against said owner or operator, for any direct injuries he may have sustained thereby; and in case of loss of life, limb or bodily power, by reason of such neglect or failure aforesaid, a right of action shall accrue to the person, widow or lineal heirs, for the recovery of damages for the injury he or they shall have sustained.

Recovery.

Terms defined.

Section 7. The term "coal mine," as herein used, includes the shafts, slopes, drifts or inclined planes, connected with the excavations penetrating coal stratum or strata, which excavations are ventilated by one general air current, or division thereof, and connected by one general system of mine railroads, over which coal may be delivered to one or more parts outside the mine. The term "mine foreman" means the person who shall have, on behalf of the operators, immediate supervision of a coal mine. The term "operator" means any firm, corporation or individual operating any coal mine. The term "anthracite mine" shall include any coal mine not now included in the bituminous boundaries.

Repeal.

Section 8. That all acts or parts of acts inconsistent herewith be, and the same are hereby repealed, and all local laws inconsistent herewith are hereby repealed.

Approved—The 29th day of May, A. D. 1901.

WILLIAM A. STONE.

## ARTICLE II OF THE ACT OF JUNE 2, 1891, AS AMENDED BY THE ACT OF JUNE 8, 1901.

### Inspectors and Inspection Districts

Counties and their division into six districts.

Section 1. The counties of Luzerne, Lackawanna, Carbon, Schuylkill, Northumberland and Columbia, shall be divided into six inspection districts, as follows:

Districts.

Section 2. First district—The county of Luzerne.

Second district—The county of Lackawanna.

Third district—The county of Carbon.

Fourth district—The county of Schuylkill.

Fifth district—The county of Northumberland.

Sixth district—The county of Columbia.

Filling of vacancies.

Section 3. In order to fill any vacancy that may occur in the office of Inspector of Mines by reason of the expiration of term, resignation, removal for cause or

from any other reason whatever, the judges of the court of Lackawanna county shall appoint an examining board for the county of Lackawanna, and the judges of the court of Luzerne county shall appoint an examining board for the counties of Carbon and Luzerne, and the judges of Schuylkill county shall appoint an examining board for the counties of Schuylkill, Northumberland and Columbia.

Section 4. The said Board of Examiners shall be composed of three reputable coal miners in actual practice and two reputable mining engineers, all of whom shall be appointed at the first term of court in each year, to hold their places during the year. Any vacancies that may occur in the Board of Examiners shall be filled by the court as they occur. The said Board of Examiners shall be permitted to engage the services of a clerk, and they, together with the clerk shall each receive the sum of five (5) dollars per day for every day they are actually engaged in the discharge of their duties under this appointment, and mileage at the rate of six cents per mile from their home to the place of meeting and return, by the nearest practicable railway route.

Board of Examiners.

Vacancies.

Clerk.

Compensation and mileage.

Section 5. Whenever candidates for the office of Inspector are to be examined, the said examiners shall give public notice of the fact in not more than five newspapers published in the inspection district, and at least two weeks before the meeting, specifying the time and place where such meeting shall be held. The said examiners shall be sworn to a faithful discharge of their duties, and at least four of them shall sign a certificate, setting forth the fact of the applicants having passed a successful examination, and who have answered ninety per centum of the questions; the names of the applicants, the questions asked and answers thereto, shall be sent to the Secretary of the Commonwealth, and published in at least two papers, daily or weekly, and shall give such certificate to only such applicant as has passed the required examination.

Notice of examination to be published.

Examiners to be sworn.

Recommendations to be sent to the Secretary of the Commonwealth.

Section 6. The said Board of Examiners shall hold at least one such examination during each year, at least six months before the date of the general election, in the month of November of each year.

Examinations.

Section 7. At the next general election in November, the qualified voters of the First inspection dis-

Election of inspectors.

trict shall elect five qualified persons to act as Mine Inspectors of this Commonwealth; the qualified voters of the Second inspection district shall elect four qualified persons to act as Mine Inspectors of this Commonwealth; the qualified voters of the Third inspection district shall elect one qualified person to act as Mine Inspector of this Commonwealth; the qualified voters of the Fourth inspection district shall elect four qualified persons to act as Mine Inspectors of this Commonwealth; the qualified voters of the Fifth inspection district shall elect one qualified person to act as Mine Inspector of this Commonwealth: Provided, That the present Mine Inspectors in the several inspection districts shall continue in office until the expiration of the terms for which they have been appointed, and the number of inspectors to be elected at the coming election shall be reduced by the number of Inspectors now regularly appointed and serving in said districts. When the terms of the present Inspectors shall expire, their successors shall be elected in accordance with the provisions of this act. At the said first election under this act in November, Anno Domini one thousand nine hundred and two, for said Inspectors, the qualified electors of the First inspection district shall elect two Inspectors; the qualified electors of the Second inspection district shall elect two Inspectors; the qualified electors of the Fourth inspection district shall elect two inspectors; the qualified electors of the Fifth inspection district shall elect one Inspector; and the qualified electors of the Sixth inspection district shall elect one Inspector. At the expiration of the term of office of any of the present Inspectors, who hold office under the appointment of the Governor of the Commonwealth, the qualified electors of the Third inspection district shall elect one Inspector, and as further vacancies are caused by the expiration of the term of office of the present Inspectors, the qualified electors of the several inspection districts shall elect Inspectors to take their places, beginning with the First inspection district, then the Second inspection district, Third inspection district, Fourth inspection district, Fifth inspection district and Sixth inspection district, until each inspection district has its full quota of elected inspectors under this act. Said Inspectors, elected under this act, shall be

Proviso.

Inspectors to be elected in November, 1902.

Election to fill vacancies.

under the directions of the Chief of the Bureau of Mines, who shall assign districts to the several Inspectors in the respective counties in which they are elected.

Section 8. Candidates for the office of Mine Inspector shall file with the county commissioners a certificate from the mine examining board, as above set forth, before their names shall be allowed to go upon the ballot as provided by the county commissioners for the general election; and the name of no person shall be placed upon the official ballot except such as has filed the certificate as herein required; and no person shall be qualified to act as such Mine Inspector unless such certificate has been previously filed with the county commissioners of his county.

Candidate shall file certificate with the county commissioners.

Section 9. The person so elected must be a citizen of Pennsylvania and shall have attained the age of thirty years. He must have a knowledge of the different systems of work in coal mines, and he must produce satisfactory evidence to the Board of Examiners of having had at least five years' practical experience in anthracite coal mines of Pennsylvania. He must have had experience in coal mines where noxious and explosive gases are evolved.

Inspectors must be citizens of Pennsylvania.

Experience required.

Before entering upon the duties of his office he shall take an oath or affirmation, before an officer properly qualified to administer the same, that he will perform his duties with fidelity and impartiality; which oath or affirmation shall be filed in the office of the prothonotary of the county. He shall provide himself with the most modern instruments and appliances for carrying out the intentions of this act.

Shall be sworn.

Filing of oath.

Section 10. The salary of each of the said Inspectors shall be three thousand dollars per annum, which salary, together with the expenses incurred in carrying into effect the provisions of this act, shall be paid by the State Treasurer out of the Treasury of the Commonwealth upon the warrant of the Auditor General.

Salary.

Section 11. Each of the said Inspectors shall hold said office for a term of three years from the first Monday of January immediately succeeding his election to said office, and until his successor is duly elected and qualified.

Term of office.

Section 12. It shall be the duty of the Chief of Bureau of Mines and Mining to direct one or more of

the Inspectors who shall be elected under this act, and it shall be the duty of said Inspectors to obey said orders of the said Chief of Bureau of Mines and Mining, to inspect such collieries as come under the act to which this act is an amendment in counties not mentioned in this amendment to said act, in such manner and at such times as is required by law, and the inspectors inspecting said collieries shall make and include in their return a due report of said inspection.

Inspection of collieries in other counties than those named.

Appointment to fill vacancies.

Section 13. In case of death, resignation, removal from office, or other vacancies in the office of Mine Inspector before the expiration of said term of office, the judges of the court of common pleas of the county in which said vacancy occurs shall appoint a duly qualified person to fill said vacancy for the unexpired term. Said appointee to be one of the persons having filed with the county commissioners of said county a certificate from the Board of Examiners, showing he passed a successful examination before the said Board, and is duly qualified as hereinbefore mentioned.

Appointee shall have filed a certificate.

When and how deputy may be appointed.

Section 14. In case the Inspector becomes incapacitated to perform the duties of his office for a longer period than two weeks, it shall be the duty of the judges of the court of common pleas of the county from which said Inspector was elected to deputize some competent person, recommended by the Board of Examiners, to fill the office of Inspector until the said Inspector shall be able to fulfil the duties of his office, and the person so appointed shall be paid in the same manner as is provided for the Inspector of Mines.

Inspectors shall reside in district where elected.

Section 15. Each of the said Inspectors shall reside in the district for which he is elected, and shall give his whole time and attention to the duties of his office. He shall examine all the collieries in his district at least once every two months, as often in addition thereto as the necessities of the case or the condition of the mines require. He shall see that every necessary precaution is taken to secure the safety of the workmen and that the provisions of this act are observed and obeyed; and he shall personally visit each working face, and see that the air-current is carried to the working faces and is of sufficient quantity or volume to thoroughly ventilate the places. He shall every three months make a report of the condition of

Duties.

Ventilation.

Reports.

each working face in each colliery, on a form to be furnished to the inspectors by the Chief of the Bureau of Mines and Mining, designating the gangway in which the working is situated, and the breast number of said working and their condition shall be designated by the words, good, fair, or bad, as the circumstances may warrant; and the said report, or a duplicate, shall be placed in a weather and dust-proof case, with a glass front; said case to be furnished by the operator, and placed in a conspicuous place at each mine opening, shaft, slope or drift, so that the workmen have easy access thereto. He shall certify in said report that the employes are hoisted to the surface of the ground or given access thereto according to law; he shall attend every inquest held by the coroner or his deputy upon the bodies of persons killed in or about the collieries in his district; he shall visit the scene of the accident, for the purpose of making an examination into the particulars of the same; wherever loss of life or serious personal injury occurs, as elsewhere herein provided for, and make an annual report of his proceedings to the Secretary of Internal Affairs of the Commonwealth at the close of every year, enumerating all the accidents in and about the collieries in his district, marking in tabular form those accidents causing death or serious personal injury; the condition of the workings of the said mines with regard to the safety of the workmen therein and the ventilation thereof, and the results generally shall be fully set forth; and such other duties as now are or hereafter may be required by law.

Reports to be exhibited.

Certificate.

Shall attend inquests.

Annual report.

Section 16. The nomination and election of said mine inspectors shall be under the general election laws of this Commonwealth.

Elections.

Section 17. The Mine Inspector shall have the right, and it is hereby made his duty, to enter, inspect and examine any mine or colliery in the territory allotted to him and the workings and machinery belonging thereto, at all reasonable times, either by day or by night, but not so as to obstruct or impede the working of the colliery, and shall have power to take one or more of his fellow inspectors into or around any mine or colliery in the territory allotted to him, for the purpose of consultation or examination.

To have right of entry, and may be accompanied by another inspector.

Shall inquire into the condition of mine or colliery.

He shall also have the right, and it is hereby made his duty to make inquiry into the condition of such mine or colliery workings, machinery, ventilation, drainage, method of lighting or using lights, and into all matters and things connected with or relating to, as well as to make suggestions providing for, the health and safety of persons employed in or about the same, and especially to make inquiry whether the provisions of this act have been complied with.

Owner to furnish means,

The owner, operator or superintendent of such mine or colliery is hereby required to furnish the means necessary for such entry, inspection, examination, inquiry and exit.

Record.

The inspector shall make a record of the visit, noting the time and material circumstances of the inspection.

Inspectors shall not be pecuniarily interested.

Section 18. No person who shall act or practice as a land agent or as a manager or agent of any coal mine or colliery, who is pecuniarily interested in operating any coal mine or colliery, shall at the same time hold the office of Inspector of Mines under this act.

Charges of neglect or incompetency, how they shall be presented, etc

Section 19. Whenever a petition signed by fifty or more reputable coal miners, or by fifteen or more reputable coal operators, or more, or both, setting forth that any inspector of mines neglects his duties, or is incompetent, or is guilty of malfeasance in office, it shall be the duty of the court of common pleas from which said Inspector was elected to issue a citation, in the name of the Commonwealth, to the said Inspector to appear at not less than five days' notice, on a day fixed, before said court, and the court shall then proceed to inquire into and investigate the allegations of the petitioners. If the court finds that the said Inspector is neglectful of his duties, or is incompetent to perform the duties of his office for any cause that existed previous to his election, or that has arisen since his election, or that he is guilty of malfeasance in office, the court shall declare the said Inspector removed from office and proceed to fill the vacancy.

Removal.

Costs.

The cost of said investigation shall be borne by the removed Inspector; but if the allegations in the petition are not sustained, the cost shall be paid by the Treasurer of this Commonwealth upon warrant of the Auditor General, or by the petitioners in case the court



finds that there was no probable ground for said charge.

Section 20. The maps and plans of the mines and the records thereof, together with all the papers relating thereto, shall be kept by the inspector, properly arranged and preserved, in a convenient place in the territory to which the inspector has been allotted, and shall be transferred by him, with any other property of the Commonwealth that may be in his possession, to his successor in office.

Maps and plans of mines.

Section 21. This act shall go into effect from the first day of January, Anno Domini one thousand nine hundred and two.

Act to take effect.

Section 22. All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

Repeal.

Approved—The 8th day of June, A. D. 1901.

WILLIAM A. STONE.

---

AN ACT

To provide payment to the miner for all clean coal mined by him.

Section 1. Be it enacted, &c., That from and after the passage of this act all individuals, firms and corporations engaged in mining coal in this Commonwealth, who, instead of dumping all the cars that come from the mine into a breaker or chutes, shall switch out one or more of the cars for the purpose of examining them, and determining the actual amount of slate or refuse, by removing said slate or refuse from the car, and who shall, after so doing, wilfully neglect to allow the miner in full for all clean coal left after the refuse, dirt or slate is taken out, at the same rate paid at the mine for clean coal less the actual expense of removing said slate or refuse, they shall be deemed guilty of a misdemeanor.

Wilful neglect to pay miner for all clean coal, less the cost of cleaning, deemed a misdemeanor.

Section 2. That any individual, firm or corporation as aforesaid, violating the provisions of this act, upon suit being brought and conviction had, shall be sentenced by the court to pay a fine of not more than one hundred dollars, and to make restitution by paying to the miner the amount to which, under this act, he

Penalty.

Restitution to be made.

would be entitled for the coal mined by him, and for which he was not paid.

Approved—The 13th day of June, A. D. 1883.

ROBT. E. PATTISON.

---

### AN ACT

To provide for the recovery of the bodies of workmen enclosed, buried or entombed in coal mines.

Duty of court.

Section 1. Be it enacted, &c., That whenever any workman or workmen shall heretofore have been, or shall hereafter be enclosed, entombed or buried in any coal mine in this Commonwealth, it shall be the duty of the court, sitting in equity, in the county wherein such workman or workmen are enclosed, entombed or buried, upon the petition of any of the relatives of those enclosed, entombed or buried, to make an order of court for the petitioner to take testimony in order that the court may ascertain whether such workman or workmen, or the body or bodies of such workman or workmen, can be recovered or taken out of said mine.

Mandamus to owner, etc., of mines for recovery of bodies.

If, after full hearing, it shall appear to the court that such undertaking is feasible or practicable, said court may forthwith issue a peremptory mandamus to the owner or owners, lessee or lessees, operator or operators of such coal company, to forthwith proceed to work for and recover and take out the body or bodies of such workman or workmen, and said court shall have full authority to enforce such peremptory mandamus in the manner already provided for the enforcement of such process.

Approved—The 9th day of May, A. D. 1889.

JAMES A. BEAVER.

## AN ACT

For the better protection of employes in and about the coal mines by preventing mine superintendents, mine foremen and assistants from receiving or soliciting any sums of money or other valuable consideration from men while in their employ, and providing a penalty for violation of the same.

Section 1. Be it enacted, &c., That on and after the passage of this act any mine superintendent, mine foreman or assistant foreman, or any other person or persons who shall receive or solicit any sum of money or other valuable consideration, from any of his or their employes for the purpose of continuing in his or their employ, or for the purpose of procuring employment, shall be guilty of a misdemeanor, and upon conviction shall be subject to a fine not less than fifty dollars, nor more than three hundred dollars, or undergo an imprisonment of not less than six months, or both, at the discretion of the court.

Receiving or soliciting money declared a misdemeanor.

Penalty.

Section 2. All acts or parts of acts inconsistent herewith be and the same are hereby repealed.

Repeal.

Approved—The 15th day of June, A. D. 1897.

DANIEL H. HASTINGS.

## AN ACT

To amend article nine, section one, of an act, entitled "An act to provide for the health and the safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," approved June second, one thousand eight hundred and ninety-one; also to amend section seventeen of an act, entitled "An act relating to bituminous coal mines, and providing for the lives, health, safety and welfare of persons employed therein," approved June thirtieth, one thousand eight hundred and eighty-five.

Section 1. Be it enacted, &c., That the first section of article nine of an act, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property con-

nected therewith," approved June second, one thousand eight hundred and ninety-one, which reads as follows.

Section 1, article IX, act of June 2, 1891, cited for amendment.

"No boy under the age of fourteen years, and no woman or girl of any age, shall be employed or permitted to be in any mine for the purpose of employment therein. Nor shall a boy under the age of twelve years, or a woman or girl of any age, be employed or permitted to be in or about the outside structures or workings of a colliery for the purpose of employment, but it is provided, however, that this prohibition shall not affect the employment of a boy or female of suitable age in an office or in the performance of clerical work at a colliery;" be amended so that the same shall read as follows:

Employment of boys under certain ages and of all females forbidden.

No boy under the age of sixteen years, and no woman or girl of any age, shall be employed or permitted to be in any mine for the purpose of employment therein. Nor shall a boy under the age of fourteen years, or a woman or girl of any age, be employed or permitted to be in or about the outside structures or workings of a colliery for the purpose of employment; but it is provided, however, that this prohibition shall not affect the employment of a boy or female, of suitable age, in an office or in the performance of clerical work at a colliery.

Except for office or clerical work.

Section 2. That the first section of article nine of an act, entitled "An act relating to bituminous coal mines, and providing for the lives, health, safety and welfare of persons employed therein," approved June thirtieth, one thousand eight hundred and eighty-five, which reads as follows:

Section 1, article IX, act of June 30, 1885, cited for amendment.

"No boy under the age of fourteen years, and no woman or girl of any age, shall be employed or permitted to be in any mine for the purpose of employment therein; nor shall a boy under the age of twelve years, or a woman or girl of any age, be employed or permitted to be in or about the outside structures or workings of a colliery for the purpose of employment, but it is provided, however, that this prohibition shall not affect the employment of a boy or female, of suitable age, in an office or in the performance of clerical work at a colliery;" be amended so that the same shall read as follows:

No boy under the age of sixteen years, and no woman or girl of any age, shall be employed or permitted to be in any mine for the purpose of employment therein; nor shall a boy under the age of fourteen years, or a woman or girl of any age, be employed or permitted to be in or about the outside structures or workings of a colliery for the purpose of employment; but it is provided, however, that this prohibition shall not affect the employment of a boy or female, of suitable age, in an office or in the performance of clerical work at a colliery.

Employment of boys under certain ages, and of all females forbidden.

Except for office or clerical work.

Approved—The 13th day of May, A. D. 1903.

SAML. W. PENNYPACKER.

Abstract of act of April 14, 1903, establishing a Department of Mines in Pennsylvania:

AN ACT

To establish a Department of Mines in Pennsylvania; defining its purposes and authority; providing for the appointment of a Chief of said Department, and assistants, and fixing their salaries and expenses.

Department of Mines.

Section 1. Be it enacted, &c., That there is hereby established in Pennsylvania a Department known as the Department of Mines, which shall be charged with the supervision of the execution of the mining laws of this Commonwealth, and the care and publication of the annual reports of the inspectors of coal mines and any and all other mines that may come under the provisions of the mining laws of this Commonwealth.

Duties and powers of.

Section 2. The chief officer of this Department shall be denominated Chief of the Department of Mines, and shall be appointed by the Governor, by and with the advice and consent of the Senate, within thirty days after the final passage of this act, and every four years thereafter, who shall be commissioned by the Governor to serve a term of four years from the date of his appointment, and until his successor is duly qualified.

Chief of the Department of Mines.

Appointment by Governor.

Section 3. The Chief of the Department of Mines shall be a competent person, having at least ten years' practical experience as a miner and the qualifications of the present mine inspectors. The said Chief of the

Qualification.

Oath. Department of Mines, so appointed shall, before entering upon the duties of his office, take and subscribe to the oath of office prescribed by the Constitution, the same to be filed in the office of the Secretary of the Commonwealth, and give to the Commonwealth a bond in the penal sum of ten thousand dollars, with surety, to be approved by the Governor, conditioned for the faithful discharge of the duties of his office.

Bond. Section 4. It shall be the duty of the Chief of the Department to devote the whole of his time to duties of his office, and to see that the mining laws of the State are faithfully executed; and for this purpose he is hereby invested with the same power and authority as the mine inspectors, to enter, inspect and examine any mine or colliery within the State, and the works and machinery connected therewith, and to give such aid and instruction to the mine inspectors, from time to time, as he may deem best calculated to protect the health and promote the safety of all persons employed in and about the mines; and the said Chief of the Department of Mines shall have the power to suspend any mine inspector for any neglect of duty, but such suspended mine inspector shall have the right of appeal to the Governor, who shall be empowered to approve of such suspension or restore such suspended mine inspector to duty, after investigating the causes which led to such suspension. Should the Chief of Department of Mines receive information by petition, signed by ten or more miners or three or more operators, setting forth that any of the mine inspectors are neglectful of the duties of their office, or are physically unable to perform the duties of their office, or are guilty of malfeasance in office, he shall at once investigate the matter; and if he shall be satisfied that the charge or charges are well founded, he shall then petition the court of common pleas or the judge in chambers, in any county within or partly within the inspection district of the said mine inspector, which court upon receipt of said petition and a report of the character of the charges and testimony produced, shall at once issue a citation, in the name of the Commonwealth, to the said inspector to appear, on not less than fifteen days' notice, on a fixed day, before said court, at which time the court shall proceed to inquire into the allegations of the petitioners,

Power and authority of the Chief.

May suspend mine inspectors for neglect of duty.

Appeal

Petition of miners or operators.

Investigation.

Citation.

Inquiry by the court.

and may require the attendance of such witnesses, on the subpoena issued and served by the proper officer or officers, as the judge of the court and the Chief of said Department may deem necessary in the case; the inspector under investigation shall also have similar power and authority to compel the attendance of witnesses in his behalf. If the court shall find by said investigation that the said mine inspector is guilty of neglecting his official duties, or is physically incompetent to perform the duties of his office, or is guilty of malfeasance in office, the said court shall certify the same to the Governor, who shall declare the office vacant, and shall proceed to supply the vacancy as provided by the mining laws of the State. The cost of such investigation shall, if the charges are sustained, be imposed upon the deposed mine inspector; but if the charges are not sustained, the costs shall be paid out of the State Treasury, upon voucher or vouchers duly certified by said Chief of Department.

Certificate of court to the Governor.

The cost.

To enable said Chief of the Department of Mines to conduct more effectually his examinations and investigations of the charge and complaints which may be made by petitioners against any of the mine inspectors as herein provided, he shall have power to administer oaths and take affidavits and depositions, in form and manner provided by law: Provided, however, That nothing in this section shall be construed as to repeal section thirteen of article two of the act of Assembly, approved the second day of June, Anno Domini one thousand eight hundred and ninety-one, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," and also articles thirteen and fourteen of an act of Assembly, approved the fifteenth day of May, Anno Domini one thousand eight hundred and ninety-three, entitled "An act relating to bituminous coal mines, and providing for the lives, health, safety and welfare of persons employed therein."

Chief of Department empowered to administer oaths and take affidavits.

Proviso.

Section 5. It shall be the duty of the Chief of the Department of Mines to take charge of, and preserve in his office, the annual reports of the mine inspectors, and transmit a synopsis of them, together with such

Annual reports of inspectors.

other statistical data compiled therefrom, and other work of the Department as may be of public interest, properly addressed, to the Governor, to be transmitted to the General Assembly of this Commonwealth, on or before the 15th day of March in each year. It shall also be the duty of the Chief of Department of Mines to see that said reports are placed in the hands of the public printer for publication, on or before the first day of April in each year; the same to be published under the direction of the Chief of the Department of Mines. In order that the Chief of the said Department may be able to prepare, compile and transmit a synopsis of his annual report to the Governor within the time herein specified, the mine inspectors are hereby required to deliver their annual reports to the Chief of said Department on or before the twentieth day of February, in each year. In addition to the annual reports herein required of the mine inspectors, they shall furnish the Chief of the Department of Mines monthly reports, and also such special information on any subject regarding mine accidents, or other matters pertaining to mining interests, or the safety of persons employed in and about the mines, as he at any time may require or may deem necessary, in the proper and lawful discharge of his official duties. The Chief of the Department of Mines shall also establish, as far as may be practicable, a uniform style and size of blanks for the annual, monthly and special reports of the mine inspectors, and prescribe the form and subject matter to be embraced in the text and the tabulated statements of their reports.

Publication of reports.

Reports to be delivered to Chief on or before February 20, annually.

Monthly reports and special information.

Blanks.

Form and subject matter of reports.

Examination and investigation by the Chief.

Duty of Board of Examiners, etc.

The Chief of the Department of Mines is hereby authorized to make such examinations and investigations as may enable him to report on the various systems of coal mining and all other mining practiced in the State, method of mining ventilation and machinery employed, the circumstances and responsibilities of mine accidents; and such other matters as may pertain to the general welfare of coal miners and others connected with mining, and the interests of mine owners and operators in the Commonwealth.

Section 6. The Board of Examiners for the examination of applicants for mine inspectors in the Anthracite and Bituminous coal mines of the Common-



wealth, the Board for the examination of applicants for mine foremen and assistant mine foremen in the Anthracite mines, the Board for the examination of applicants for first and second grade certificates in the Bituminous mines, and the Board styled Miners' Examining Board for applicants for certificates of competency as miners, shall send to the Chief of the Department of Mines duplicates of the manuscripts and all other papers of applicants, together with the tally-sheets and the solution of each question as given by the Examining Board, which shall be filed in the Department as public documents.

Duplicate papers.

Filing of.

Section 7. Certificates of qualification to mine foremen and assistant mine foremen in the Anthracite mines, first and second grade certificates for mine foremen in the Bituminous mines, shall be granted by the Chief of the Department of Mines to each applicant who has passed a successful examination. The certificates shall be in manner and form as shall be prescribed by the Chief of the Department of Mines, and a record of all certificates granted shall be kept in the Department. Each certificate shall contain the full name, age and place of birth of the applicant, and also the length and nature of his previous service in the mines. Before the certificates aforesaid shall be granted to mine foremen, assistant mine foremen, foremen of first grade and foremen of second grade, each applicant for the same shall pay the sum of three dollars to the Chief of the Department of Mines. The money so received, less the cost of issuing and recording certificates, shall be turned over in due form to the State Treasurer.

Certificates of qualification.

Record of.

Contents of.

Fee.

Section 8. The Chief of the Department of Mines shall keep in the Department a journal or record of all inspections, examinations and work done under his administration, and copies of all official communications; and is hereby authorized to procure such books, instruments, and chemicals, or other tests, as may be found necessary to the proper discharge of his duties under this act, at the expense of the State. All instruments, plans, books and records pertaining to the office shall be the property of the State, and shall be delivered to his successor in office.

Journal to be kept.

Books, instruments, chemicals, etc.

Eligibility of  
Chief.

Section 11. No person who is acting as a land agent, or as a manager, viewer or agent of any mine or colliery, shall at the same time, serve as Chief of the Department of Mines under the provisions of this act.

Repeal.

Section 12. All acts or parts of acts inconsistent with this act be and the same are hereby repealed.

Approved—The 14th day of April, A. D. 1903.

SAML. W. PENNYPACKER.

INDEX

TO

ANTHRACITE LAWS

	Page
Act providing for the health and safety of employes, approved June 2, 1891, .....	597
division of region into eight inspection districts, .....	597
how vacancies in office of mine inspector shall be filled, .....	598
boards to examine candidates for mine inspector; compensation of boards, .....	598
notice of examinations, .....	599
examiners to be sworn; examination papers to be sent to the Secretary of the Commonwealth, .....	599
when board of examiners fails to agree court may dissolve board, .....	599
Governor shall appoint inspectors, .....	599
inspectors must be citizens of Pennsylvania, .....	599
experience required, .....	599
salary; must reside in district, .....	600
duties of inspectors, .....	600
boards of examiners may readjust district, .....	600
inspectors shall not be pecuniarily interested in mines, .....	602
neglect of duties or incompetency, .....	602
removal from office, .....	602
maps and plans, .....	602
neglect or refusal of owner to make maps, .....	604
maps shall be property of the Commonwealth, .....	605
inspectors' maps shall be open for inspection, .....	605
shafts, slopes, openings and outlets, .....	606
boilers and connections, machinery, etc., .....	611
wash houses, .....	612
ambulances and stretchers, .....	612
mine foremen, .....	614
employment of boys and females, .....	617
ventilation, .....	617
props and timbers, .....	620
general rules, .....	621
inquests, .....	631
returns, notices, etc., .....	632
injunctions, .....	633
arbitration, .....	634
penalties, .....	634
definition of terms, .....	636
Act relative to compensation and mileage of boards of examiners of mine inspectors, mine foremen and fire bosses, approved June 26, 1895, .....	638
examining boards authorized to employ clerk, .....	638
boards shall submit to the Auditor General sworn statement of expenses, .....	638
Act to protect the lives of miners, to provide for the examination of persons employed in the mines, and to prevent the employment of incompetent persons, approved July 15, 1897, .....	639
miners shall have certificate of competency, .....	639
Miners' Examining Boards, .....	639
how appointed; qualifications, and term of office, .....	640
compensation; how vacancies shall be filled; meetings of boards, .....	640
miners shall register; application for registration; fee for examination and registration, .....	641
boards shall report to the court and Bureau of Mines and Mining, .....	641
shall meet monthly, .....	641

	Page
shall grant certificates of competency, .....	642
qualifications of applicant for miners' certificate, .....	642
certificate not transferable, .....	642
miners must have certificate, .....	642
violation of this act a misdemeanor; penalty, .....	643
members of the Board appointed under the act of 1889 shall serve until the expiration of their terms, .....	643
board shall investigate complaints; duty of district attorney, .....	643
citizens may prosecute, .....	644
Amendment of the act of June 2, 1891, providing for the health and safety of miners, approved April 20, 1899, .....	644
main doors, unless self-acting, shall have an attendant, .....	645
Act to regulate the weight of black blasting powder, approved April 24, 1901, .....	645
act providing for the care of employes injured in the mines, approved May 29, 1901, .....	646
inspector shall visit medical rooms, .....	647
violation of this act a misdemeanor; right of action for damages, .....	647
terms defined, .....	648
Amendment of the act of June 2, 1891, providing for the health and safety of miners, approved June 8, 1901, .....	648
inspectors and inspection districts, .....	648
how vacancies in the office of mine inspector shall be filled, .....	648
boards to examine candidates for mine inspector; compensation, .....	649
notice of examinations; examiners to be sworn, .....	649
examination papers to be sent to the Secretary of the Commonwealth, .....	649
annual examinations, .....	649
election of inspectors, .....	649
candidates for the office of mine inspector shall file certificates with the county commissioners, .....	651
inspectors must be citizens of Pennsylvania; experience required, .....	651
salary; term of office, .....	651
inspector shall reside in county where elected, .....	652
duties of inspector, .....	652
shall make annual report; may enter and inspect any mine or colliery in his district, .....	653
shall make a record of visits, .....	654
inspectors shall not be pecuniarily interested in mines, .....	654
neglect of duties or incompetency; removal from office, .....	654
maps and plans of mines, .....	655
Act to provide payment to the miner for all clean coal mined by him, approved June 13, 1883, .....	655
neglect to pay miners for all clean coal a misdemeanor; penalty, .....	655
restitution to be made, .....	655
Act to provide for the recovery of bodies of workmen entombed in coal mines, approved May 9, 1889, .....	656
duty of the court; court may issue mandamus to owner of mine for the recovery of bodies, .....	656
Act for the protection of employes and to prevent mine superintendents, mine foremen and assistants from soliciting money from employes, approved June 15, 1897, ..	657
receiving or soliciting money a misdemeanor; penalty, .....	657
Amendment of the act of June 2, 1891, providing for the health and safety of miners, approved May 13, 1903, .....	657
employment of boys under sixteen years, and females of all ages, forbidden, ...	658
exceptions, when employed in an office, .....	658
Act to establish a Department of Mines, approved April 14, 1903, duties and powers of the Department, .....	659
Chief of the Department shall be appointed by the Governor; term; qualification, power and authority of the Chief; may suspend mine inspectors for neglect of duty, .....	659
shall take charge of annual reports of inspectors; synopsis of the reports to be sent to the General Assembly, .....	660
annual report to be published, .....	662
reports of inspectors must be delivered before February 20, .....	662
monthly reports and special information; form of reports, .....	662
investigations by the Chief of various systems of mining, .....	662
duties of boards of examiners of mine inspectors, .....	662
mine foremen and miners, .....	663
certificates of qualification to be issued to mine foremen and assistant mine foremen; form of certificate; fee, .....	663
Chief authorized to procure books, instruments, etc., .....	663
eligibility of Chief, .....	664

# INDEX

---

	Page
Letter of transmittal, .....	1
Introduction, .....	iii
Accidents, .....	iv
Care of injured miners, .....	ix
Legal age of boy employes, .....	xiv
Mine inspection, .....	xviii
Election of inspectors, .....	xx
Examination of fire bosses, .....	xxv
Case of Commonwealth vs. Wilkes-Barre and Scranton Coal and Iron Company, .....	xxvi
Establishment of Department of Mines, .....	xxxii
Summary of work of Department, 1898 to 1903, .....	xxxiv
Abstract showing tons of coal mined, days worked, persons employed, killed and injured, amount of powder and dynamite used, etc., ....	xxxv
Table A, classification of employes in each district, .....	xxxvii
Table B, classification of fatal accidents in each district, .....	xxxviii
Table C, classification of non-fatal accidents in each district, .....	xxxix
Table D, number of gaseous and non-gaseous mines in each district, and production from gaseous and non-gaseous mines, etc., .....	xl
Table E, quantity of coal produced by each company that produced 700,000 or more tons, .....	xli
Table F, classification of employes killed or fatally injured, 1883 to 1903 inclusive, .....	xlii
Table G, classification of fatal accidents, 1883 to 1903 inclusive, .....	xliii
Table H, nationality of employes killed or fatally injured, 1892 to 1903 inclusive, .....	xliv
Table I, fatal accidents, 1890 to 1903 inclusive, .....	xlv
Table J, non-fatal accidents, 1890 to 1903 inclusive, .....	xlvi
Table K, production of coal in tons of 2,000 pounds, explosives used, etc., 1892 to 1903 inclusive, .....	xlvii
Table L, number of employes, by districts, 1890 to 1903 inclusive, .....	xlviii
Table M, number of employes, by counties, 1890 to 1903 inclusive, .....	xlix
Table N, production of coal, by districts, 1890 to 1903 inclusive, .....	l
Table P, production of coal, by counties, 1890 to 1903 inclusive, .....	lii
Table Q, fatal accidents per each 1,000 employes, and tons of coal mined per fatal accident, 1870 to 1903 inclusive, .....	liii
FIRST ANTHRACITE DISTRICT, .....	3
Letter of transmittal, .....	3
Summary of statistics, .....	4
Table A, production of coal by the various operators and by coun- ties, .....	5

	Page
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	6
Table C, classification of fatal accidents, .....	7
Table D, classification of non-fatal accidents, .....	8
Table E, occupations of persons killed, .....	9
Table F, occupations of persons injured, .....	10
Table G, nationality of persons killed, .....	11
Table H, nationality of persons injured, .....	11
Table I, method of ventilation of mines, .....	12
Table 1, operators, location of collieries, railroads, etc., .....	14
Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	15
Table 3, classification of employes, days worked in breakers, .....	20
Table 4, fatal accidents, .....	24
Table 5, non-fatal accidents, .....	27
Description of fatal accidents, .....	32
Condition of mines, .....	32
Improvements in district, .....	34
Mine foremen's examinations, .....	35
 SECOND ANTHRACITE DISTRICT, .....	 37
Letter of transmittal, .....	37
Summary of statistics, .....	38
Table A, production of coal by the various operators and by counties, .....	39
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	40
Table C, classification of fatal accidents, .....	41
Table D, classification of non-fatal accidents, .....	42
Table E, occupations of persons killed, .....	43
Table F, occupations of persons injured, .....	44
Table G, nationality of persons killed, .....	45
Table H, nationality of persons injured, .....	45
Table I, method of ventilation of mines, .....	46
Table 1, operators, location of collieries, railroads, etc., .....	48
Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	50
Table 3, classification of employes, days worked in breakers, .....	56
Table 4, fatal accidents, .....	60
Table 5, non-fatal accidents, .....	64
Description of fatal accidents, .....	69
Condition of mines, .....	72
Improvements in district, .....	73
Flooding of mines in Carbondale district, .....	76
Inrush of sand and water into Eddy Creek shaft of Delaware and Hudson Company, .....	77
 THIRD ANTHRACITE DISTRICT, .....	 83
Letter of transmittal, .....	83
Summary of statistics, .....	84
Table A, production of coal by the various operators and by counties, .....	85

	Page
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	86
Table C, classification of fatal accidents, .....	87
Table D, classification of non-fatal accidents, .....	88
Table E, occupations of persons killed, .....	89
Table F, occupations of persons injured, .....	90
Table G, nationality of persons killed, .....	91
Table H, nationality of persons injured, .....	91
Table I, method of ventilation of mines, .....	92
Table 1, operators, location of collieries, railroads, etc., .....	94
Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	96
Table 3, classification of employes, days worked in breakers, .....	102
Table 4, fatal accidents, .....	108
Table 5, non-fatal accidents, .....	110
Description of fatal accidents, .....	113
Condition of mines, .....	114
<b>FOURTH ANTHRACITE DISTRICT, .....</b>	<b>117</b>
Letter of transmittal, .....	117
Summary of statistics, .....	118
Table A, production of coal by the various operators and by counties, .....	119
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	120
Table C, classification of fatal accidents, .....	121
Table D, classification of non-fatal accidents, .....	122
Table E, occupations of persons killed, .....	123
Table F, occupations of persons injured, .....	124
Table G, nationality of persons killed, .....	125
Table H, nationality of persons injured, .....	125
Table I, method of ventilation of mines, .....	126
Table 1, operators, location of collieries, railroads, etc., .....	128
Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	130
Table 3, classification of employes, days worked in breakers, .....	136
Table 4, fatal accidents, .....	142
Table 5, non-fatal accidents, .....	144
Description of fatal accidents, .....	148
Condition of mines, .....	150
<b>FIFTH ANTHRACITE DISTRICT, .....</b>	<b>153</b>
Letter of transmittal, .....	153
Summary of statistics, .....	154
Table A, production of coal by the various operators and by counties, .....	155
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	156
Table C, classification of fatal accidents, .....	157
Table D, classification of non-fatal accidents, .....	158
Table E, occupations of persons killed, .....	159
Table F, occupations of persons injured, .....	160
Table G, nationality of persons killed, .....	161

	Page
Table H, nationality of persons injured, .....	161
Table I, method of ventilation of mines, .....	162
Table 1, operators, location of collieries, railroads, etc., .....	164
Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	166
Table 3, classification of employes, days worked in breakers, .....	172
Table 4, fatal accidents, .....	178
Table 5, non-fatal accidents, .....	180
Description of fatal accidents, .....	185
Condition of mines, .....	194
Improvements in district, .....	194
Mine foremen's examinations, .....	196
<b>SIXTH ANTHRACITE DISTRICT, .....</b>	<b>197</b>
Letter of transmittal, .....	197
Summary of statistics, .....	198
Table A, production of coal by the various operators and by coun- ties, .....	199
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	200
Table C, classification of fatal accidents, .....	201
Table D, classification of non-fatal accidents, .....	202
Table E, occupations of persons killed, .....	203
Table F, occupations of persons injured, .....	204
Table G, nationality of persons killed, .....	205
Table H, nationality of persons injured, .....	205
Table I, method of ventilation of mines, .....	206
Table 1, operators, location of collieries, railroads, etc., .....	208
Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	210
Table 3, classification of employes, days worked in breakers, .....	216
Table 4, fatal accidents, .....	222
Table 5, non-fatal accidents, .....	224
Description of fatal accidents, .....	228
Condition of mines, .....	238
Improvements in district, .....	238
<b>SEVENTH ANTHRACITE DISTRICT, .....</b>	<b>243</b>
Letter of transmittal, .....	243
Summary of statistics, .....	244
Table A, production of coal by the various operators and by coun- ties, .....	245
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	246
Table C, classification of fatal accidents, .....	247
Table D, classification of non-fatal accidents, .....	248
Table E, occupations of persons killed, .....	249
Table F, occupations of persons injured, .....	250
Table G, nationality of persons killed, .....	251
Table H, nationality of persons injured, .....	251
Table I, method of ventilation of mines, .....	252
Table 1, operators, location of collieries, railroads, etc., .....	255



Page

Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	256
Table 3, classification of employes, days worked in breakers, .....	260
Table 4, fatal accidents, .....	264
Table 5, non-fatal accidents, .....	266
Description of fatal accidents, .....	270
Improvements in district, .....	276
Mine foremen's examinations, .....	280
<b>EIGHTH ANTHRACITE DISTRICT, .....</b>	<b>281</b>
Letter of transmittal, .....	281
Summary of statistics, .....	282
Table A, production of coal by the various operators and by counties, .....	283
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	284
Table C, classification of fatal accidents, .....	285
Table D, classification of non-fatal accidents, .....	286
Table E, occupations of persons killed, .....	287
Table F, occupations of persons injured, .....	288
Table G, nationality of persons killed, .....	289
Table H, nationality of persons injured, .....	289
Table I, method of ventilation of mines, .....	290
Table 1, operators, location of collieries, railroads, etc., .....	292
Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	293
Table 3, classification of employes, days worked in breakers, .....	298
Table 4, fatal accidents, .....	302
Table 5, non-fatal accidents, .....	304
Description of fatal accidents, .....	308
Condition of mines, .....	313
Improvements in district, .....	314
<b>NINTH ANTHRACITE DISTRICT, .....</b>	<b>317</b>
Letter of transmittal, .....	317
Summary of statistics, .....	318
Table A, production of coal by the various operators and by counties, .....	319
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	320
Table C, classification of fatal accidents, .....	321
Table D, classification of non-fatal accidents, .....	322
Table E, occupations of persons killed, .....	323
Table F, occupations of persons injured, .....	324
Table G, nationality of persons killed, .....	325
Table H, nationality of persons injured, .....	325
Table I, method of ventilation of mines, .....	326
Table 1, operators, location of collieries, railroads, etc., .....	329
Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	331
Table 3, classification of employes, days worked in breakers, .....	337
Table 4, fatal accidents, .....	343
Table 5, non-fatal accidents, .....	346

	Page
Description of fatal accidents, .....	350
Improvements in district, .....	362
Fire at No. 6 Lansford, Lehigh Coal and Navigation Company, .....	370
Mine foremen's examinations, .....	371
<b>TENTH ANTHRACITE DISTRICT, .....</b>	<b>373</b>
Letter of transmittal, .....	373
Summary of statistics, .....	374
Table A, production of coal by the various operators and by counties, .....	375
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	376
Table C, classification of fatal accidents, .....	377
Table D, classification of non-fatal accidents, .....	378
Table E, occupations of persons killed, .....	379
Table F, occupations of persons injured, .....	380
Table G, nationality of persons killed, .....	381
Table H, nationality of persons injured, .....	381
Table I, method of ventilation of mines, .....	382
Table 1, operators, location of collieries, railroads, etc., .....	384
Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	386
Table 3, classification of employes, days worked in breakers, .....	392
Table 4, fatal accidents, .....	397
Table 5, non-fatal accidents, .....	399
Description of fatal accidents, .....	402
Condition of mines, .....	403
Improvements in district, .....	404
Mine foremen's examinations, .....	406
<b>ELEVENTH ANTHRACITE DISTRICT, .....</b>	<b>409</b>
Letter of transmittal, .....	409
Summary of statistics, .....	410
Table A, production of coal by the various operators and by counties, .....	411
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	412
Table C, classification of fatal accidents, .....	413
Table D, classification of non-fatal accidents, .....	414
Table E, occupations of persons killed, .....	415
Table F, occupations of persons injured, .....	416
Table G, nationality of persons killed, .....	417
Table H, nationality of persons injured, .....	417
Table I, method of ventilation of mines, .....	418
Table 1, operators, location of collieries, railroads, etc., .....	420
Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	421
Table 3, classification of employes, days worked in breakers, .....	425
Table 4, fatal accidents, .....	428
Table 5, non-fatal accidents, .....	430
Description of fatal accidents, .....	434
Condition of mines, .....	436
Improvements in district, .....	436
Mine foremen's examinations, .....	440

	Page
TWELFTH ANTHRACITE DISTRICT, .....	443
Letter of transmittal, .....	443
Summary of statistics, .....	444
Table A, production of coal by the various operators and by coun- ties, .....	445
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	446
Table C, classification of fatal accidents, .....	447
Table D, classification of non-fatal accidents, .....	448
Table E, occupations of persons killed, .....	449
Table F, occupations of persons injured, .....	450
Table G, nationality of persons killed, .....	451
Table H, nationality of persons injured, .....	451
Table I, method of ventilation of mines, .....	452
Table 1, operators, location of collieries, railroads, etc., .....	454
Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	456
Table 3, classification of employes, days worked in breakers, .....	462
Table 4, fatal accidents, .....	467
Table 5, non-fatal accidents, .....	469
Description of fatal accidents, .....	473
Condition of mines, .....	477
Improvements in district, .....	480
Mine foremen's examinations, .....	484
THIRTEENTH ANTHRACITE DISTRICT, .....	487
Letter of transmittal, .....	487
Summary of statistics, .....	488
Table A, production of coal by the various operators and by coun- ties, .....	489
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	490
Table C, classification of fatal accidents, .....	491
Table D, classification of non-fatal accidents, .....	492
Table E, occupations of persons killed, .....	493
Table F, occupations of persons injured, .....	494
Table G, nationality of persons killed, .....	495
Table H, nationality of persons injured, .....	495
Table I, method of ventilation of mines, .....	496
Table 1, operators, location of collieries, railroads, etc., .....	498
Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	500
Table 3, classification of employes, days worked in breakers, .....	506
Table 4, fatal accidents, .....	512
Table 5, non-fatal accidents, .....	514
Description of fatal accidents, .....	519
Condition of mines, .....	521
Improvements in district, .....	526
Mine foremen's examinations, .....	530
FOURTEENTH ANTHRACITE DISTRICT, .....	531
Letter of transmittal, .....	531
Summary of statistics, .....	532

	Page
Table A, production of coal by the various operators and by counties, .....	533
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	534
Table C, classification of fatal accidents, .....	535
Table D, classification of non-fatal accidents, .....	536
Table E, occupations of persons killed, .....	537
Table F, occupations of persons injured, .....	538
Table G, nationality of persons killed, .....	539
Table H, nationality of persons injured, .....	539
Table I, method of ventilation of mines, .....	540
Table 1, operators, location of collieries, railroads, etc., .....	542
Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	544
Table 3, classification of employes, days worked in breakers, .....	550
Table 4, fatal accidents, .....	556
Table 5, non-fatal accidents, .....	558
Condition of mines, .....	562
Mine foremen's examinations, .....	564
<b>FIFTEENTH ANTHRACITE DISTRICT, .....</b>	<b>567</b>
Letter of transmittal, .....	567
Summary of statistics, .....	568
Table A, production of coal by the various operators and by counties, .....	569
Table B, fatal and non-fatal accidents, tons of coal produced per accident, .....	570
Table C, classification of fatal accidents, .....	571
Table D, classification of non-fatal accidents, .....	572
Table E, occupations of persons killed, .....	573
Table F, occupations of persons injured, .....	574
Table G, nationality of persons killed, .....	575
Table H, nationality of persons injured, .....	575
Table I, method of ventilation of mines, .....	576
Table 1, operators, location of collieries, railroads, etc., .....	577
Table 2, tons of coal mined, days worked, persons employed, kegs of powder used, etc., .....	578
Table 3, classification of employes, days worked in breakers, .....	582
Table 4, fatal accidents, .....	585
Table 5, non-fatal accidents, .....	586
Description of fatal accidents, .....	589
Condition of mines, .....	591
Improvements in district, .....	591
Mine foremen's examinations, .....	593



*Handwritten signature*

Reference

