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# REPORT

OF THE

# DEPARTMENT OF MINES

OF PENNSYLVANIA

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Part I Anthracite

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1905

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## LETTER OF TRANSMITTAL

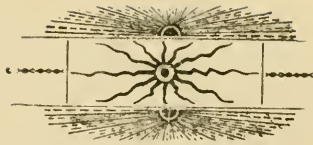
Department of Mines,  
March 30, 1906.

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

Sir: In compliance with the Act of Assembly of April 14, 1903, I beg to submit herewith, for transmission to the General Assembly, the report of the Department of Mines for the year ending December 31, 1905. Part I covers in detail the operations in the fifteen Anthracite Districts, Part II the operations in the sixteen Bituminous Districts, as returned by the Inspectors. Observations and suggestions are also offered relative to mining subjects.

Respectfully submitted,

JAMES E. RODERICK,  
Chief of Department of Mines.



# REPORT

OF THE

# DEPARTMENT OF MINES

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## INTRODUCTION

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The year 1905 was a most extraordinary one in the industrial life of the United States. In all branches of trade there was felt the quickening impulse of prosperity, and the great coal-producing centers of Pennsylvania were alive with an activity never before equalled. As a result, the output that has been growing by leaps and bounds during the past decade reached a totality of 198,008,534 tons. The significance of this tremendous tonnage as a means of augmenting the wealth of the country, and as a source of comfort to all classes of people, can scarcely be appreciated. Persons ordinarily have but little conception of the value of coal either as a domestic commodity or as a factor in the development and maintenance of our great industrial interests. Anthracite coal, by reason of its clear-burning and intense heat-producing qualities and its limited production, has become one of the great luxuries of modern life in the eastern part of the United States. Bituminous coal is the great power that lies at the foundation of all our manufacturing interests. It enables the factory, the furnace, the locomotive and the steamboat to create and transport the vast and constantly growing wealth of the land. It is small wonder, then, that the mere suggestion of a strike of the mine workers is enough to cause alarm and anxiety among the manufacturing and transportation interests, as well as among the vast army of householders. The financial welfare of the former and the physical comfort of the latter are de-

pendent largely upon coal, and naturally the advent of any element that threatens the disorganization of the trade or interruption of production, is viewed with feelings of trepidation.

The total coal output of Pennsylvania for the year represents a value at the mines of about \$350,000,000, and at points of distribution of about \$650,000,000. The anthracite production was 78,647,020 short tons, and the bituminous 119,361,514 short tons. In producing the tonnage of the year in the anthracite region 551 employes were killed inside the mines, the ratio being 1 employe to every 142,735 short tons. For every 1,000 employes 4.73 were killed. In the bituminous region 444 were killed inside the mines, the ratio being 1 employe to every 268,832 short tons. For every 1,000 employes 2.26 were killed. The number killed outside in the anthracite region was 93; the number in the bituminous region 35. The total loss of life in and about the anthracite mines was 644, and in and about the bituminous mines 479, total 1,123.

The only note of disparagement to be struck in reviewing the bituminous trade is in regard to the price at which much of the coal was sold. At certain periods of the year the price fell to 75 cents a ton at the mines, and at this figure even the tremendous production failed to bring satisfactory results to the operator. It is a most gratifying thing, of course, to contemplate the unprecedented output, but it would have been more to the purpose had the output been restricted somewhat and the profits thereby enhanced. Coal cannot be forced upon the market when there is no demand for it, without serious loss resulting to the shipper.

We hear a great deal about the inefficiency of the car service, the dilatory movement of the cars, and the inadequacy of the supply, but the scarcity of cars cannot under the present conditions be considered as an unmixed evil; in fact, it may be regarded as a blessing. With a production already so great that, notwithstanding the heavy demand, prices were forced to an alarmingly low figure, a freer movement of cars would have been little less than a calamity. The coal industry, however, notwithstanding the great increase in the productive capacity, is every year attaining nearer and nearer to systematic regulation. Both employer and employe are learning, too, that their interests are identical, and that harmonious relations are essential to their mutual success. Altogether the outlook is decidedly favorable for the establishment of business-like rules by which this great industry can be controlled, so that it will be a source of continual profit to both employer and employe. Pennsylvania continues to lead the coal mining industry of the country, producing practically all of the anthracite and 30 per cent. of the bituminous. Its mines furnished about 49 per cent. of the total output in 1905.

The jurisdiction of the Department of Mines, under existing laws, extends only to the coal mining interests. A great deal of thought has been given to the enactment of legislation that would tend to safeguard the coal miner in his hazardous work, and at the same time treat with justness the rights and interests of the operator. The coal-mining industry of Pennsylvania is so vast that it has overshadowed all other kindred industries, and the result has been that the slate, ore, graphite and fire clay mines and stone and cement quarries have been allowed to develop with complete freedom from legal restraint or guidance. These interests are now great enough to demand attention. They have reached a stage of development where they should be brought within the purview of the law. The operators of these industries should be compelled to take all the necessary precautions to protect their great army of employes, and the employes in turn should be brought under such statutory regulations as will insure careful attention to the rules necessary for the protection of life and property. It is the judgment of this Department that the next Legislature should be made familiar with the need of these industries for proper regulation in their development and operation, and to that end a bill will be prepared and introduced at the Session of 1907.



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

	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.
Letters written, copied and indexed, .....	922	697	1,851	1,465	1,733	2,911	3,036	3,190
Letters received, docketed and filed, .....	1,216	972	1,312	1,690	1,324	2,328	2,649	3,022
Blanks sent to mine inspectors, .....	30,370	42,384	76,428	67,408	51,816	83,040	55,841	67,567
Envelopes and envelopes sent to bituminous mine inspectors, .....	7,500	26,188	26,750	23,250	21,750	9,000	30,000	61,000
Books and books sent to bituminous mine inspectors, .....	275	275	2,146	300	4,618	2,146	.....	500
Mine foremen's record books, 300 pages each, sent to bituminous mine inspectors, .....	59	275	490	70	378	178	.....	78
Annual reports of the Department of Mines, shipped from office, .....	522	1,538	900	2,303	1,887	1,032	5,115	5,822
English mine laws in pamphlet form sent to mine inspectors, .....	.....	1,258	1,735	2,303	1,887	11,450	40,515	5,822
Monthly narrative reports, 31 pages each, sent to mine inspectors, .....	.....	171	455	517	.....	475	555	400
Books for recording accidents, 400 pages each, sent to mine inspectors, .....	.....	18	17	17	.....	1	.....	1
Reports of accidents received, copied and filed, .....	.....	2,235	2,550	2,719	2,211	3,243	3,085	3,502
Reports of inspections received, copied and filed, .....	.....	3,845	3,318	3,486	2,896	5,312	5,444	4,977
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, .....	.....	5,416	5,627	6,024	6,213	9,330	9,270	11,050
Anthracite mine laws translated into foreign languages and distributed, .....	.....	576	611	656	926	1,649	1,780	1,830
Bituminous mine laws translated into foreign languages and distributed, .....	.....	.....	.....	.....	57,250	22,225	61,000	.....
Books of mine foremen's and assistant mine foremen's certificates, 300 pages each, sent to mine inspectors, .....	.....	.....	.....	.....	.....	57,100	29,200	.....
English mine laws in pamphlet form distributed, .....	.....	.....	.....	.....	.....	60	.....	.....
Mine inspectors' annual reports received, corrected and compiled for publication, .....	.....	18	18	20	20	28,000	.....	378
Certificates of qualification issued to mine foremen and assistant mine foremen in the anthracite region after being recorded, .....	.....	.....	.....	.....	.....	30	30	30
Certificates of qualification issued to mine foremen of first grade and mine foremen of second grade in the bituminous region after being recorded, .....	127	181	70	296	235	680	196	272
.....	.....	.....	.....	.....	.....	768	383	241

## MINE INSPECTION

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The work of the inspectors during the year, taken as a whole, has been excellent, but in two or three instances it has not been sufficiently well done to meet the standard required by the Department. The delinquent inspectors have been notified in regard to the matter, and it is believed that improvement will be shown in their work in future, as they have the ability to serve the Commonwealth with as great effectiveness and thoroughness as the other inspectors.

As stated in previous reports, the work of the inspectors, if done conscientiously, is extremely strenuous and hazardous. For the enlightenment of those who are always finding fault with the inspectors, I enumerate some of their duties as they appear on the records of the Department: Inspecting mines, inspecting machinery in and about the mines, investigating accidents, attending inquests, inspecting maps and plans, consulting on mining and legal matters, attending court, examining candidates for mine foremen and assistant mine foremen, and doing the clerical work of the office, which consists, in part, of weekly, monthly and annual reports to the Department. They are also required to be present at mine fires, to visit mines after explosions of gas whereby the mines are damaged and ventilation interrupted, and to make extra examinations of mines where the foremen have any suspicion of a "squeeze" or of a "caving-in" of any part of the mine. At critical times they are expected to lead the investigating party when they know or believe that the mistake of a subordinate might mean death to the whole party. 2,001 days were spent by the inspectors in making mine inspections, 250 days inspecting machinery in and about the mines, 500 days investigating accidents, 102 days attending inquests, 198 days consulting on mining and legal matters, 38 days attending court, 204 days traveling on duty, 161 days examining applicants for certificates as mine foremen and assistant mine foremen, 133 days were consumed by sickness and injury that prevented the inspectors from working, and 1,026 days in doing clerical work in the office and attending to other duties. The Department allowed 80 days for vacations. It may be stated here that the records of the Department show the work in detail of each inspector. The reports of the inspectors for the year show that the mines are in good condition so far as safety, ventilation and sanitary requirements are concerned. Detailed information on this subject will be found in the various reports of the inspectors.

The abstract herewith will show the number of mines, the number of employes inside and outside, and the production in each anthracite and bituminous district. There were 2,005 mines in the State, under the supervision of thirty-one inspectors. If the anthracite mines were apportioned equally among the inspectors, each district would include about 45 mines, but under the present law, on account of county lines, they cannot be so divided. If the bituminous mines were apportioned equally among the inspectors, each district would include about 85 mines. This division, however, would be very unfair, as some districts would be very much more difficult to supervise. In some cases a district of 60 mines might place more responsibility upon the inspector and require more attention than another district that included 100 mines.

It is proper to say here that the State of Pennsylvania has as many inspectors as Great Britain has for all her coal mines, iron mines and slate quarries in England, Scotland, Ireland and Wales.

Anthracite					Bituminous				
Districts	Number of mines	Number of employes inside	Number of employes outside	Production	Districts	Number of mines	Number of employes inside	Number of employes outside	Production
1st, .....	36	8,490	2,743	4,284,033	1st, .....	66	9,534	1,145	8,094,084
2d, .....	46	7,554	2,361	4,192,603	2d, .....	76	8,730	2,807	8,669,747
3d, .....	25	7,482	2,383	4,508,105	3d, .....	112	6,862	899	4,007,297
4th, .....	42	8,716	3,035	5,407,571	4th, .....	85	8,395	1,255	5,299,280
5th, .....	44	9,616	3,435	5,225,201	5th, .....	66	6,472	4,058	8,515,253
6th, .....	40	8,285	3,151	4,630,053	6th, .....	91	10,553	1,461	8,635,832
7th, .....	52	9,049	3,919	5,445,392	7th, .....	66	8,832	932	6,197,785
8th, .....	35	9,256	3,353	6,770,022	8th, .....	159	6,784	548	4,489,394
9th, .....	110	9,467	5,751	7,068,225	9th, .....	76	7,473	2,767	8,682,541
10th, .....	21	6,438	3,924	4,132,015	10th, .....	125	8,740	1,370	5,404,318
11th, .....	18	7,148	3,643	4,182,465	11th, .....	59	6,356	3,936	8,449,810
12th, .....	50	6,602	3,786	4,289,288	12th, .....	70	10,086	1,940	9,107,883
13th, .....	45	5,828	3,396	3,445,481	13th, .....	61	10,061	1,239	8,791,547
14th, .....	55	9,823	5,885	4,895,697	14th, .....	65	8,184	866	7,600,003
15th, .....	20	2,917	1,618	1,743,592	15th, .....	120	9,047	921	6,312,985
					16th, .....	69	9,781	2,317	10,703,753
	c39	116,371	51,883	70,220,551		1,366	135,890	29,051	119,361,514

### INSPECTION OF SAFETY CATCHES.

Two accidents occurred during the year, by reason of inefficient safety catches, one at the Conyngham shaft, and one at Clear Spring shaft, in which 17 lives were lost. These accidents created a good deal of excitement, especially in the counties of Lackawanna and Luzerne, and the public press had a great deal to say about the dangerous condition of the safety catches at the different shafts.

The Department decided to have an inspection of the shaft cages made immediately in the most thorough manner, and in the presence of the inspectors. The following letter was therefore sent to each inspector:

"Dear Sir: The frequency with which fatal accidents occur in the shafts and slopes of the anthracite mines leads me to think that possibly there may be some negligence or oversight on the part of the persons directly in charge of the machinery in and about the mines. I therefore instruct you to see at once that the provisions of the mining law, as found in Article 4, Sections 9, 10, 11, 12, 13, 14 and 15, of the Act of June 2, 1891, are complied with to the letter at all the mines in your district. Take no promises from anyone, but insist on immediate compliance with the requirements of the law that bear directly on the protection of human life. I suggest that you be present at at least one test of the safety catches at each shaft, and remain until every cage, where men are lowered and hoisted, is tested, to satisfy yourself that the safety catches are efficient. Afterwards insist that these tests be made at regular intervals and a report be made to you promptly, signed by the persons making the tests. Also insist that a daily record be kept of the examinations as provided for in Section 13, to be signed by the person or persons making the examinations, and you will be required to examine these records while on your tour of inspection. Let all other matters, except attending to accidents, be secondary until you have fully covered your district. You will then be expected to send a full report of your examinations to the Department of Mines.

Kindly acknowledge receipt of this letter.

Very truly yours,

JAMES E. RODERICK,  
Chief of Department of Mines."

The inspectors made written reports to the Department of the testing of the cages, giving the result of each test. They found several cages that needed slight repairs, but in only a few instances were the cages and appliances condemned.

Not desiring to express an arbitrary opinion as to how often the safety catches should be tested, I asked each superintendent for his opinion, and the answers received varied very greatly. Some of them said once a week and some said once a year. The Department did not fix any stated time for the testing of the safety appliances, but instructed the inspectors to notify the superintendents that they should see that they were tested as often as necessary and a report sent to the inspector. The inspectors are not required to be present at these tests unless requested to do so by the superintendents, and, when they are so requested, the tests must be made in the day time.

While 17 persons were killed during the year on the cages in shafts, through the failure of safety appliances to work, it is nevertheless true, as stated elsewhere, that the safest place in a coal

mine in on the cage in the shaft. This opinion is expressed after a careful investigation of the causes of accidents during the past thirty-six years, the results of which can be seen elsewhere in this report.

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### EMPLOYMENT AGES OF BOYS

The Legislature of 1903 passed a law making the minimum employment age of boys inside the mines sixteen years for both the anthracite and bituminous regions. This proved to be a most unpopular enactment among the rank and file of the mine workers. The anthracite workers did little more than complain about the injustice of the law, but the bituminous workers aided the operators in having it referred to court, where it was declared unconstitutional.

The Legislature of 1905 passed another law making the minimum employment ages of boys inside the anthracite mines sixteen years, and outside fourteen years. This also proved to be unpopular with the mine workers, and by many persons was thought to be unconstitutional. It was referred to the court of Luzerne county for a test as to its constitutionality, and Judge Wheaton, in an elaborate opinion, decided that so far as it related to the qualifications of the boys it was unconstitutional, but that the section bearing on the ages was in no wise a violation of the constitution. The Superior Court in a decision written by Judge Rice affirmed the decision of the lower court. The act and the opinions of the court are published herewith. In consequence of this legislation the State of Pennsylvania has now two laws bearing on this subject. The bituminous law makes the employment age twelve years for both inside and outside workers, while the anthracite law makes the age for inside workers sixteen years and for outside workers fourteen years. It is evident that our mining laws are imperfect and unfair when they allow boys to work in and about the bituminous mines at twelve years of age, while requiring a minimum of sixteen years inside and fourteen years outside the anthracite mines. If our lawmakers understood that the duties of the boys employed inside of the mines in the anthracite and bituminous regions are identical, and that the danger to life and limb is about the same, their sense of fairness and justice would no doubt impel them to pass a law making the employment age the same in both regions. This Department recommends the enactment of one law making the employment age fourteen years for boys employed in and about the anthracite and bituminous mines. If a uniform law, with fourteen years as a minimum, were passed, Pennsylvania would lead all other States and



countries in practical and sensible protective legislation on this important question.

Under the present anthracite law great injustice in many instances is done to heads of large families, and more particularly to poor widows, by reason of their boys being prohibited from entering the mines until they are sixteen years of age. They are by this extreme enactment deprived of a natural and much needed support. I am not, however, in accord with the bituminous law that makes the employment age twelve years. Both laws are radically wrong in this respect and should be amended on reasonable lines. In the anthracite region, as before stated, they bear unjustly upon the widows and heads of large families, and in the bituminous region they work injury to the boys by permitting them to go to work at too early an age. The bituminous workers contend, however, that the employment age should not be raised for the reason that there is no employment for the boys in that region except inside of the mines. In my opinion there is no reason whatever for making any distinction between the ages of boys outside and inside of the mines. The dangers that menace the boys in and about the anthracite breakers are perhaps more serious than those that menace the boys working inside the mines. If the boys tending doors in the mines would stay at their work, they would be practically safe from danger, but when there is a slackness in the work they frequently run away from the doors, and when they hear the cars coming, in their haste to return to their post of duty, they are apt to fall and be run over, or they are so late in opening the doors that the cars come upon them before they can get out of the way, and the result is often injury or loss of life to themselves or the drivers. The same observation will apply to boys in the breakers. If they could be compelled to remain at their working places when the breaker is running empty, instead of going about, they would incur very little danger. The fact is, however, that the minute the chutes are cleared the boys run loose, climb on top and over the safety guards, and frequently fall on or into the machinery, and are injured or killed. They also run and jump on moving cars, and in many other ways invite disaster. The management should impose the penalty of discharge upon a boy who leaves his work in the breaker or in the mine. The statistics for 1905, in the anthracite region, show that out of a total of 14 doortenders killed, 8 were between the ages of 16 and 17, 4 between the ages of 18 and 19, one was 59 years and one 74 years. Of the 31 drivers and runners killed inside, 10 were between the ages of 16 and 17, 13 between the ages of 18 and 21, and 8 between the ages of 22 and 37. Of the 24 skatpickers killed, 18 were between the ages of 14 and 16, and 6 between the ages of 17 and 47. An analysis of these figures will show that in proportion to the number em-

ployed there were fewer fatal accidents among drivers and runners between the ages of 16 and 17, than among the employes from 18 to 37. This observation is also true in regard to the slatepickers. The statistics for 1905, in the bituminous region, show that 3 doorboys were killed between the ages of 14 and 16. Of the 38 drivers and runners killed inside, 18 were between the ages of 18 and 24, 12 between the ages of 25 and 35, and 8 between the ages of 36 and 53.

When the matter of the sanitary conditions is considered, the boy who is tending door inside of a mine has the advantage, as he is enabled to breathe purer air than the boy in the breaker, especially in the breakers that are known as "dry" breakers. The inside worker is also protected from the heat of summer and the cold of winter.

While the Department very earnestly advocates the employment age of fourteen years for boys inside the mines, it is also of the opinion that the employment age of drivers should be 16 years, runners 17 years, miners' laborers in the anthracite region and loaders in the bituminous region, 18 years, and miners in both regions, 21 years. It would tend to the safety, health and strength of the boys if they were allowed to begin work at fourteen years of age as doortenders, and after remaining for two years in that position they could be employed as drivers. The two years' experience would familiarize them with the work of drivers and runners, and they would also in that time have naturally become stronger physically for the more strenuous work of the laborer and miner.

## AN ACT

Regulating the employment of minor children in or about any anthracite coal mine or colliery; prohibiting the employment of any child under the age of sixteen years inside of any anthracite coal mine; prohibiting the employment of any child under fourteen years of age in or about any anthracite coal-breaker or colliery, or the outside workings thereof; prohibiting the employment of any minor child, of any age, in or about either the inside workings of any anthracite coal mine or in or about any anthracite coal-breaker or colliery, or the outside workings thereof, unless the person, firm, co-partnership or corporation, employing said minor child, shall first obtain and file the employment certificate, as provided for by this act, and carry out the other duties provided by this act; fixing the duties of the common school superintendents; or, in the absence of such an officer, then that of the principal teacher of any city, borough or township, as relates to the issuance of said employment certificates and the other duties provided by this act; declaring what said employment certificate shall contain; providing for the form and wording of said employment certificates and the issuance of the blank-forms by the Department of Mines of this Commonwealth; making false swearing to any certificate provided for by this act to be perjury, and punishable as such; providing that the failure of any employer of minor children to produce the certificate required by this act, upon demand of the proper persons, shall be prima facie evidence of the illegal employment of said minor children; fixing the duty of truant or school attendance officers, as to carrying out the provisions of the act; giving to the common school superintendent, or, in the absence of such an official, then to the principal teacher of any city, borough or township, the same power to administer oaths or affirmations as is now given to notaries public, in all matters connected with the proper enforcement of this act; providing a penalty for the violation of the provisions of this act.

Section 1. Be it enacted, &c., That it shall be unlawful for any person, firm, copartnership or corporation to employ any minor child, under the age of sixteen years, inside of any anthracite coal mine, or to employ any minor child, under the age of fourteen years, in any anthracite coal breaker or colliery, or around the outside workings of any anthracite coal mine.

Section 2. It shall be the duty of the Chief of the Department of Mines of this Commonwealth, and the right of any citizen of this Commonwealth, in the name of the Commonwealth of Pennsylvania, upon violation of the provisions of section one of this act, to bring suit in the court of common pleas of the county wherein said offense or violation occurred; and if, upon the trial of the case, the jury shall find that such violation did occur, they shall render a verdict against the offending party or parties, to an amount equal to ten dollars for each and every day said minor child or children were employed contrary to the provisions of this act; said amounts, when collected, to be paid into the State Treasury, for the use of the Commonwealth; and the State Treasurer shall return one-half of the



fine or fines so collected to the school-district in which the child, so illegally employed, resided.

Section 3. It shall be unlawful for any person, firm, copartnership or corporation to employ any minor child in or about any anthracite coal mine or colliery, or permit any such minor child to work in or around any anthracite coal mine or colliery, unless the person, firm, copartnership or corporation, employing said child or permitting said minor child to work, is furnished with and keeps on file an employment certificate, as hereinafter prescribed, and maintains a complete list of such children employed. Such lists and employment certificates at all times during the employment of such minor children, shall be subject to the inspection of any common school superintendent, any truant or attendance officer of any school-district, the Chief of the Department of Mines of this Commonwealth, or any mine inspector, and shall be returned to each child when his or her employment shall cease.

Section 4. It shall be the duty of the city, borough or township common school superintendents within their various jurisdictions, and of the principal teacher, where no common school superintendent has jurisdiction, or their duly authorized deputies, to issue the employment certificates provided for in this act; but no principal teacher shall be authorized to issue said employment certificates within any district under a duly authorized common school superintendent. The district of such city, borough or township superintendent or principal teacher shall be the same as that in which the child seeking an employment certificate resides. Said employment certificate shall only be issued after the affidavits and documents hereinafter prescribed have received careful consideration by said common school superintendent or principal teacher, as the case may be, or their duly authorized deputies, as aforesaid; and no fee or emolument shall be charged for issuing the same.

Section 5. An affidavit, in duplicate, as to the age of any child under sixteen years seeking an employment certificate, shall be made by the father, mother, guardian or custodian of the child; and shall set forth the place and date of his or her birth, and the date and place of his or her baptism or circumcision, if any; shall be accompanied by a certificate of the registration of birth, baptism or circumcision of such child, as kept by any religious denomination; or by a certificate of the registration of his or her birth, as kept by any public authority, or, in the case of a foreign-born child, a true copy of passenger-manifest, passport or other official record, filed at the office of the Commissioner of Immigration, at the port of arrival.

Section 6. The employment certificate required by the third section of this act, shall consist of the affidavit as to age, made before

the city, borough or township common school superintendent, or principal teacher, as aforesaid, or their duly authorized deputies; and the other certificate, as herein provided, together with the certificate of approval by the said common school superintendent or principal teacher, as the case may be, or their duly authorized deputies, as hereinbefore provided, and shall be called employment certificate number one.

Section 7. The blank-forms of the several certificates shall be furnished, free of charge, by the Department of Mines of this Commonwealth, upon application by the proper persons, and shall be uniform throughout the State. A duplicate of each employment certificate shall be filled out and kept on file by the city, borough or township common school superintendent, or the principal teacher in localities not under the jurisdiction of any city, borough or township superintendent issuing the certificate, together with a certificate of the registration of birth, baptism or circumcision, or, in case of a foreign-born child, a copy of passenger-manifest, passport, or other official record, as herein provided by this act.

Section 8. False swearing to any affidavit given in accordance with the provisions of this act shall constitute perjury, and be punishable as such.

Section 9. A failure to produce to the common school superintendent, any truant or attendance officer, the Chief of the Department of Mines of this Commonwealth, or any mine inspectors, an employment certificate and the list required by this act, when requested so to do, shall be prima facie evidence of the illegal employment of any minor child whose employment certificate is not produced or whose name is not so listed; and it shall be the duty of the Chief of the Department of Mines of this Commonwealth, and the right of any citizen of this Commonwealth, in the name of the Commonwealth of Pennsylvania, upon any violation of the provisions of this act providing for the keeping and filing of said employment certificate and list of minor children, to bring suit in the court of common pleas of the county wherein said violation occurred; and if, upon the trial of the case, the jury shall find such violation actually did occur, they shall render a verdict against the offending party or parties to an amount equal to ten dollars for each and every day said minor child or children were employed contrary to the provisions of this act; said amounts, when collected, to be paid into the State Treasury for the use of the Commonwealth; and the State Treasurer shall return one-half of the fine or fines so collected to the school-district in which the child, so illegally employed, resided.

Section 11. Truant or school attendance officers shall report any cases of such illegal employment to the city, borough or township superintendent, or to the principal teacher in localities not under

the jurisdiction of any city, borough or township superintendent, and to the Inspector of Mines of the district.

Section 12. The city, borough or township superintendent, and the principal teachers in localities not within the jurisdiction of any common school superintendent, and their duly authorized deputies, shall have the power to administer oaths and affirmations in all matters where persons desire to swear to, affirm or verify any documents or affidavits necessary to properly carry out the provisions of this act.

Section 13. Nothing in this act shall be so construed as to make the employers of minor children liable to the penalties herein mentioned for the illegal employment of said minor children before the fifteenth day of October, Anno Domini one thousand nine hundred and five.

Section 14. All acts or parts of acts inconsistent with the provisions of this act be and the same are hereby repealed.

Approved—The 2d day of May, A. D. 1905.

SAML. W. PENNYPACKER.

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#### JUDGE WHEATON'S OPINION.

The plaintiff is a minor over the age of sixteen years and is a resident and citizen of the school district of the borough of Plymouth, Luzerne county, Pennsylvania.

The defendant is the common school superintendent of the said school district.

Since the approval of the Act of the General Assembly of May 2, 1905, entitled "An act regulating the employment of minor children in or about any anthracite coal mine or colliery, etc.," the plaintiff applied to the defendant for an employment certificate, as contemplated by said act.

The defendant refused to issue such certificate.

Whereupon plaintiff applied for a writ of alternative mandamus, which was issued August 30, 1905.

To this, defendant made return, which was filed September 25, 1905.

To this return plaintiff demurred.

Demurrer filed September 26, 1905.

The legal questions thus raised are as follows:

First—Does the said act of May 2, 1905, require the issuance of an employment certificate to a minor over sixteen years of age?

Second—Is the common school superintendent obliged to obey

the act, which in express terms denies him any compensation for the duties imposed upon him?

Third—Is the act constitutional?

Depends on Construction.

The answer to the first question depends entirely upon the construction of the language of the act.

It was without doubt, the intention of the Legislature to require employment certificates from all minor children above the age of fourteen years as a pre-requisite to their employment in or about any anthracite coal mine or colliery.

Section 3 provides that "it shall be unlawful for any person, firm, co-partnership or corporation to employ any minor child in or about any anthracite coal mine or colliery, unless the person, firm, co-partnership or corporation employing said child or permitting said minor child to work, is furnished with and keeps on file an employment certificate, as hereinafter prescribed, and maintains a complete list of such children employed."

The title of the act is, in part, "An act prohibiting the employment of any minor child, of any age, in or about either the inside workings of any anthracite coal mine or in or about any anthracite coal breaker or colliery, or the outside workings thereof, unless the person, firm, co-partnership or corporation employing said minor children shall first obtain and file the employment certificate, as provided for by this act," etc.

The legislative intent, thus clearly expressed, will not fail as to minor children above the age of sixteen years, unless the act has omitted to "prescribe" or "provided for" a method of obtaining employment certificates for such minors.

With due regard for the argument that this is a penal statute and must therefore receive a strict construction, the controlling principle is, that the clearly expressed intention of the Legislature may not be thwarted by a technical or too narrow construction of the language of the act.

Requirements of Act.

Section 6 provides that "the employment certificate required by the third section of this act"—which clearly covers all minors above the age of fourteen years—"shall consist of the affidavit as to age made before the city, borough or township common school superintendent, or principal teacher, as aforesaid, or by their duly authorized deputies; and the other certificate, as hereinafter provided, together with the certificate of approval, etc." \* \* \* "and shall

be called 'employment certificate number one,' or 'employment certificate number two,' as the case may be."

What affidavit as to age?

The act does not say the affidavit as to age, "as aforesaid"—which might mean the affidavit provided for in section 5 immediately preceding, for children under the age of 16 years only—but the "affidavit as to age made before the common school superintendent, etc., as aforesaid,"—to wit, the affidavit contemplated by section 4 of the act which broadly covers all the employment certificates provided for in the act and required by the third section.

This construction seems to be further strengthened by the form of affidavit prescribed, which in each case is entitled "affidavit of parent, guardian or custodian" and in each instance is sufficient to embrace all minors who, by the terms of the act, may be employed in or about the anthracite mines.

It is argued that the words in section 6, "the affidavit as to age," refer to section 5 of the act, and that since section 5 provides only for an affidavit as to children under the age of 16 years, that there is no basis for an employment certificate to a child over the age of 16 years, and therefore none is required.

Such construction ignores the language of section 6, that "the employment certificate required by the third section of this act shall consist, etc."—and ignores the fact that the statutory form of affidavit and certificate prescribed by section 6 is broad enough to cover all minors above the age of 14 years, and ignores the fact that the language is as fairly referable to section 4 of the act as to section 5, and it would override the manifest intent of the Legislature that employment certificates must be furnished by or for all minors permitted by the act to be employed in or about the anthracite coal mines.

If section 6 had provided that the "employment certificate required by the third section of this act shall consist of an affidavit as to age made before the city, borough or township common school superintendent, or principal teacher, as aforesaid," in form as follows: (Form as prescribed following) it would not seem to leave much ground for arguing that there was no provision for minors above the age of 16 years.

That in effect is what the section does provide, and so construed it is consistent with the legislative intent as expressed in section 3 and in the title. We are of opinion, therefore, that the act covers minors above the age of 16 years as well as those between the ages of 14 and 16 years, and provides a method for obtaining employment certificates for all minors above the age of 14 years seeking the particular employment covered by the act.



## Office of Superintendent

The answer to the second question involved is, that the office of borough superintendent of common schools is one of purely legislative creation, and the man who takes the office takes it with the burden of such additional labors as the Legislature may in its discretion see fit to impose from time to time. This infringes on no constitutional right of the possessor of the office, and is violative of no duty of the legislative body.

See *Comm. vs. Moir* 199 Pa. p. 549 and cases there cited.

As to the third proposition presented, (although the point has not been made) if the duties imposed upon defendant were purely ministerial, and he had no interest in the act beyond the mere performance of such duties, he would have no standing to set up the unconstitutionality of the act, and the question would not be before us for determination. But this defendant has an interest in the act.

The burden which is imposed upon him is substantial.

Upon the allegation of the answer admitted by demurrer, there are about two thousand minors in his district between the ages of 14 and 21 years of age, most of whom are employed in and about the anthracite coal mines and collieries.

This act will require defendant not only to devote his time, but to expend his own moneys, without hope of being reimbursed.

In addition to his interest in the act, growing out of the performance of its requirements, without compensation, which in effect is to diminish his salary or emoluments, his duties are not purely ministerial.

He is required to certify in each case that the applicant "can read and write legibly simple sentences in the English language."

This certificate is necessarily based upon an examination of the applicant. The method of examination, and the subject matter presented, within the general limits of the act, are left to the discretion and judgment of the superintendent and his determination as to the applicant's qualifications, is the result of his judgment, which, if fairly exercised, could not be controlled or reversed.

## Duties not Ministerial

We are of opinion, therefore, that the defendant has such interest in the act, and that part, at least, of his duties thereunder are of such character, as to remove him from the class of purely ministerial officers, and give him standing to raise the question of the constitutionality of the act.

Absence of interest is the very ground of those decisions which declare against the right of a ministerial officer to urge the unconstitutionality of an Act of Assembly imposing duties upon him.

It is argued, that the act is unconstitutional: First, because it violates article 14, section 1, of the Constitution of the United States, which provides that "no State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty or property, without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws;"—that the language "the equal protection of the laws," means the protection of equal laws;—that the specific violations consist, in those provisions of the act of 1905, which require as pre-requisite to the employment of the class of minors created by the act, whose right to work is recognized, a different educational qualification on the part of some of the class, from that which is required of others of the same class;—that this inequality as to members of the same class of minors, is based upon the ability or inability of the individual members of the class, to produce "a certificate of the registration of his or her birth, baptism or circumcision, as kept by any religious denomination, or by any public authority; or in the case of a foreign born child, a true copy of passenger manifest, or other official record, filed at the office of the Commissioner of Immigration, at the port of arrival;"

That this clearly shows that the discrimination, which is claimed to be illegal and violative of the constitutional provision referred to, is not based upon any pretended exercise of the police power, and that even if it were so claimed, the very basis of the discrimination would show that it was an unlawful, unreasonable and arbitrary attempt to exercise such power.

Secondly—That the act violates the constitutional provisions aforesaid, because it requires certain educational qualifications before a minor can work in the anthracite coal mines, which is not required for any other kind of employment.

The argument on this branch of the question is based upon the alleged absence of any relation between an educational qualification and the dangers of the employment, and of any bearing of such qualification upon health or morals or public welfare, or other proper subject of legislation within the purview of the police power of the State, on account of which it is argued the discrimination against the particular employment is unlawful. We cannot sustain defendant's position in this regard.

#### Guardian of all Minors.

In considering the only question left, we must start out with a recognition of the fact that the Legislature is the guardian of all the minor children of the State.

It has power to act, and frequently does act, as *parens patrie*

on behalf of lunatics, minors and other incapacitated persons including adult women. *Com. vs. Beatty*, 15 Pa. Super. Ct. p. 5.

It has power to prohibit the employment of all minors in any and all places and occupations generally recognized as hazardous to person, health or morals, or where such employment would be detrimental to the public welfare.

It has the right to say that only such minors as are within or above certain ages may be employed in certain places and occupations.

Section 1 of the act under consideration is a fair illustration of the exercise of this right.

It has the right to say that every individual minor who is of the specified age which relieves him from the prohibition against working in a particular employment shall possess a certain amount of intelligence, evidenced by a certain educational standard, or shall be possessed of a certain standard of health or physical perfection, evidenced by an examination; but once having created the class and recognized its right to the employment in the particular occupation, the Legislature has no right or power to prevent some of the class from working by subjecting them to a restriction which it does not impose upon other members of the same class, particularly where the sole ground of the discriminating restriction is place of birth, or difference in color of skin, or inability to produce a certified copy of a record which may never have existed, or if it ever did exist, may have been lost or destroyed.

### The Right to Work.

It needs hardly to be stated that, in the absence of statutory prohibition, the right of a minor child to work has existed since mankind began to work, and that it is a property right, the very foundation of the acquisition and enjoyment of property.

By the terms of section 6 of the act of 1905, those native born minors above the age of fourteen years who are able to produce a "certificate of religious record of birth, baptism or circumcision" or "the certificate of public registration of birth," and those foreign born children who are able to produce "the certificate of passport, or other official immigration record," to supplement the affidavit of parent, guardian or custodian, may work in or about the anthracite mines, etc., as the case may be, if they "can read at sight, and write legibly simple sentences in the English language."

Those minors above the age of fourteen years who cannot produce a "certificate of registration of birth, baptism or circumcision," or if "foreign born," cannot produce a copy of passenger manifest, passport or other official record, (immigration office), of age, may not work in or about the anthracite mines, etc., as the case may be, unless



they "can read at sight and write legibly simple sentences in the English language," and in addition thereto produce a certificate from the principal teacher of the last schools where they attended "which states that they have received instruction in reading, spelling, writing, English grammar and geography, and are familiar with the fundamental operations of arithmetic, to and including fractions."

There is also added to this latter class of minors another restriction contained in the form of approval,—P. L., page 348—which is made by the act an essential part of the statutory form of employment certificate, that they shall have "regularly attended the public schools, or schools equivalent thereto, during the year previous to applying for such school record, and for the period required by the compulsory attendance laws of this Commonwealth"—that is, during seventy per centum of the school year.

#### Does not Apply Alike

This would apparently prevent the issuing of an employment certificate under the act to any minor child above the age of fourteen years who cannot produce a certificate of registration of birth, baptism, etc., and who did not attend school last year, but would in no way affect the employment of those minor children above the age of fourteen years who did not attend school last year if they are fortunate enough to be able to produce a certificate, etc., of birth registration.

From a mere statement of these provisions of the act it is apparent that it does not apply alike to all of the class affected by it.

It does not afford to all the members of that class similarly situated the equal protection of the law.

It deprives certain members of the class of a vital property right, to wit, the right to labor in or about the anthracite coal mines, without due process of law.

This inequality of protection and deprivation of right is founded solely upon a frivolous and arbitrary ground of distinction, which cannot be defended as being the exercise of the police power of the State, or within the powers of general guardianship.

That clause of the Fourteenth Amendment which ordains that no State shall deny to any person within its jurisdiction the equal protection of the laws, undoubtedly prohibits discriminating and partial legislation by any State in favor of particular persons as against others in like condition.

#### Must Treat all the Same

It requires that legislation which prescribes regulations for the health, good order and safety of society, or is adopted to advance its

interests and prosperity, shall treat alike all persons brought under subjection to it. *Minneapolis Railway Co. vs. Beckwith*, 129 U. S. p. 29.

Police regulations, though necessarily special in character, do not furnish ground of complaint if they operate alike upon all persons or property under the same circumstances and conditions.

Class legislation discriminating against some and favoring others is prohibited, but legislation which in carrying out a public purpose is limited in its application, if within the sphere of its operation it affects alike all persons similarly situated, is not within the amendment. *Barbier vs. Connelly*, 113 U. S. 27, 32.

The discriminations which are open to objection are those where persons engaged in the same business are subjected to different restrictions, or are held entitled to different privileges under the same conditions. *Soo Hing vs. Crowley*, 113 U. S. 703, 709.

For the reasons stated we are of the opinion that so much of the act as requires the furnishing of employment certificates, and as provides a method for obtaining the same, and imposes duties as to their issuance, and fines and penalties for employing those who shall not have procured them is violative of the Fourteenth amendment and is unconstitutional and void.

The first and second sections of the act are severable and are a valid and constitutional exercise of the police power, and they and the repealing clause may stand.

The prayer for a mandamus is refused at the cost of the petitioners.

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### SUPERIOR COURT OPINION

This is an appeal from judgment in favor of the defendant, a borough common school superintendent, on demurrer to his return to an alternative writ of mandamus, the object of which was to compel him to perform the duties prescribed by the act of May 2, 1905, P. L. 344, and to issue to the petitioner an employment certificate as provided by that act. In his return the defendant admitted the facts alleged in the petition but claimed that he could not be required to perform the acts: First, because the provisions of the act relative to the issuance of employment certificates do not include minors over 16 years of age; second, because, being a public officer within the protection of section 13, article 3 of the Constitution of Pennsylvania, the enforcement against him of the provisions of the act whereby extremely onerous duties are imposed upon common school superintendents, for the performance of which compensation is explicitly denied by the act, would be in contra-

vention of that section of the Constitution; third, because the provisions of the act referred to under the first head are in violation of the first section of the fourteenth amendment of the Federal Constitution. The court below decided against the defendant upon the first two propositions, and while his counsel do not in their printed brief expressly assent to these conclusions, they have presented to us no argument in opposition to them. Therefore, and also because we all are of opinion that the court was right in sustaining the third proposition, we do not feel called upon to discuss them with a view to determining whether or not the case can be decided upon them without consideration of the federal question. In saying this we are not to be understood as intimating a doubt as to the correctness of the conclusions of the court upon the first two questions.

#### Prohibits Minors from Working.

Conceding, for the purposes of the case, all that the learned counsel for the appellant has so forcibly and ably argued in support of the claim that the Legislature has power to prohibit the employment of minors under a certain age in or about anthracite coal mines, and the power to prescribe certain educational qualifications as a condition precedent to the right of minors who have reached the specified age to be so employed, without imposing the same restrictions upon minors before engaging in other employment, there remains the serious objection, which has not been satisfactorily answered that the legislative provisions under consideration make a discrimination between minors of the same sex and age, the same mental and physical ability, the same experience in this avocation and the same educational qualifications, permitting members of one class to obtain employment certificates, without which no minor can be employed at all, upon much easier terms than are required of members of the other class. The first class consists of those who are able to produce in addition to the affidavit of parent, guardian or custodian, a certificate of registration of birth, baptism or circumcision as kept by any religious denomination, or a certificate of registration or birth as kept by any public authority, or, in the case of a foreign born child, a true copy of passenger manifest, passport or other official record on file in the office of the Commissioner of Immigration at the port of arrival. The second class consists of those who are unable to produce either of such certificates or copy of such official records.

#### Discrimination.

A member of the first class may obtain an employment certificate if he can read at sight and write legibly simple sentences in the

English language, while a member of the second class, although of the same age as the member of the first class, and perhaps older, not only (1) must be able to read at sight and write legibly simple sentences in the English language, but in addition to the affidavit of parent, guardian or custodian, is required (2) to produce a statement of the principal teacher of the last school which he attended certifying that he has received instruction in reading, spelling, writing, English grammar and geography and is familiar with the fundamental operations of arithmetic, to and including fractions, and (3) to produce such evidence as will enable the common school superintendent to certify that he regularly attended the public schools, or schools equivalent thereto, during the year previous to applying for such school record, and for the period required by the compulsory attendance laws of this Commonwealth. Proof that he is of the prescribed age, no matter how convincing, will not take the place of these additional prerequisites which a minor of the second class must show that he possesses in order to obtain an employment certificate. Doubtless the strict enforcement of these regulations applicable to this class would exclude from employment in or about the mines a very large proportion of minors of the second class under 14 years of age, and thus tend to prevent imposition on the part of such as to their age; but it is equally apparent that it would make it impossible for great numbers of minors between 14 and 21 years of age, who are able to read at sight and write legibly simple sentences in the English language, and who can prove conclusively that they are of the required age, to obtain an employment certificate until they have undergone school training for a considerable period in other branches of education. To require this in order to put them on an equal footing, as to the right to labor in or about anthracite coal mines, with the minor who is able to produce a certificate of registration of birth, baptism or circumcision, or copy of an immigration record, is to deny them the equal protection of the laws. The first section of the fourteenth amendment does not prohibit classification of the subjects of legislation, and the application of different regulations to different classes.

#### The Federal Law.

Nor are the courts warranted in declaring a classification made by the Legislature to be in conflict with the section, merely because in their judgment it is unnecessary, unwise or inexpedient. But although it is primarily a legislative question, it is not beyond the jurisdiction of the courts to inquire, and determine, whether the attempted classification transgresses constitutional limitations of legislative power. "While good faith and a knowledge of existing conditions on the part of the Legislature is to be presumed, yet to

carry that presumption to the extent of always holding that there must be some undisclosed and unknown reason for subjecting certain individuals or corporations to hostile and discriminating legislation is to make the protecting clause of the fourteenth amendment a mere rope of sand, in no way restraining State action:" Justice Brewer in *Gulf, Colorado & Santa Fe R. R. Co. vs. Ellis*, 165 U. S. 150. (17 Sup. Ct. Repr, 255.) Arbitrary selection can never be justified by calling it classification. Even in the most extreme cases cited in the appellant's brief it is expressly or impliedly conceded that while every presumption possible in favor of the validity of the legislative classification is to be made, yet where it is apparent that it is not based on any reasonable ground, or any difference which bears a just and proper relation to the subject with reference to which the classification is attempted, but is a mere arbitrary selection, it will not relieve the statute from the equality clause of the fourteenth amendment. The learned judge below reached the conclusion that the provisions of the act under consideration are, for that reason, in conflict with that clause, but that section 1, which makes it unlawful to employ any minor under 16 years inside of any anthracite coal mine, or to employ any minor under 14 years in any anthracite coal breaker or colliery, or around the outside workings of any anthracite coal mine, and section 2, which prescribes the remedy for violation of the provisions of section 1, are a valid and constitutional exercise of the police power, and are enforceable, notwithstanding the invalidity of the other provisions of the act relative to employment certificates. We concur in his conclusion and do not find that we can add anything further to what is clearly set forth in the opinion filed by him in support of it.

The judgment is affirmed.

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### THE AGES OF BOYS IN THE BREAKERS

During the latter part of 1905 a man by the name of Lovejoy made a tour of the anthracite counties inquiring into the ages of boys employed at the mines. In blazing head lines the daily papers published, on Mr. Lovejoy's authority, the statement that 1,000 boys were found at work in and about the breakers who were under the legal employment age of fourteen years. A newspaper reporter called my attention to this report, and asked if it was true. I answered that to the best of my knowledge it was not true; that it was a very extravagant statement. One of the district inspectors was also asked regarding the report, and he denied its accuracy, stating that in his opinion there were not more than



2,000 boys who were below the employment age, and even they had certificates from their parents or guardians to show that they were over fourteen. The general public, by this most unreliable authority, was asked to believe that through the neglect of the mine inspectors 10,000 children were allowed to work in and about the breakers, in plain violation of the law. Owing to the wide-spread publicity given the statement, the Department decided to make a thorough investigation to see just what foundation it had to rest upon.

On the 12th of December the following circular letter was therefore mailed to each inspector:

"Dear Sir: I hereby instruct you to make a special visit to each breaker in your district, so that you may be able to make a report to the Department of Mines not later than December 31, 1905. Make a strict inquiry as to the ages of boys working in and about the breakers. See whether Section 1 of the Act of May 2, 1905, has been complied with. Insist upon all boys, wherever found, furnishing proper proof of age according to law. You are authorized to enter legal proceedings against all violators of this law, whether employer or employe. Make a report to this Department of the total number of boys over fourteen and under sixteen years of age employed in and about each breaker; also give the names of boys of doubtful age, with the address of their parents or guardians.

Please acknowledge receipt of this letter.

Very truly yours,

(signed)

JAMES E. RODERICK,

Chief of Department of Mines."

The inspectors immediately made a thorough tour of their districts and reported the results to this Department. From these reports I am able to state that the total number of boys ranging from fourteen to sixteen years of age, employed in and about the breakers, is 8,124. Of this number the inspectors had some doubt as to 760 of the boys having reached the legal employment age, although each of them had presented the certificate required by law, which was on file, showing that he was over fourteen years of age. The boys of doubtful age number a little over 9 per cent. of the total number employed. It is very probable, however, that many of the 760 classed as doubtful by the inspectors are over fourteen. The difficult thing is to get at the correct ages of these boys, as at least 75 per cent. of them were born in foreign countries. Besides this, the Department has neither the time nor the money to spend in prosecuting the parents or guardians of these children. If the next Legislature could be induced to appropriate about \$50,000 for this purpose, the Department could enter proceedings to get at the true facts in the matter, as it has in its possession the names and addresses of the parents and guardians of children of doubtful age.

One instance may be cited here of the difficulty the Department meets with in its efforts to prosecute the violators of the law. On the 20th of October last the following letter was received at this Department from The Pennsylvania Society to Protect Children from Cruelty, Philadelphia:

"Dear Sir: We desire to call your attention to the case of \_\_\_\_\_ of Tamaqua, Pa. He is working in Number \_\_\_\_\_ Breaker and will be fourteen years of age on the 28th day of December, and is therefore working in violation of the law. We trust you will give this matter your immediate attention.

Yours very truly,

SCOTT NEARING,  
Assistant Secretary."

The Department at once took this matter up with the inspector of the district, stating the facts and requesting that he investigate and report at once. On the following day I made a personal investigation and found that the boy was working as stated, but had provided the foreman with a certificate showing that he was over fourteen years of age. I felt satisfied, however, notwithstanding the certificate, that we had a case against the boy and the Company and that the Secretary who had written the Department had the necessary proof. An attorney was therefore engaged to prosecute the coal company employing the boy, for violation of the law. Proceedings were entered and the writ was made returnable December 8, but the attorney said it would be impossible to have the case brought to trial before March term, 1906. The Department not being satisfied with this slow procedure, wrote the attorney asking him if there was no way under the law by which a more speedy trial could be had. At this juncture of the case the attorney for the Commonwealth was confronted by an affidavit from the father of the boy, presented by his attorney, which read as follows:

"Schuylkill County: ss.

..... being sworn, says that he is the father of ....., and that the said ..... was born the twenty-eighth day of December, 1889, and is now almost sixteen years of age."

This affidavit was sworn and subscribed to October 24, 1905, before Samuel Beard, justice of the peace. I at once sent a copy of this affidavit to Mr. Nearing, who had made the original complaint, stating in my communication as follows:

"Please find herewith an affidavit showing that ..... is nearly sixteen years of age. Are you prepared to give us the evidence as per your letter of October 19, that he will be fourteen years of age the 28th day of December, 1905?"

On the 28th of December I received a letter from Mr. Nearing, with an affidavit enclosed, signed and sworn to by an agent of The

Pennsylvania Society to Protect Children from Cruelty, showing that the parents of the boy mentioned had, on the 23rd of August, 1905, informed him that the boy who was working in the ——— breaker was born December 28, 1891. As the oath of the father would have more weight than the oath of the agent of the Society, the Department felt that it could do nothing else than drop the case and pay the attorney's fee and expenses.

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### DANGERS OF MINING COAL

The mining of coal is a most dangerous vocation; the lives of the men engaged in it are always in jeopardy, and yet the exercise of care and judgment on the part of both employer and employe would eliminate much of the danger. It is true that the managers of the mines of Pennsylvania have adopted rather stringent rules in their efforts to safeguard the miners, and have spent large sums of money to make the mines safe. But the fact still remains that the chief object of the management is to produce the greatest amount of coal at the smallest cost. The employes inside of the American mines are producing more coal per person than the employes of the mines in any European country, and are also earning more money than the foreign employes. With all this strenuous effort, it may still be doubted whether the American employer of labor in the coal mines is earning any larger dividends on his investment than the European employer of similar labor. The question is, Does this combined effort on the part of employer and employe to increase the production, add to the perils that already surround this occupation? If so, it is time to call a halt on both employer and employe, and insist that they give greater attention to the safeguarding of the lives of the people in the mines. The dangers cannot be entirely eliminated, but they can be lessened greatly if the common and well known precautions are taken. The roofs should be made secure, care should be taken in handling explosives, in dealing with gaseous mines, in running the mine cars, in operating the machinery of the hoisting shafts and the machinery in and about the breakers. Undoubtedly many accidents could be prevented if greater precautions were taken. From my experience of many years I am of the opinion that nothing but stringent laws that will reach both employer and employe, with penalty clauses attached that can be enforced, will prevent the sacrifice of lives in the mines of Pennsylvania. There can be no good reason advanced why the American operator and the American miner cannot be made to observe laws made for their mutual benefit and protection. I would again sug-



gest that a commission of experts be appointed to prepare a mining law that will be comprehensive enough to cover the needs of both the anthracite and bituminous mines. The law should carry with it the power to punish all violators of its provisions.

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### FATAL ACCIDENTS

The total number of fatal accidents in the anthracite region during the year was 644. The greatest loss of life was caused by falls of coal, slate and roof. Of the 551 fatal accidents that occurred inside of the mines, 295, or about 53.54 per cent., were due to this cause; mine cars caused 82, or 14.88 per cent.; explosions of gas and suffocation by gas 43, or 7.8 per cent.; explosions of powder and dynamite 16, or 2.91 per cent.; premature blasts 44, or 7.99 per cent.; falling into shafts 43, or 7.8 per cent.; miscellaneous causes, 28, or 5.08 per cent. The number of fatal accidents outside of the mines was 93, or 14 per cent. of the total number. It seems incredible that 23 persons should be killed by the cars, 33 by machinery, and 11 by suffocation, on the surface. If even ordinary precautions had been taken by the victims themselves, or by those who were in charge of the breakers and machinery, a great majority of these lives would have been spared. The reports of the inspectors show that the breakers are generally constructed so that they are practically safe, the dangerous parts being carefully guarded. Nevertheless, every year shows a recurrence of a large number of fatalities. Those killed by cars are generally the victims of their own carelessness; those smothered in the chutes are sometimes the victims of their own carelessness, but frequently of the carelessness of the persons in charge of the work. Whenever a person in charge is so regardless of the lives of those under him as to send an employe into the chutes to shovel back the coal, without taking the precaution to protect him from the loaders under the breaker, he should be deemed guilty of manslaughter and punished accordingly.

The occupations of the 551 victims inside of the mines were as follows: Miners 308, or 55.9 per cent.; miners' laborers 148, or 26.86 per cent., a total of 456, or nearly 83 per cent. of the total number killed inside, or 6.16 killed for every 1,000 miners and miners' laborers employed. The number of drivers and runners killed was 31, or 5.63 per cent., or 2.57 for every 1,000 employed; doorboys and helpers 14, or 2.54 per cent., or 4.26 for every 1,000 employed; company men 28, or 5.08 per cent., or 2.7 for every 1,000 employed; 1 mine foreman and 2 fire bosses, or .54 per cent., were also killed, or 1.8 for every 1,000 employed, and 19 other employes, or 3.45 per cent.

The occupations of those killed outside the mines were as follows: Slatepickers 24, or 1.43 for every 1,000 employed; engineers and firemen 6, or 1.06 for every 1,000 employed; carpenters and blacksmiths 5, or 1.83 for every 1,000 employed; other employes 58, or 2.17 for every 1,000 employed.

### FATAL ACCIDENTS BY FALLS AND BY GAS

The table herewith gives the number of lives lost by falls of coal, slate and roof, and by explosions of gas and suffocation by gas, in each anthracite and bituminous district during the year. In the anthracite mines 295 lives were lost by falls and 43 by gas, or about seven times as many by falls as by gas. In the bituminous mines 298 lives were lost by falls and 39 by gas, or about eight times as many by falls as by gas. The First, Fifth, Twelfth and Sixteenth Bituminous Districts were the only districts in which lives were lost by gas. This table has been prepared to show the preponderance of accidents that occur by falls of coal, slate and roof, over those caused by gas explosions and suffocation by gas. It is earnestly hoped that the attention of the next Legislature will be directed to this very important subject, so that some law may be passed, or some of the present laws amended, to make it compulsory on the part of managers and miners to be more careful of the lives of the persons actually engaged in the mining and loading of coal, by insisting that each place be properly timbered and made safe according to law.

Anthracite			Bituminous		
Districts	By falls	By gas	Districts	By falls	By gas
First, .....	31	1	First, .....	22	13
Second, .....	21	1	Second, .....	36	.....
Third, .....	19	.....	Third, .....	4	.....
Fourth, .....	18	1	Fourth, .....	7	.....
Fifth, .....	34	5	Fifth, .....	15	4
Sixth, .....	16	6	Sixth, .....	17	.....
Seventh, .....	26	13	Seventh, .....	18	.....
Eighth, .....	26	13	Eighth, .....	7	.....
Ninth, .....	20	3	Ninth, .....	20	.....
Tenth, .....	9	1	Tenth, .....	14	.....
Eleventh, .....	16	5	Eleventh, .....	25	.....
Twelfth, .....	17	7	Twelfth, .....	18	16
Thirteenth, .....	18	3	Thirteenth, .....	21	.....
Fourteenth, .....	21	6	Fourteenth, .....	16	.....
Fifteenth, .....	3	1	Fifteenth, .....	15	.....
			Sixteenth, .....	38	6
	295	43		298	39

## FATAL ACCIDENTS 1870-1905

The anthracite mine law of Pennsylvania was enacted early in 1870 as a result of the calamity in the Avondale mine in the month of September, 1869, by which 179 persons lost their lives through inhaling the smoke and fumes from a burning breaker. This breaker was built immediately above the shaft, and the mine had no second opening or escape shaft. Before the year 1870 there were no official records kept of the accidents in and about the mines, although accidents were of frequent occurrence and disastrous both to life and property. In proportion to the small number of employes and the small number of mines in operation at that time, the fatalities were very numerous. The act of 1870 was amended in 1885, and again in 1891, but, notwithstanding the legislative endeavor to give greater protection to the workers in and about the mines, the number of accidents has constantly increased.

During the period 1870 to 1879 the anthracite counties were divided into six inspection districts, with six inspectors. The production of coal in 1879, the tenth year of operation under the act of 1870, was 27,711,250 tons; the number of fatal accidents in and about the mines was 262. These figures show that for each life lost 105,768 tons of coal were produced, and 3.81 persons killed for each thousand employed. Between 1879 and 1889 an additional inspector was appointed, making the number seven. The production of coal in 1889, the last year of the second decade, was 38,973,950 tons; the number of fatal accidents in and about the mines was 397, showing that for each life lost 98,171 tons were produced, and 3.32 persons killed for each thousand employed. In 1899, the last year of the third decade, another inspector was added, making the number eight, an addition of two in thirty years. In 1899 the production was 54,034,224 tons; the number of fatal accidents in and about the mines was 461, showing that for each life lost 117,211 tons were produced, and 3.28 persons killed for each thousand employed. During the years 1899 to 1905, a period of six years, the number of inspectors was increased from eight to fifteen. In 1905 the production was 70,220,554 tons; the number of fatal accidents in and about the mines was 644, showing that for each life lost 109,038 tons were produced, and 3.83 persons killed for each thousand employed. The increase in production from 1879 to 1905 was 153 per cent.; the increase in fatal accidents was 146 per cent. The increase in the number of inspectors from eight to fifteen became effective January 1, 1903, but it will be seen that during the years 1903 to 1905 inclusive the number of accidents increased, notwithstanding the augmented force of inspectors, and while it is not to be inferred that the increase in fatalities was due to the increased

number of inspectors, it is nevertheless a fact that the hoped-for decrease in fatalities was not realized. In order to reduce the accidents there must be more frequent inspection by foremen and assistants. This inspection, in my opinion, should be made daily in every working place in the mine, and there should also be insistence on the part of the foremen and assistants that the workmen take proper care of themselves when engaged in the dangerous labor connected with coal mining. These foremen and assistants should see, as directed by law, that no incompetent persons are allowed to mine coal. The workmen, especially the miners, should see that their working places are made safe before doing any work. They should by all means take care of the lives of the laborers put under their care, and when they neglect to do so they should be punished by dismissal and by prosecution for criminal negligence.

In the early seventies the annual reports of the inspectors were poorly edited, no care being taken to make them accurate. It has therefore been difficult to get reliable statistics. Yet through my personal knowledge of the anthracite counties at the time, especially Luzerne and Lackawanna, I have been able to unravel some of the apparent inconsistencies in these reports. I have compiled the following accidents by decades, which will enable the reader to get at the facts readily. During the first ten years, 1870 to 1879, 43 persons lost their lives by falling into shafts, 27 by falling into slopes, 11 by falling into manways, 18 by the breaking of hoisting ropes and the failure of safety appliances to work, 1 by the engineer losing control of his engine. During the second decade, 1880 to 1889 inclusive, 72 persons lost their lives by falling into shafts, 33 by falling into slopes, 4 by falling into manways, 3 by the breaking of hoisting ropes and the failure of safety appliances to work, 5 by engineers losing control of their engines. During the third decade, 1890 to 1899 inclusive, 82 persons lost their lives by falling into shafts, 43 by falling into slopes, 41 by falling into manways, 9 by the breaking of hoisting ropes and the failure of safety appliances to work, 3 by engineers losing control of their engines. During the six years 1900 to 1905 inclusive, of the fourth decade, 55 persons lost their lives by falling into shafts, 42 by falling into slopes, 23 by falling into manways, 22 by the breaking of hoisting ropes and the failure of safety appliances to work, 14 by engineers losing control of their engines. Thus we find that during the thirty-six years 1870 to 1905 inclusive, 252 persons lost their lives by falling into shafts, 145 by falling into slopes, 79 by falling into manways, 52 by the breaking of hoisting ropes and the failure of safety appliances to work, and 23 by engineers losing control of



their engines. This shows that an average of 7 each year was killed by falling into shafts, 4 by falling into slopes, 2 by falling into manways, 1.44 by the breaking of hoisting ropes and the failure of safety appliances to work, and .64 by engineers losing control of their engines. When we consider that tens of thousands of persons have been lowered and hoisted at the anthracite shafts each day for the past thirty-six years, it seems that the safest place in a coal mine is on the cage in the shaft. I think the managers of our coal mines are to be congratulated for the care they have taken of the lives of their employes in this respect. I may also state here that no actual safety can be reached by depending on the safety appliances, especially in shafts where the speed often exceeds 1,000 feet per minute, as something—guides or buntons—must give way in case of the breaking of a rope. There is no great reason for the breaking of the ropes in the hoisting shafts, if the ropes and appliances are properly cared for as directed by law and changed at regular intervals according to the amount of work performed. The law provides that an engineer placed in charge of "an engine whereby persons are hoisted or lowered into any mine, shall be a sober and competent person, of not less than twenty-one years of age. He shall work his engine slowly and with great care when any person is being lowered or hoisted, and no one shall interfere with or intimidate him while in the discharge of his duties. He shall be in constant attendance for that purpose during the whole time any person or persons are below ground." If hoisting engineers do their duty as prescribed by law, there is no excuse whatever for losing control of their engines, unless some unforeseen accident happens to the engine or machinery under their charge, and for such emergencies there should be safety appliances attached to all engines, as provided by law.

It is to be regretted that we cannot commend the foremen and superintendents for their care of the workmen while actually engaged in the mining of coal at the face of the workings. Statistics show an awful loss of life among miners and miners' laborers during the past twenty-five years, 1881 to 1905 inclusive. During that time 4,424 miners and 2,452 miners' laborers, a total of 6,876, were killed.

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## RESPONSIBILITY FOR ACCIDENTS

The Department has spent considerable time and effort in its endeavor to fix the responsibility for the many accidents that occur in the anthracite and bituminous mines. From the reports of the inspectors it is conclusively shown that more than half of the fatalities are due to negligence, carelessness, recklessness and ignorance



on the part of the victims. In the bituminous region, for the year 1905, 64 per centum of the accidents was due to these causes; 58 per centum is charged to the victims themselves, and 6 per centum to other employes. Only 36 per centum of the accidents is classed as unavoidable. In the anthracite region 58 per centum of the accidents was due to these causes; 48 per centum is charged to the victims themselves, and 10 per centum to other employes, 42 per centum being classed as unavoidable.

An effort has also been made to classify the accidents inside the mines with reference to the nationality of the victims. In the anthracite mines during the year 1904 the number of English-speaking miners (including Americans, English, Welsh, Scotch, Irish and Germans) killed was 88; other nationalities 145. During 1905 the number of English-speaking miners killed was 98; other nationalities 210. During 1904 the number of English-speaking miners' laborers killed was 23; other nationalities 122. During 1905 the number of English-speaking miners' laborers killed was 32; other nationalities 116.

In the bituminous mines during 1904 the number of English-speaking miners killed was 46; other nationalities 162. During 1905 the number of English-speaking miners killed was 56; other nationalities 205.

The Department is unable to say what proportion of the employes in the mines are English-speaking persons, but it is evident that the fatalities among the employes designated as non-English speaking are largely in excess of their proportionate number. This is not surprising, however, and will continue to be the case until these people acquire sufficient knowledge of the English language to understand orders given by foremen and thus be able to protect themselves in the performance of their duties. An effort will be made during 1906 to ascertain the number of employes of each nationality inside and outside the mines of the State, and it is hoped that the superintendents and managers will aid the Department in obtaining this information, which we consider important.

Number of employes inside and outside the 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 1905 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	146,165	30,412	39	1.28	3.59
1882, .....	50,764	250	4.92	140,230	31,436	41	1.20	3.54
1883, .....	56,268	274	4.87	137,764	35,153	43	1.39	3.53
1884, .....	61,922	285	4.62	127,513	39,151	46	1.17	3.28
1885, .....	62,901	290	4.61	131,834	37,419	42	1.12	3.21
1886, .....	63,930	236	3.69	165,046	39,114	43	1.10	2.71
1887, .....	67,716	270	3.99	156,153	38,801	46	1.19	2.97
1888, .....	78,688	317	4.03	147,114	43,530	47	1.08	2.98
1889, .....	74,178	339	4.57	128,763	45,486	58	1.28	3.32
1890, .....	73,613	323	4.39	139,276	46,396	55	1.19	3.15
1891, .....	76,569	372	4.86	133,606	46,739	56	1.20	3.47
1892, .....	82,088	361	4.40	141,903	48,212	57	1.18	3.21
1893, .....	86,387	388	4.49	136,188	51,682	68	1.32	3.33
1894, .....	87,901	368	4.19	138,497	52,008	78	1.50	3.19
1895, .....	89,251	354	3.97	160,872	54,454	67	1.23	2.93
1896, .....	94,798	430	4.54	125,217	55,290	72	1.30	3.34
1897, .....	95,812	372	3.88	141,347	53,745	51	.95	2.83
1898, .....	91,771	360	3.95	146,074	51,249	51	.99	2.83
1899, .....	92,167	389	4.22	155,574	48,437	72	1.49	2.88
1900, .....	94,140	358	3.80	160,233	49,684	53	1.07	2.86
1901, .....	98,434	441	4.48	152,142	49,217	72	1.46	3.47
1902, .....	98,377	245	*2.49	168,739	49,762	55	1.11	2.03
1903, .....	102,055	426	4.17	176,692	49,772	92	1.85	3.41
1904, .....	110,262	496	4.49	148,376	50,968	99	1.94	3.69
1905, .....	116,371	551	4.73	142,735	51,883	93	1.79	3.81

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

Number of mines and miners' laborers employed in the 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 1905 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	138,181
1882, .....	22,843	135	5.91	15,229	56	3.68	218	143,584
1883, .....	25,319	136	5.37	16,879	67	3.97	232	145,272
1884, .....	27,100	132	4.87	19,606	81	4.13	192	169,590
1885, .....	23,305	160	5.65	20,128	86	4.27	204	167,331
1886, .....	25,970	131	5.04	17,068	68	3.98	196	177,437
1887, .....	29,558	102	3.45	17,548	57	3.25	208	180,981
1888, .....	34,547	169	4.89	21,952	87	3.96	218	191,002
1889, .....	30,504	194	6.36	19,368	79	4.08	197	197,837
1890, .....	28,936	136	4.70	18,620	95	5.10	210	191,268
1891, .....	30,552	180	5.89	19,590	119	6.07	213	208,339
1892, .....	30,779	189	6.14	22,110	120	5.43	202	226,428
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	24,628	115	4.67	187	271,900
1896, .....	37,003	204	5.51	26,350	134	5.09	170	282,790
1897, .....	36,932	210	5.69	27,277	99	3.63	151	300,310
1898, .....	36,377	176	4.84	24,069	124	5.15	151	312,221
1899, .....	36,421	199	5.46	23,946	114	4.75	149	301,867
1900, .....	36,852	184	4.99	24,613	95	3.86	176	291,007
1901, .....	37,804	224	5.92	26,265	123	4.64	195	307,210
1902, .....	36,392	114	3.13	25,443	62	2.44	*116	318,203
1903, .....	36,823	202	5.49	27,533	110	4.00	211	318,350
1904, .....	39,848	233	5.85	31,217	145	4.64	213	308,494
1905, .....	42,078	308	7.32	31,967	148	4.63	208	337,590

\*Strike during the year. †Washeries worked during the strike. The time was not computed in the average days worked.

## Analyses of Pennsylvania Anthracite Coal. Made by the United States Second Geological Survey.

	Chemical Analyses				Physical Properties.			Percentage of constituents of fuel		
	Water	Volatile matter	Fixed carbon	Sulphur	Ash	Color of Ash	Specific Gravity	Fixed carbon	Volatile matter	Carbon ratio.
Colliery and Coal Bed										
Northern Field										
Hollenbeck shaft, Wilkes-Barre, Balt. (E) bed, .....	2.49	4.34	83.96	.65	8.54	Reddish-gray, .....	1.61	95.08	4.92	19.73
D. & H. Co's No. 5, Plymouth, Cooper bed, .....	3.67	4.51	80.51	.73	10.54	Gray, .....	1.56	94.69	5.71	17.83
D. & H. Co's No. 5, Plymouth, Bennett bed, .....	4.09	4.28	85.32	.73	5.50	Gray, .....	1.54	95.22	4.18	19.92
Eastern Middle Field										
Jeddo Nos. 2 and 4, Mammoth bed, .....	3.66	3.24	85.31	.53	7.04	Cream, .....	1.64	96.74	3.66	25.37
Ebervale No. 2, Mammoth bed, .....	4.13	3.14	81.40	.51	6.60	Cream, .....	1.59	96.23	3.77	25.53
Coleraine Nos. 1 and 2, Wharton bed, .....	3.72	2.75	86.91	.57	6.03	Reddish-gray, .....	1.62	95.43	3.47	31.54
Spring Mountain No. 4, Jeunesville, Mammoth bed, .....	4.14	2.98	88.50	.38	4.38	Cream, .....	1.65	96.73	2.97	29.58
Coleraine Nos. 1 and 2, Mammoth bed, .....	4.30	3.09	86.71	.44	5.54	Cream, .....	1.58	96.06	3.54	28.91
Spring Mountain No. 4, Jeunesville, Wharton bed, .....	3.5	3.37	81.72	.33	7.41	Reddish-gray, .....	1.62	96.17	3.83	25.11
Spring Brook No. 5, Yorktown, Mammoth bed, .....	4.23	2.84	86.25	.69	6.23	Cream, .....	1.69	96.81	3.19	30.35
Spring Brook No. 5, Wharton bed, .....	3.65	3.11	87.56	.45	5.21	Light cream, .....	1.61	96.56	3.41	23.07
Western Middle Field										
St. Nicholas, middle split, Mammoth bed, .....	2.49	4.04	80.28	.60	12.57	Cream, .....	1.67	95.21	4.79	19.87
St. Nicholas, bottom split, Mammoth bed, .....	3.44	3.66	81.81	.79	10.27	Reddish-gray, .....	1.66	95.72	4.28	22.35
St. Nicholas, Buck Mountain bed, .....	2.59	3.95	83.29	.51	9.73	Cream, .....	1.65	95.47	4.53	21.08
Gilberton, New-Cook bed, .....	3.41	3.97	81.86	.51	11.23	Cream, .....	1.65	95.31	4.69	20.32
Gilberton, Elk Mountain bed, .....	3.58	3.94	82.02	.41	10.03	Cream, .....	1.78	95.41	4.79	20.79
Draper, t. Gibbs Mountain bed, .....	2.71	3.82	81.29	1.50	10.69	Reddish-gray, .....	1.66	95.50	4.50	21.52
Draper, Primrose bed, .....	3.35	3.69	80.30	.51	11.46	Reddish-gray, .....	1.64	95.63	4.37	21.88
Turkey Run at Shenandoah, Mammoth bed, .....	3.64	3.62	82.06	.58	12.62	Reddish-gray, .....	1.65	95.65	4.35	21.93
Kobinoor, at Shenandoah, Mammoth bed, .....	3.64	3.43	82.65	1.48	9.24	Reddish-gray, .....	1.62	96.00	4.00	21.00
Kobinoor, Primrose bed, .....	3.55	3.73	82.37	.48	9.83	Reddish-gray, .....	1.66	95.66	4.34	22.04
Southern Field										
(Lehigh Coal and Navigation Co's Colleries, Panther Creek Basin)										
No. 3 Mammoth bed (E), .....	3.03	4.33	85.72	1.01	5.85	*Red, .....	1.57	95.15	4.85	19.62
No. 3 Red Ash bed (F), .....	2.93	4.29	88.18	.55	4.04	Cream, .....	1.57	95.36	4.64	20.55
No. 4 Mammoth bed (D and E), .....	3.11	4.27	81.41	.4	7.69	Light cream, .....	1.61	95.18	4.82	19.75
No. 5 Mammoth bed (D and E), .....	3.04	4.65	83.70	.54	8.05	Light cream, .....	1.62	94.73	5.27	17.98
No. 6 Mammoth bed (D and E), .....	3.65	3.99	86.70	.50	5.14	Cream, .....	1.61	95.60	4.40	31.79
No. 6 Red Ash bed (F), .....	3.08	3.96	87.78	.45	4.71	Dark cream, .....	1.59	95.58	4.32	22.5

\*White specks.

No. 8 Mammoth bed (D and E), .....	3.32	3.71	86.11	.42	5.53	1.62	85.88	4.12	23.27
No. 10 Mammoth bed (D and E), .....	2.74	4.21	81.51	.62	10.87	1.67	85.15	4.95	19.20
No. 11 Mammoth bed (D and E), .....	2.70	4.63	77.98	.83	13.74	1.68	84.33	5.67	16.64
No. 10 Mammoth (D and E), bony coal, 1, .....	2.73	3.92	83.11	.42	9.79	1.66	85.48	4.52	21.13
No. 10 Mammoth (D and E), bony coal, 2, .....	3.03	4.05	83.17	1.32	7.31	1.64	85.40	4.60	20.74
No. 10 Mammoth (D and E), bony coal, 3, .....	2.82	4.24	82.08	.45	10.38	1.67	85.08	4.92	19.32

Average Composition of Pennsylvania Anthracite.

Bed-Field	Chemical Analyses					Percentage of Constituents of Fuel		
	Water	Volatile matter	Fixed carbon	Sulphur	Ash	Fixed carbon	Volatile matter	Carbon ratio, C., V. II, C.
Wharton, Eastern Middle, .....	3.713	3.080	86.404	.585	6.218	96.56	3.44	28.07
Mammoth, Eastern Middle, .....	4.119	3.084	86.379	.496	5.922	96.35	3.45	27.99
Primrose, Western Middle, .....	3.541	3.716	81.590	.499	10.654	95.64	4.35	21.93
Mammoth, Western Middle, .....	3.163	3.717	81.143	.899	11.078	95.62	4.38	21.83
Primrose F., Southern, .....	3.008	4.125	87.982	.506	4.379	95.52	4.48	21.32
Buck Mountain, Western Middle, .....	3.042	3.949	82.662	.462	9.885	95.41	4.56	20.93
Seven-foot, Western Middle, .....	3.410	3.978	80.868	.512	11.222	96.31	4.69	20.72
Mammoth, Southern, .....	3.057	4.875	83.813	.641	8.184	95.15	4.85	19.62
Mammoth, Northern, .....	3.421	4.381	83.208	.727	8.203	95.00	5.00	19.09
B. Coal Bed, Loyalsbook, .....	1.285	8.100	83.344	1.051	6.250	91.14	8.86	10.29



## \*HISTORICAL NOTES OF THE ANTHRACITE INDUSTRY.

- 1820 Lehigh Coal & Navigation Co. began mining and shipping coal from Summit Hill region. Canal opened Mauch Chunk to Easton, 1829; White Haven to Mauch Chunk, 1837.
- 1825 Schuylkill Canal was completed from Mt. Carbon to Philadelphia.
- 1829 Delaware & Hudson Canal Co. began transporting coal from Carbondale region.
- 1831 Nesquehoning R. R. and Plane built.
- 1831 Morris Canal opened Phillipsburg to Newark; opened to Jersey City, 1836. Leased by Lehigh Valley R. R. Co., 1872.
- 1832 Little Schuylkill R. R. began transporting coal from Tamaqua region.
- 1832 Shamokin Division Northern Central Ry. originally opened. Re-organized 1851. Leased to Northern Central Ry. 1863.
- 1833 Delaware Division Pennsylvania Canal opened.
- 1834 Wyoming and State Canals opened.
- 1837 Shipments of coal began from Beaver Meadow region.
- 1837 Shipments of coal began from Pine Grove via Union Canal.
- 1837 Morris & Essex R. R. opened. Leased to D., L. & W. R. R. Co., 1869.
- 1838 Shipments of coal began from Hazleton region.
- 1839 Summit Branch R. R. opened. Leased to S. B. R. R. Co., 1866.
- 1839 Shipments of coal began from Shamokin region westward.
- 1839 Shipments of coal began from Lykens Valley region westward.
- 1840 Shipments of coal began from Buck Mountain region.
- 1840 Quakake R. R. opened. Extended and opened to Mt. Carmel, 1862.
- 1842 Philadelphia & Reading R. R. began transporting coal through to Pt. Richmond.
- 1846 Shipments of coal began from Wilkes-Barre region via L. & S. R. R. Planes and Lehigh Canal.
- 1850 Pennsylvania Coal Co. began business.
- 1852 Central R. R. of N. J. opened from Elizabeth to Easton. Third rail from Hampton Junction laid 1856.
- 1854 Delaware, Lackawanna & Western R. R. Co. began mining and shipping.
- 1855 Lehigh Valley R. R. Co. began transporting coal to Phillipsburg. Opened to Perth Amboy in 1875.
- 1856 Trevorton R. R. opened.
- 1857 Belvidere Delaware R. R. began transporting coal.

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\*From The Coal Trade, 1905.

- 1857 North Pennsylvania R. R. opened. Leased to Philadelphia & Reading R. R. Co. May 1st, 1879.
- 1858 Lackawanna & Bloomsburg R. R. opened; leased to D., L. & W. R. R. Co. 1873.
- 1858 Mining began in McAuley Mountain region.
- 1864 Stove coal sold at auction in July for \$12.03 per ton.
- 1868 Lehigh & Susquehanna R. R. opened to Phillipsburg. Leased to C. R. R. of N. J., 1871.
- 1869 The Coal Trade Journal established, April 21st.
- 1869 Pennsylvania & New York R. R. opened to Waverly.
- 1870 Nesquehoning Valley R. R. and Panther Creek Tunnel opened.
- 1870 Sunbury, Hazleton & Wilkes-Barre R. R. opened. Leased by Pa. R. R., 1878.
- 1871 Erie R. R. Co. began mining and shipping coal.
- 1873 Philadelphia & Reading Coal & Iron Co. began mining and shipping coal.
- 1874 Lehigh & Wilkes-Barre Coal Co. began operations.
- 1879 Philadelphia & Reading R. R. Co. leased Delaware & Bound Brook R. R. May 1st.
- 1879 Stove coal sold at auction in September for \$2.36 per ton.
- 1882 North & West Branch R. R. opened November 23rd.
- 1883 First Reading-Jersey Central lease.
- 1884 Thomas Dickson died, R. M. Olyphant elected president D. & H. C. Co.
- 1885 Pennsylvania mine law put in force.
- 1886 Jersey Central arranged to resume independence on January 1st, 1887.
- 1887 Important development of Lake and Western trade.
- 1888 A "Banner Year," high prices and large tonnage. Fred A. Potts died.
- 1889 Poughkeepsie Bridge Route opened. F. B. Gowen died.
- 1890 New York, Ontario & Western line to Scranton opened.
- 1891 Coxe Bros. road (D. S. & S.) began operations.
- 1892 "Reading Deal" organized by A. A. McLeod.
- 1893 Port Reading began business.
- 1894 N. Y., Susquehanna & Western line to Wilkes-Barre opened.
- 1895 Last formal meeting of the "Sales Agents" held.
- 1896 Last meeting of presidents, held January 23rd, and percentages adopted.
- 1897 E. P. Wilbur resigned presidency of the Lehigh Valley.
- 1898 N. Y., Susquehanna & Western leased to Erie. D. & H. Canal abandoned.
- 1899 Change in Lackawanna; Sam Sloan succeeded by W. H. Truesdale, after thirty years' control.

- 1900 Absorption by the Erie of the Pennsylvania Coal Co. interests, both coal and railroad.
- 1901 The feature this year was the establishment of a recognized scale of selling prices.
- 1902 The long strike from May 12th to October 24th.
- 1903 Record output; shipments approaching 60,000,000 tons.
- 1904 Control of N. Y., O. & W. Ry. goes to N. Y., N. H. & H. R. R. Co.
- 1905 Lehigh Valley R. R. buys out Coxe Bros. & Co. Record production, 78,647,020 short tons.

TABLE AA.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Districts	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	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
First, .....	3,823,591	398,105	54,337	4,284,033	298	11,233	53	61	168,520	235,104	967
Second, .....	3,865,495	44,978	44,978	4,192,693	200	9,915	37	66	159,982	214,757	952
Third, .....	4,009,891	259,286	259,286	4,518,215	177	9,865	37	101	183,044	150,275	1,057
Fourth, .....	5,138,413	222,472	56,636	5,417,571	184	11,751	36	69	290,829	149,686	1,198
Fifth, .....	4,823,415	47,959	47,959	5,225,201	185	13,051	61	93	199,894	620,777	741
Sixth, .....	4,125,919	409,906	94,295	4,630,053	184	11,436	45	112	159,449	667,041	1,311
Seventh, .....	4,689,325	516,951	279,716	5,447,991	189	12,988	61	209	155,706	572,978	1,453
Eighth, .....	6,290,678	447,411	91,963	6,770,022	230	12,609	48	81	172,186	383,887	1,547
Ninth, .....	6,681,321	831,050	155,364	7,067,735	248	15,218	49	131	165,469	1,917,583	1,757
Tenth, .....	3,645,548	422,004	64,463	4,132,015	261	10,062	27	62	48,507	616,273	876
Eleventh, .....	3,645,097	452,133	55,226	4,152,406	178	10,791	50	58	96,253	493,972	919
Twelfth, .....	3,722,322	525,110	41,856	4,283,288	185	10,388	44	76	57,467	588,156	979
Thirteenth, .....	2,962,177	384,703	69,001	3,443,481	203	9,224	40	106	47,467	810,357	964
Fourteenth, .....	4,184,138	593,685	107,974	4,885,697	193	15,298	49	37	113,454	584,535	1,453
Fifteenth, .....	1,432,871	253,395	37,321	1,743,592	259	4,535	12	27	15,183	368,073	525
Totals, 1905, .....	62,441,134	6,359,280	1,420,140	70,220,554	208	168,254	644	1,280	1,962,820	8,353,574	17,500
Totals, 1904, .....	58,158,288	6,171,748	1,379,222	65,709,258	213	161,330	595	1,047	1,791,192	6,897,722	17,185
Totals, 1903, .....	60,231,104	5,716,341	1,230,506	67,171,951	231	151,827	518	1,325	1,707,176	9,000,432	16,872
Totals, 1902, .....	31,531,873	4,424,779	934,957	26,991,540	116	148,141	300	641	835,147	2,200,805	6,133
Totals, 1901, .....	53,447,902	5,279,375	1,178,674	59,905,951	185	147,651	513	1,243	1,520,894	4,153,685	13,059
Totals, 1900, .....	45,271,608	4,880,532	1,064,778	51,217,318	171	143,826	411	1,057	1,237,180	3,434,641	13,408

TABLE AA.—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 delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
	Cylindrical	Tubular	Horse power	Total horse power	Steam	Air	Electric							
First, .....	112	138	18,295	22,389	96	52	32	399	27,881	60	48,120	32,015	16	14
Second, .....	145	80	10,470	11,967	51	4	4	253	17,799	65	58,250	95,204	10	12
Third, .....	59	173	3,154	13,401	13	5	50	303	22,139	59	40,412	26,188	16	5
Fourth, .....	47	152	22,154	23,598	19	7	90	335	21,238	47	41,372	24,662	10	9
Fifth, .....	58	158	27,627	30,157	30	7	12	514	30,439	50	46,404	23,189	10	22
Sixth, .....	77	169	24,430	28,650	18	3	11	359	24,914	56	57,259	34,093	12	15
Seventh, .....	63	167	32,224	35,929	29	5	9	467	47,439	55	38,273	21,504	5	25
Eighth, .....	182	133	23,223	29,121	18	3	15	517	40,162	39	35,036	14,286	8	24
Ninth, .....	240	335	57,622	64,361	120	14	3	685	52,042	119	125,263	64,884	11	22
Tenth, .....	94	180	25,230	28,054	24	4	.....	311	39,778	44	47,030	28,950	.....	10
Eleventh, .....	12	203	28,270	28,570	16	15	3	247	34,033	41	57,516	28,390	1	13
Twelfth, .....	161	227	33,066	38,676	29	.....	9	314	48,835	47	38,349	23,298	8	16
Thirteenth, .....	174	6,588	31,408	37,996	40	4	.....	281	25,765	75	63,316	27,627	1	8
Fourteenth, .....	104	3,240	36,255	39,495	29	3	5	421	48,682	96	71,335	49,645	6	18
Fifteenth, .....	81	90	16,615	20,359	20	.....	5	155	17,788	24	24,059	17,891	3	4
Totals, .....	1,661	2,494	399,068	460,218	454	98	184	5,471	501,474	877	791,994	433,707	117	217



TABLE A.—Number of each class of employes in each district.

Occupations of Persons Employed	Districts															Grand total inside and outside
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	
Mine foremen, .....	28	30	28	28	37	30	29	24	50	23	15	27	29	30	12	420
Assistant mine foremen, .....	17	22	10	12	27	22	19	23	62	11	12	13	17	11	36	314
Fire bosses and assistants, .....	34	13	57	51	53	52	101	67	52	80	80	94	58	111	29	932
Miners, .....	2,836	2,642	2,377	3,155	3,271	3,237	3,055	3,128	3,804	1,000	2,625	2,692	2,015	4,559	1,062	42,078
Drivers, .....	2,920	2,714	2,465	2,916	2,994	2,306	2,578	2,842	2,277	1,621	1,357	1,211	1,158	1,122	476	31,987
Doorbosses and helpers, .....	1,028	1,028	1,068	1,241	1,241	1,035	1,065	1,079	705	446	513	500	379	610	288	12,069
Pumpmen, .....	291	226	246	251	282	241	474	454	256	124	102	106	131	188	99	3,254
Company men, .....	88	46	497	478	51	744	809	61	258	50	56	41	45	100	48	1,009
All other employes, .....	670	454	497	478	81	744	809	1,082	739	976	652	615	438	573	274	10,370
Totals, .....	544	379	697	479	815	498	923	535	1,442	1,277	1,216	1,343	1,228	1,354	558	13,428
Totals, .....	8,490	7,554	7,482	8,716	9,616	8,285	9,049	9,256	9,467	6,138	7,148	6,602	5,898	9,823	2,917	116,371
Occupations of Persons Employed Outside																
Superintendents, .....	9	13	12	.....	5	12	6	8	15	14	4	16	14	11	4	143
Foremen, .....	23	23	23	.....	25	25	20	23	36	29	21	38	37	35	11	401
Blacksmiths and carpenters, .....	144	123	128	142	208	201	223	159	351	188	198	176	186	284	86	2,733
Engineers and firemen, .....	312	214	205	223	363	330	441	371	733	409	352	489	429	575	217	5,663
Slate pickers (boys), .....	595	507	623	820	729	849	983	827	827	800	1,145	710	661	1,588	316	12,040
Slate pickers (men), .....	402	378	255	370	301	228	303	470	677	240	277	197	395	226	45	4,734
Book-keepers and clerks, .....	28	38	47	46	52	63	65	70	80	80	48	58	39	80	22	766
All other employes, .....	1,230	1,065	1,090	1,436	1,752	1,433	1,878	1,445	3,032	2,134	1,668	2,102	1,635	2,586	917	25,403
Totals, .....	2,743	2,361	2,383	3,035	3,435	3,151	3,919	3,353	5,751	3,924	3,643	3,786	3,296	5,385	1,618	51,883
Grand totals, inside and outside, ..	11,233	9,915	9,865	11,751	13,051	11,436	12,968	12,609	15,218	10,062	10,791	10,388	9,224	15,208	4,535	168,254

TABLE B.—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	Percentages
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth		
Falls of coal, slate and roof, .....	31	21	19	18	34	16	26	26	20	9	16	17	18	21	3	295	53.54
Mine cars, .....	10	2	10	5	5	5	7	5	3	2	10	6	2	7	3	82	14.83
Explosions of gas and dust, .....	1	.....	1	.....	5	6	1	2	.....	1	5	3	2	5	1	33	5.99
Explosions of powder and dynamite, ..	.....	.....	.....	3	1	1	.....	.....	2	3	3	1	1	.....	1	16	2.91
Premature blasts, .....	3	3	.....	2	6	4	.....	3	1	.....	8	4	2	.....	.....	43	7.99
Falling into shafts, slopes, etc., .....	1	3	2	.....	2	9	1	1	5	2	3	3	3	6	3	44	7.89
Crushed at batteries, .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....	.....	.....	1	3	.55
Kicked by mules, etc., .....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	4	1	.....	.....	3	.56
Suffocation by gas or otherwise, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	10	1.81
Machinery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous, .....	.....	.....	1	1	.....	2	12	1	.....	.....	.....	.....	.....	.....	.....	23	4.17
Totals, .....	45	28	34	29	54	43	53	38	36	19	47	38	32	42	12	551	100.00
Causes of Accidents Outside																	
Cars, .....	3	1	.....	1	2	.....	4	.....	4	1	1	1	4	.....	.....	23	24.73
Machinery, in shafts, etc., .....	3	2	.....	2	.....	2	.....	5	5	3	2	1	2	.....	.....	33	35.36
Suffocation, .....	.....	1	3	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	11	11.83
Batteries, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous, .....	1	.....	.....	4	1	.....	1	5	3	4	.....	2	2	.....	.....	25	26.88
Totals, .....	7	4	3	7	7	2	8	10	13	8	3	6	8	7	.....	98	100.00
Grand totals, inside and outside, ..	53	32	37	36	61	45	61	48	49	27	50	44	40	49	12	644	100.00

Number of widows, 340.  
Number of orphans, 876.

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

Causes of Accidents Inside	Districts															Total	Percentages
	Districts																
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth		
Falls of coal, slate and roof, .....	24	20	25	25	21	32	59	25	44	6	16	97	17	14	8	364	83.21
Mine cars, .....	16	15	25	13	29	22	47	19	10	9	16	12	13	7	4	552	53.01
Explosions of gas and dust, .....	1	.....	16	2	13	17	19	8	8	16	16	18	24	4	.....	152	13.88
Explosions of powder and dynamite, .....	3	.....	2	3	2	7	9	.....	10	2	12	3	3	1	1	155	5.02
Premature blasts, .....	6	8	19	5	8	5	17	8	14	4	4	.....	12	4	3	109	9.95
Falling into shafts, slopes, etc., .....	1	.....	1	1	.....	.....	6	.....	1	.....	2	1	6	1	1	19	1.74
Crushed at batteries, .....	.....	.....	3	3	2	3	3	2	.....	1	1	.....	1	.....	3	5	4.6
Kicked by mules, etc., .....	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25	2.29
Suffocation by gas or otherwise, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Machinery, .....	6	6	6	5	8	11	30	8	10	13	1	3	9	2	1	109	9.95
Miscellaneous, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	59	52	88	58	83	99	182	70	97	51	54	63	85	33	21	1,095	100.00
Causes of Accidents Outside																	
Cars, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Machinery, .....	1	9	2	6	5	5	6	4	16	2	1	5	4	1	3	69	55.57
Suffocation in chutes, etc., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boiler explosions, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous, .....	1	4	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	2	14	13	11	10	13	27	11	31	11	4	13	21	4	6	194	100.00
Grand totals, inside and outside, ..	61	66	101	69	93	112	209	81	131	62	58	76	106	37	27	1,289	.....

TABLE D.—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	Washeries in tons from	Percentage of production from gaseous mines	Percentage of production from non-gaseous mines	Percentage of production Washeries
First, .....	12	23	34	24	22	2,236,704	1,959,235	78,094	52.21	45.97	1.82
Second, .....	15	15	13	41	37	1,326,006	2,687,487	179,029	31.63	64.10	4.27
Third, .....	19	33	57	6	4	3,911,403	48,269	548,523	86.76	1.07	12.17
Fourth, .....	23	35	51	19	3	4,508,968	294,439	694,164	83.38	3.78	12.84
Fifth, .....	28	50	53	16	14	3,961,437	678,578	585,186	75.81	12.99	11.20
Sixth, .....	23	38	52	17	14	3,896,374	623,572	199,597	82.22	13.47	4.31
Seventh, .....	44	43	101	8	5	5,029,481	330,373	94,538	92.19	6.08	1.73
Eighth, .....	31	46	67	4	1	6,296,843	53,162	519,677	91.68	7.79	7.53
Ninth, .....	30	51	52	78	61	4,026,251	3,042,084	.....	56.96	43.01	.....
Tenth, .....	16	28	80	4	6	3,663,597	355,747	112,671	88.66	8.61	2.73
Eleventh, .....	18	27	89	.....	.....	4,182,466	.....	100.00	.....	.....	.....
Twelfth, .....	37	32	94	13	8	3,667,424	168,413	453,451	85.50	3.93	10.57
Thirteenth, .....	26	35	58	18	11	2,868,568	661,972	15,001	83.26	16.31	.43
Fourteenth, .....	26	34	111	28	31	2,794,749	2,181,111	9,837	55.25	41.25	.29
Fifteenth, .....	19	23	29	.....	.....	1,743,352	.....	.....	100.00	.....	.....
Totals and percentages, .....	357	513	982	276	217	53,835,493	12,464,982	3,480,079	76.67	18.38	4.95

TABLE E.—Quantity of coal produced by each company that produced 500,000 or more tons, and the number of persons employed.

Names of Companies	Number of Inspection Districts	Production of coal in tons.	Employees
Philadelphia and Reading Coal and Iron Company, .....	Tenth, Eleventh, Twelfth, Thirteenth, Fourteenth, Fifteenth, ..	11,479,173	36,635
Lehigh Valley Coal Company, .....	Fourth, Fifth, Sixth, Seventh, Ninth, Tenth, Eleventh, Twelfth, ..	6,766,043	14,251
Delaware and Hudson Company, .....	Fifteenth, .....	5,332,013	14,561
Delaware, Lackawanna and Western Railroad Company, .....	First, Second, Third, Fourth, Fifth, Sixth, Seventh, Eighth, ..	4,966,549	8,321
Lehigh and Wilkes-Barre Coal Company, .....	First, Third, Fourth, Sixth, Seventh, Eighth, .....	4,177,087	9,822
Pennsylvania Coal Company, .....	Second, Third, Fourth, Thirteenth, .....	3,474,411	9,810
Susquehanna Coal Company, .....	Seventh, Tenth, Fourth, Fifth, Sixth, Fourteenth, .....	2,579,918	7,987
Lehigh Coal and Navigation Company, .....	Ninth, Thirteenth, .....	2,434,034	5,133
Seranton Coal Company, .....	First, Third, .....	2,434,034	6,463
Hillside Coal and Iron Company, .....	First, Second, Fifth, .....	1,567,258	3,703
Coxe Brothers and Company, Incorporated, .....	Ninth, Thirteenth, .....	1,314,534	2,251
Temple Iron Company, .....	First, Sixth, .....	1,249,438	3,310
Kingston Coal Company, .....	Sixth, Eighth, .....	1,184,722	2,613
G. E. Markle and Company, .....	Ninth, .....	1,074,878	1,903
Parrish Coal Company, .....	Eighth, .....	887,644	1,477
Mineral Railroad and Mining Company, .....	Fourth, .....	583,909	2,092
Price-Funcoast Coal Company, .....	Second, .....	543,701	1,301
A. Pardee and Company, .....	Ninth, .....	511,989	1,276
Mill Creek Coal Company, .....	Thirteenth, .....	511,013	963
Paraga Brothers and Company, .....	Ninth, .....	508,121	1,228
St. Clair Coal Company, .....	Twelfth, .....	504,400	805
Totals, .....	.....	54,468,034	136,421

The 21 companies named above produced over 75 per cent. of the anthracite tonnage.



TABLE F.—Classification of employes killed or fatally injured in and about the mines, 1877 to 1905 inclusive.

	Years														
	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891
Inside Employes															
Mine foremen and assistants, .....	1	2	2	3	.....	3	2	1	.....	2	1	1	4	1	.....
Fire bosses and assistants, .....	4	4	2	.....	5	5	1	1	.....	2	5	5	2	5	6
Miners, .....	119	94	141	88	114	135	136	132	169	131	102	169	194	146	180
Miners, laborers, .....	32	28	37	38	70	56	67	81	86	68	57	57	79	95	119
Drivers and runners, .....	9	11	22	18	24	28	47	28	16	18	22	33	39	37	38
Doorboys, etc., .....	4	3	6	8	17	9	18	13	6	6	10	9	10	8	7
All others, .....	11	21	22	31	4	14	3	30	19	9	72	16	11	31	22
Totals, .....	16	163	232	186	234	250	274	286	290	236	270	317	339	223	372
Outside Employes															
Foremen, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	3	.....	1	1	.....
Blacksmiths and carpenters, .....	1	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	1	13	.....
Engineers and firemen, .....	.....	.....	.....	.....	.....	.....	.....	9	7	6	3	3	9	8	3
Slate pickers, .....	5	1	6	6	11	11	11	7	13	9	9	6	10	12	11
All others, .....	12	17	17	8	27	23	24	21	16	26	28	37	37	21	40
Totals, .....	18	24	30	16	33	41	49	46	42	43	46	47	58	55	56
Grand totals, inside and outside, .....	194	187	262	202	273	291	323	332	332	279	316	364	397	378	428

TABLE F.—Continued.

	Years													
	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905
Inside Employees														
Mine foremen and assistants, .....	3	3	1	5	3	3	5	2	.....	5	2	3	3	1
Fire bosses and assistants, .....	4	1	.....	1	4	2	4	2	.....	.....	2	3	2	2
Miners, .....	180	19	218	179	204	210	176	199	184	224	114	202	233	308
Miners' laborers, .....	111	108	91	115	134	99	124	114	95	122	62	110	145	148
Drivers and runners, .....	33	47	38	33	46	25	33	39	33	45	27	46	31	31
Doorboys, etc., .....	8	2	5	7	10	4	6	4	8	6	5	12	20	14
All others, .....	16	22	15	14	29	28	12	15	33	37	32	51	63	47
Totals, .....	361	358	368	354	430	372	360	389	358	441	245	426	496	551
Outside Employees														
Foremen, .....	1	2	.....	3	3	.....	1	1	.....	.....	.....	1	1	.....
Blacksmiths and carpenters, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Engineers and firemen, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State pickers, .....	7	.....	12	13	12	7	13	10	5	5	12	6	6	6
All others, .....	45	53	62	41	55	30	33	55	40	58	34	72	79	58
Totals, .....	57	68	78	67	72	51	51	72	53	72	55	92	99	92
Grand totals, inside and outside, .....	418	426	446	421	502	423	411	461	411	513	300	518	595	644

TABLE G.—Number and causes of fatal accidents in and about the mines, 1870 to 1905 inclusive.

	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887
Inside of Mines																		
By falls of coal, .....	41	48	61	73	52	57	52	72	45	75	50	57	73	58	74	65	67	74
By falls of slate and roof, .....	19	16	38	31	41	37	40	44	32	53	44	56	53	66	61	62	61	75
By mine cars, .....	30	27	21	27	32	25	29	15	30	37	36	48	48	52	61	35	35	49
By explosions of gas and dust, .....	17	28	30	22	19	29	16	21	21	26	22	36	22	32	19	25	24	19
By explosions of powder and dynamite, .....	15	6	4	5	5	10	14	3	6	11	3	3	12	11	5	13	7	7
By explosions of hoists, .....	12	12	17	11	18	15	8	13	6	6	7	14	6	28	29	18	18	14
By falling into shafts, .....	13	3	10	11	5	13	4	1	1	3	5	5	8	14	11	11	5	9
By falling into slopes, .....	10	3	3	3	1	2	4	1	1	1	1	1	4	1	5	11	3	1
By falling down manways, etc., .....	2	2	2	2	2	2	2	2	2	3	2	1	1	1	2	2	2	2
Crushed at battoiries, .....	2	2	2	3	4	4	2	3	1	6	1	1	1	1	2	2	2	2
By mules, .....	2	2	2	3	4	4	1	2	2	1	1	1	1	1	1	1	1	1
By suffocation, .....	24	24	2	9	5	4	4	4	4	1	4	5	1	1	1	1	1	1
Miscellaneous causes, .....	35	17	17	26	29	29	19	11	6	7	11	14	15	13	19	*50	16	22
Totals, .....	184	188	198	226	212	204	213	176	163	232	186	234	250	274	286	290	286	270
Outside of Mines																		
By cars, .....	4	4	9	17	4	6	6	5	7	14	2	16	18	24	16	19	12	17
By machinery, .....	4	9	8	6	5	13	5	4	6	6	5	14	9	12	13	9	11	11
By suffocation, .....	1	2	1	1	1	2	1	2	2	1	1	1	2	4	3	3	3	3
By boiler explosions, .....	11	1	1	1	4	3	2	1	1	1	1	3	3	4	3	7	5	1
Miscellaneous causes, .....	7	6	7	14	5	10	2	7	8	9	8	6	12	9	14	7	15	17
Totals, .....	27	22	25	38	19	34	15	18	24	30	16	39	41	49	46	42	43	46
Grand totals, inside and outside, .....	211	210	223	264	231	238	228	194	187	262	202	273	291	323	332	332	279	316

\*Nanticoke disaster; 26 persons were entombed by an inrush of quicksand.

TABLE G.—Continued.

	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905
Inside of Mines																		
By falls of coal, .....	85	81	67	75	88	80	83	66	68	84	58	78	61	66	40	61	82	76
By falls of slate and roof, .....	89	100	70	97	104	100	104	123	187	120	128	148	114	160	76	149	156	219
By mine cars, .....	58	58	56	59	57	74	53	52	49	40	44	51	60	69	42	70	71	82
By explosions of gas and dust, .....	20	29	60	39	57	45	29	31	41	36	33	28	33	33	20	26	30	33
By explosions of powder and dynamite, .....	11	10	3	13	7	11	18	24	9	10	11	11	14	15	19	17	35	16
By explosions of blasts, etc., .....	24	24	16	33	29	30	28	27	28	38	24	27	29	38	13	38	34	44
By falling into shafts, .....	9	3	17	11	6	7	13	7	13	8	7	5	13	15	6	19	14	24
By falling into slopes, .....	3	5	8	6	1	2	5	7	3	3	4	4	4	5	3	6	5	19
By falling down manways, etc., .....	.....	.....	.....	1	7	4	1	4	8	5	4	7	2	4	4	6	7	.....
Crushed at batteries, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
By mules, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
By suffocation, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
By suffocation, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous causes, .....	18	29	26	15	2	10	3	2	7	7	23	15	12	32	17	22	133	23
Totals, .....	317	339	323	372	361	388	368	354	430	372	360	389	358	441	245	426	496	551
Outside of Mines																		
By cars, .....	16	27	25	12	19	14	23	26	18	21	15	26	28	19	19	39	43	93
By machinery, .....	12	14	9	14	11	13	13	15	17	9	14	12	10	12	16	25	18	33
By suffocation, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
By boiler explosions, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous causes, .....	19	11	14	28	22	38	28	21	24	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	47	58	55	56	57	68	78	67	72	51	51	72	53	72	55	92	99	93
Grand totals, inside and outside, .....	364	397	378	428	418	456	446	421	502	423	411	461	411	513	300	518	595	644

\*Twin shaft disaster; 58 persons were entombed.

TABLE H.—Nationality of employes killed or fatally injured in and about the mines, 1892 to 1905 inclusive.

Nationality	Years													
	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905
American, .....	83	73	76	78	85	63	73	90	92	135	80	128	135	139
English, .....	33	36	37	18	33	31	21	27	29	22	14	17	23	18
Welsh, .....	40	41	43	39	38	38	47	30	23	24	15	30	26	27
Scotch, .....	2	1	4	1	3	.....	7	7	4	3	2	2	3	3
Irish, .....	63	75	76	73	87	77	58	67	43	68	28	50	38	38
German, .....	18	25	27	23	17	22	22	15	21	16	15	26	18	22
Polish, .....	96	120	91	113	132	107	114	152	104	139	64	125	166	175
Hungarian, .....	43	39	62	51	61	44	36	27	18	27	14	19	25	18
Italian, .....	14	19	16	18	11	12	8	13	24	25	12	33	35	37
Slavonian, .....	9	15	2	4	3	7	7	6	19	25	16	27	38	47
Lithuanian, .....	9	3	1	4	8	6	.....	5	17	22	17	17	40	56
Austrian, .....	3	6	7	4	6	7	9	10	7	8	8	25	21	22
Russian, .....	3	1	2	1	7	2	12	14	4	7	12	13	23	33
Greek, .....	2	.....	.....	3	8	4	.....	1	2	.....	2	.....	.....	5
Swedish, .....	.....	1	2	3	1	3	1	5	.....	.....	.....	2	.....	.....
French, .....	.....	1	.....	.....	1	.....	.....	1	1	2	.....	.....	.....	.....
Portugan, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bohemian, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Assyrian, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Canadian, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	418	456	446	421	502	423	415	461	411	513	300	518	595	611



TABLE I.—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 per each pound of explosive used, 1892 to 1905 inclusive.

Years	Total 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	624	30,981,875	1,092,190	1.59
1893, .....	52,841,110	611	31,723,771	1,324,142	1.50
1894, .....	50,966,920	580	30,755,450	1,713,235	1.57
1895, .....	56,948,756	638	32,766,775	1,797,494	1.65
1896, .....	53,843,249	593	32,117,950	1,723,170	1.54
1897, .....	52,581,636	549	31,874,950	2,415,650	1.51
1898, .....	52,802,594	579	30,670,160	3,025,055	1.57
1899, .....	60,518,331	653	34,317,275	3,649,417	1.53
1900, .....	57,363,393	609	30,929,500	3,454,641	1.61
1901, .....	67,064,315	682	38,020,160	4,155,685	1.59
1902, .....	41,340,935	*482	21,128,675	2,130,965	†1.77
1903, .....	75,232,585	†737	42,529,400	5,317,422	1.57
1904, .....	73,594,369	†667	44,779,890	6,519,312	1.41
1905, .....	78,647,020	676	47,570,500	8,353,594	1.41

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 J.—Number of employes in and about the mines, by counties, 1885 to 1905 inclusive.

Counties	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
Carbon, .....	2,627	3,355	3,075	4,563	3,487	3,409	3,312	3,848	4,110	5,391	4,352
Columbia, .....	2,375	2,706	1,944	2,087	1,886	2,505	2,797	2,435	2,663	2,624	2,627
Dauphin, .....	2,375	2,750	2,317	2,136	2,276	2,203	2,135	2,104	2,094	2,092	1,975
Lackawanna, .....	19,663	19,572	27,485	24,421	25,176	25,202	25,406	27,565	29,080	30,475	31,446
Luzerne, .....	40,600	41,499	42,719	41,641	43,211	43,314	45,830	48,369	51,355	53,097	55,887
Northumberland, .....	8,511	8,495	9,320	10,814	12,288	12,121	12,516	12,835	13,468	13,517	13,889
Schuylkill, .....	24,136	25,214	24,132	25,632	28,591	30,224	30,227	31,894	33,007	31,731	31,124
Sullivan, .....	236	227	240	273	256	237	229	261	307	312	312
Susquehanna, .....	216	390	380	591	478	644	822	999	1,045	1,012	1,093
Totals, .....	109,320	103,044	106,517	112,218	119,664	119,919	123,268	130,300	138,069	139,339	143,705

Counties	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905
Carbon, .....	4,333	4,748	3,983	3,993	4,242	4,355	3,895	4,051	4,407	4,240
Columbia, .....	1,988	1,977	2,436	2,302	2,633	2,929	2,339	2,236	2,192	2,368
Dauphin, .....	1,988	2,072	2,174	2,399	2,577	2,353	1,945	2,140	2,113	2,167
Lackawanna, .....	22,771	23,802	22,422	30,886	32,811	34,798	35,333	37,470	40,615	40,839
Luzerne, .....	56,955	55,138	51,820	50,803	52,615	53,280	52,766	55,639	59,136	60,734
Northumberland, .....	14,415	14,533	15,833	14,697	15,105	14,187	14,863	14,580	14,345	15,203
Schuylkill, .....	35,324	35,586	34,238	33,392	33,259	33,907	34,950	33,413	35,979	40,467
Sullivan, .....	321	327	467	521	434	434	752	648	665	636
Susquehanna, .....	1,186	1,294	1,193	1,210	1,252	1,409	1,386	1,367	1,392	1,397
Wayne, .....	150,088	149,557	142,420	140,604	143,824	147,651	148,139	151,827	161,330	168,254
Totals, .....	150,088	149,557	142,420	140,604	143,824	147,651	148,139	151,827	161,330	168,254

TABLE K.—Production of coal in tons, by counties, 1885 to 1905 inclusive.

Counties	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
Carbon, .....	688,098	1,164,970	899,296	1,592,865	1,227,908	1,266,541	1,191,158	1,427,542	1,510,289	1,589,305	1,577,144
Columbia, .....	612,880	601,731	629,713	715,821	615,778	529,490	761,539	889,490	741,991	510,537	463,042
Dauphin, .....	7,401,663	7,407,884	8,925,779	10,127,619	8,770,807	9,374,359	10,184,248	689,879	640,723	699,607	712,885
Lackawanna, .....	14,787,376	14,916,101	15,000,747	17,270,294	15,434,395	15,825,674	17,726,560	11,410,554	11,677,550	11,170,382	11,859,382
Luzerne, .....	2,561,135	2,250,822	2,814,390	3,094,229	2,973,348	3,098,547	3,672,828	17,548,508	18,253,145	17,243,993	19,143,101
Northumberland, .....	7,546,255	7,876,083	8,359,953	8,055,708	8,613,283	9,045,246	9,778,111	3,724,284	3,731,405	3,803,660	4,573,144
Schuykill, .....	119,612	61,767	92,679	84,030	71,390	63,746	94,584	76,009	9,992,086	9,985,092	11,495,388
Sullivan, .....	81,459	97,071	176,421	213,595	261,827	315,350	359,713	457,622	571,956	413,578	840,914
Wayne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	34,135,583	34,777,615	37,644,015	41,628,425	38,979,950	40,166,327	44,376,180	45,738,373	47,179,563	45,506,179	50,847,164

Counties	1886	1887	1888	1889	1900	1901	1902	1903	1904	1905
Carbon, .....	1,488,550	1,327,225	1,445,288	1,680,585	1,663,961	1,659,992	986,127	1,919,662	2,012,064	2,211,077
Columbia, .....	443,330	481,453	694,175	766,761	825,045	1,201,294	658,091	1,208,843	1,023,298	1,097,944
Dauphin, .....	1,023,842	11,946,871	11,574,460	12,239,951	12,885,108	15,409,010	377,683	1,565,437	1,645,296	1,645,648
Lackawanna, .....	17,838,773	17,768,773	17,768,773	19,839,742	16,178,578	21,946,212	10,581,401	17,898,233	16,971,066	17,597,468
Luzerne, .....	3,571,697	3,571,697	3,571,697	4,399,547	4,188,243	4,849,099	13,016,026	24,891,394	24,736,884	26,778,139
Northumberland, .....	11,092,772	10,671,913	10,980,700	12,226,938	11,886,160	13,640,766	2,823,273	4,927,304	4,923,578	4,985,697
Schuykill, .....	151,758	164,046	147,533	163,555	11,209,422	7,658,306	14,633,487	14,633,487	14,440,320	16,949,250
Sullivan, .....	474,637	476,488	422,939	621,125	496,432	663,487	365,194	262,002	262,772	277,229
Wayne, .....	.....	.....	.....	275,955	19,520	329,877	.....	714,976	618,260	607,273
Totals, .....	48,074,330	46,947,554	47,146,174	54,034,224	51,217,318	59,905,951	36,911,549	67,171,951	65,708,268	70,229,564

TABLE L.—Fatal accidents per each 1,000 employes in and about the mines and tons of coal mined for each fatal accident, 1870 to 1905 inclusive.

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	66,033
1872	44,745	223	4.98	13,899,976	62,332
1873	48,199	264	5.48	18,751,353	71,028
1874	53,402	231	4.33	17,794,857	77,034
1875	69,566	238	3.40	20,895,220	87,795
1876	70,474	228	3.24	20,929,166	86,013
1877	66,842	194	2.90	22,077,8.9	113,893
1878	62,964	187	2.92	18,161,577	99,794
1879	68,847	262	3.81	27,711,250	105,768
1880	73,373	202	2.75	24,977,261	123,650
1881	76,031	273	3.59	30,537,998	111,891
1882	82,200	291	3.54	31,201,277	107,595
1883	81,421	323	3.93	33,703,008	104,341
1884	101,073	332	3.28	22,561,373	98,066
1885	100,320	352	3.31	34,135,583	102,818
1886	103,014	279	2.71	34,777,618	124,611
1887	106,517	216	2.07	37,644,088	119,127
1888	122,218	364	2.98	41,638,426	114,391
1889	119,664	397	3.32	38,973,950	98,171
1890	119,919	378	3.15	40,166,327	106,230
1891	123,308	428	3.47	44,376,180	103,683
1892	130,360	418	3.21	45,778,373	109,422
1893	138,069	456	3.30	47,119,563	103,464
1894	139,939	446	3.19	45,566,179	102,032
1895	143,705	421	2.93	50,847,104	120,777
1896	150,088	502	3.34	48,074,330	95,763
1897	149,557	423	2.83	46,947,154	110,987
1898	142,420	411	2.89	47,154,171	114,708
1899	140,604	461	3.28	54,024,224	117,211
1900	143,824	411	2.86	51,217,318	124,115
1901	147,651	411	2.79	59,905,951	116,775
1902	148,139	300	2.03	36,911,549	123,438
1903	151,827	518	3.41	67,171,951	129,675
1904	161,330	595	3.69	65,709,258	110,433
1905	168,254	644	3.83	70,220,554	109,038

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# ANTHRACITE DISTRICTS

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# First District

LACKAWANNA AND SUSQUEHANNA COUNTIES

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Scranton, Pa., March 6, 1906.

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

Sir: I have the honor to transmit herewith my annual report for the First Anthracite Inspection District, for the year ending December 31, 1905.

Respectfully submitted,

L. M. EVANS,  
Inspector,

## SUMMARY OF STATISTICS

Number of collieries, .....	17
Number of mines, .....	36
Number of mines in operation, .....	36
Number of tons of coal shipped to market,.....	3,833,591
Number of tons used at mines for steam and heat,.....	396,105
Number of tons sold to local trade and used by employes,	54,337
Number of tons produced, .....	4,284,033
Number of persons employed inside of mines,.....	8,490
Number of persons employed outside,.....	2,743
Number of fatal accidents inside of mines,.....	46
Number of fatal accidents outside,.....	7
Number of non-fatal accidents inside of mines,.....	59
Number of non-fatal accidents outside,.....	2
Number of tons of coal produced per fatal accident inside,	93,131
Number of persons employed per fatal accident inside,...	184
Number of persons employed per fatal accident outside,	392
Number of persons employed per non-fatal accident inside,	144
Number of persons employed per non-fatal accident outside,	1,371
Number of wives made widows,.....	28
Number of children orphaned,.....	93
Number of steam locomotives used inside of mines,.....	1
Number of steam locomotives used outside,.....	25
Number of compressed air locomotives used inside,.....	27
Number of electric motors used inside, .....	32
Number of fans in use,.....	32
Number of gaseous mines in operation,.....	12
Number of non-gaseous mines in operation,.....	24

## TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Scranton Coal Company,.....	1,294,934
Delaware and Hudson Company,.....	1,141,048
Hillside Coal and Iron Company,.....	698,567
Delaware, Lackawanna and Western Railroad Company,	617,796
Temple Iron Company, .....	412,407
North End Coal Company;.....	110,531
Morss Hill Coal Company,.....	8,750
	<hr/>
Total, .....	4,284,033
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## Production by Counties.

Lackawanna, .....	3,676,760
Susquehanna, .....	607,273
	<hr/>
Total, .....	4,284,033
	<hr/> <hr/>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	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									
Scranton Coal Co., .....	9	4	13	13	.....	13	143,881	99,610	2,814	1,134	3,948	313	253	216	.....
Delaware and Hudson Co., .....	14	1	15	15	1	16	81,503	76,070	2,002	666	2,668	143	666	133	666
Hullside Coal and Iron Co., .....	7	.....	7	10	.....	10	99,795	69,857	1,209	367	1,576	173	.....	129	.....
Delaware, Lackawanna and Western R. R. Co., .....	8	.....	8	13	.....	13	77,224	47,523	1,263	254	1,517	138	254	87	.....
Temple Iron Co., .....	4	1	5	6	1	7	103,102	65,734	815	231	1,046	204	231	136	231
North End Coal Co., .....	4	.....	4	2	.....	2	27,633	58,265	340	76	416	85	.....	170	.....
Morsis Hill Coal Co., .....	.....	.....	.....	.....	.....	.....	.....	.....	47	15*	62	.....	.....	.....	.....
Totals and averages for district, .....	46	7	53	59	2	61	93,131	72,611	8,490	2,743	11,233	181	392	144	1,371



TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December.		
Falls of coal, .....	1	1	1	1	1	1	1	1	1	1	1	1	2	4.35
Falls of roof, .....	1	1	3	2	3	2	5	4	3	1	4	3	29	63.05
Mine cars, .....	1	1	1	1	1	1	3	1	1	1	1	1	10	21.74
Explosions of gas and dust, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	2.17
Premature blasts, .....	1	1	1	1	1	1	1	1	2	1	1	1	1	6.52
Falling into shafts, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	2.17
Totals, .....	2	4	4	3	4	3	8	6	5	2	5	4	46	100.
Causes of Accidents Outside.														
Cars, .....	1	1	1	1	1	1	1	1	1	1	1	1	3	42.86
Machinery, .....	1	1	1	1	1	1	1	1	1	1	1	1	3	42.86
Miscellaneous, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	14.28
Totals, .....	1	1	1	1	2	1	1	1	1	1	1	1	7	100.
Grand totals inside and outside, ..	3	1	4	4	6	4	8	7	5	2	5	4	53	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December.		
Falls of coal, .....	1	2	1	2	3	1	1	1	1	2	3	2	4	6.78
Falls of roof, .....	2	2	1	2	3	1	1	1	1	2	3	2	20	33.90
Mine cars, .....	1	2	1	1	1	1	3	1	1	1	3	1	16	27.12
Explosions of gas and dust, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1.69
Explosions of powder and dynamite, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	5.09
Premature blasts, .....	1	1	1	1	1	2	1	1	1	1	1	1	6	10.17
Falling into shafts, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1.69
By mules, .....	2	1	1	1	1	1	2	1	2	1	1	1	2	3.39
Miscellaneous, .....	1	1	1	1	1	1	1	1	1	1	1	1	6	10.17
Totals, .....	4	7	5	3	4	3	7	5	5	5	8	3	59	100.
Causes of Accidents Outside.														
Machinery, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	50.00
Miscellaneous, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	50.00
Totals, .....	1	1	1	1	1	1	1	1	1	1	1	1	2	100.
Grand totals inside and outside, ....	4	7	5	4	4	3	7	5	6	5	8	3	61	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

Inside	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December.	
Miners, .....	1	.....	.....	1	3	1	5	3	2	1	3	1	21
Miners' laborers, .....	1	.....	3	3	.....	1	1	2	.....	.....	.....	.....	15
Drivers and runners, .....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	2
Doorboys and helpers, .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Company men, .....	.....	.....	.....	.....	1	1	1	.....	.....	1	.....	.....	1
All other employes, .....	.....	.....	1	.....	1	1	1	.....	.....	1	.....	1	6
Totals, .....	2	.....	4	3	4	3	8	6	5	2	5	4	46
Outside.	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	2
Slatepickers (boys), .....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Slatepickers (men), .....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	4
All other employes, .....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	1	1	.....	1	2	1	.....	1	.....	.....	.....	.....	7
Grand totals inside and outside, .....	3	1	4	4	6	4	8	7	5	2	5	4	53

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

Inside	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December.	
Miners, .....	3	3	3	3	3	1	.....	3	3	3	3	1	24
Miners' laborers, .....	.....	.....	.....	1	.....	1	1	1	1	3	3	1	11
Drivers and runners, .....	.....	3	3	.....	1	1	3	1	.....	1	1	1	14
Doorboys and helpers, .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Company men, .....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	3
All other employes, .....	1	1	1	.....	.....	.....	2	.....	.....	.....	2	.....	7
Totals, .....	4	7	5	3	4	3	7	5	5	5	8	3	59
Outside.	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Engineers and firemen, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
All other employes, .....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Totals, .....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	2
Grand totals inside and outside, .....	4	7	5	4	4	3	7	5	6	5	8	3	61

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December.	
American, .....	..	..	1	..	2	2	2	1	1	1	..	3	13
English, .....	..	..	..	..	1	..	..	..	..	..	..	..	2
Welsh, .....	..	..	..	1	..	..	..	..	1	..	..	..	2
Scotch, .....	..	..	..	..	..	..	..	..	..	..	..	..	1
Irish, .....	..	..	..	..	1	..	1	..	1	..	1	..	4
German, .....	..	..	..	..	..	..	1	..	..	..	..	..	1
Polish, .....	1	1	1	2	1	1	2	3	..	1	1	1	15
Hungarian, .....	..	..	..	..	..	..	..	..	..	..	1	..	1
Italian, .....	..	..	1	..	..	..	..	1	..	..	..	..	2
Slavonian, .....	..	..	..	..	1	..	..	..	..	..	..	..	1
Lithuanian, .....	1	..	..	..	..	..	..	..	2	..	..	..	3
Austrian, .....	1	..	..	1	..	..	..	..	..	..	..	..	2
Russian, .....	1	..	..	..	..	1	1	1	..	..	1	..	4
Greek, .....	..	..	..	..	..	..	..	1	..	..	..	..	1
Totals, .....	3	1	4	4	6	4	8	7	5	2	5	4	53

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months.												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	2	2	1	..	1	..	3	..	2	1	1	..	13
English, .....	..	..	..	..	..	1	..	..	..	..	..	..	2
Welsh, .....	1	1	1	1	..	..	1	..	..	..	1	..	5
Irish, .....	..	..	..	..	1	..	..	..	1	..	..	..	2
Polish, .....	..	..	..	..	1	..	..	..	1	..	..	..	2
Hungarian, .....	..	3	1	2	1	..	1	3	2	2	3	1	15
Italian, .....	..	..	..	..	..	..	..	..	..	..	..	..	1
Slavonian, .....	..	1	..	..	..	..	1	..	1	..	..	..	3
Lithuanian, .....	..	..	..	1	..	..	..	..	..	..	1	..	2
Austrian, .....	..	..	..	..	..	..	..	1	..	1	1	..	3
Russian, .....	1	..	..	..	..	2	..	1	..	..	..	..	4
Totals, .....	4	7	5	4	4	3	7	5	6	5	8	3	61

TABLE I.—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 person

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 in—side	Average number of cubic feet per minute provided for each person
Scranton Coal Co.																
Johnson No. 1, .....	Shaft, .....	Gaseous, .....	Fan, .....	30	10	8	50	1.5	Guibal, .....	Steam, .....	6	173,750	122,440	169,910	274	450
Johnson No. 2, .....	Shaft, .....	Non-gas, .....	Fan, .....	18	5	6	110	1.8		Steam, .....	4	49,850	72,040	101,550	278	262
Raymond No. 1, .....	Shaft, .....	Non-gas, .....	Fan, .....	13	6	6	125	.5		Steam, .....	2	31,950	33,800	38,275	145	203
Raymond No. 2, .....	Shaft, .....	Non-gas, .....	Fan, .....	10	3.3	3	135	1.5		Gasoline, .....	2	31,740	32,647	37,120	125	263
Dunmore Veln, .....	Drift, .....	Non-gas, .....	Fan, .....	6	2	2	50	1.2		Steam, .....	1	52,500	50,000	54,000	30	1,666
Ontario Colliery, .....	Shaft, .....	Non-gas, .....	Fan, .....	20	4.25	5.25	65	1.2		Steam, .....	4	65,680	60,685	73,050	244	366
Ontario Colliery, Ontario, .....	Tunnel, .....	Gaseous, .....	Fan, .....	13	3.25	3.6	90	1.2		Steam, .....	1	70,000	40,800	70,000	249	582
Ontario Colliery, Kiondyke, .....	Tunnel, .....	Non-gas, .....	Natural, .....	12	3.25	4	120	1.2		Steam, .....	2	108,000	81,000	111,400	70	540
Ontario Colliery, Blue Ridge, .....	Tunnel, .....	Non-gas, .....	Fan, .....	15	4.50	4	60	.5		Steam, .....	2	36,000	21,000	38,100	68	308
Ontario Colliery, Blue Ridge, .....	Shaft, .....	Gaseous, .....	Fan, .....	18	4	5	120	.9		Steam, .....	1	17,900	12,200	19,900	58	210
Richmond No. 3, .....	Shaft, .....	Non-gas, .....	Fan, .....	22	4	6	75	4		Steam, .....	5	111,050	98,300	124,600	185	300
Riverside, .....	Shaft, .....	Non-gas, .....	Fan, .....	22	4	6	75	4		Steam, .....	5	53,250	48,075	53,365	160	300
Richmond No. 4, .....	Shaft, .....	Non-gas, .....	Fan, .....	14	4	4.5	50	4		Steam, .....	1	24,000	17,800	25,200	35	508
Delaware and Hudson Co.																
Coal Brook, Mills Drift, .....	Tunnel, .....	Non-gas, .....	Fan, .....	17	4.25	4.25	75	1.2	Guibal, .....	Electric, .....	5	80,870	69,995	96,785	222	315
Coal Brook, Nos. 5 and 12 Drifts	Tunnel, .....	Non-gas, .....	Fan, .....	20	5	5.30	80	1.7		Steam, .....	3	44,290	40,100	48,780	166	241
Coal Brook, No. 7 Drift, .....	Tunnel, .....	Non-gas, .....	Fan, .....	20	5	5.30	80	1.6		Electric, .....	3	48,620	45,120	51,940	160	282
Coal Brook, No. 15 Drift, .....	Tunnel, .....	Non-gas, .....	Fan, .....	17	4.25	4.25	60	1		Electric, .....	1	11,460	10,330	12,160	30	344
Leggitts Creek, No. 1, .....	Shaft, .....	Gaseous, .....	Fan, .....	20	5	6	75	2.5		Steam, .....	2	34,560	30,220	37,420	23	1,318
Leggitts Creek, No. 2, .....	Shaft, .....	Gaseous, .....	Fan, .....	20	5	6	75	2.5		Steam, .....	2	153,040	137,550	166,410	322	427
Leggitts Creek, No. 3, .....	Shaft, .....	Gaseous, .....	Fan, .....	22	6	6	90	2.4		Steam, .....	4	79,900	65,290	106,600	176	370
Marvine, .....	Shaft, .....	Gaseous, .....	Fan, .....	22	5	5	80	2.6		Steam, .....	7	167,730	160,400	178,250	345	464
Marvine, .....	Slope, .....	Gaseous, .....	Fan, .....	20	5	5	65	1.4		Steam, .....	5	188,390	163,700	214,540	290	818



TABLE I.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine.
Scranton Coal Co. Johnson, .....	Lackawanna, ..	Wm. L. Allen, ....	Peekville, .....	John K. Berkheiser, John K. Berkheiser, John K. Berkheiser, John Von Egan, John K. Berkheiser, John K. Berkheiser, John Aitken, .....	Olyphant, .....	N. Y., O. and W.
Raymond, .....						
Ontario, .....						
Richmond No. 3, .....						
Riverside, .....						
Richmond No. 4, .....						
Raymond Washery, .....						
Delaware and Hudson Co. Coal Brook, .....	Lackawanna, ..	C. C. Rose, .....	Scranton, .....	Edw. Sharar, .....	Scranton, .....	Delaware and Hudson
Leggitts Creek, .....						
Marvine, .....						
Leggitts Creek Washery, .....	Susquehanna, Susquehanna, Lackawanna, ..	V. L. Petersen, ..	Scranton, .....	S. J. Jennings, .....	Forest City, ...	Erle Delaware and Hudson
Hillside Coal and Iron Co. Forest City, .....						
Clifford, .....						
Glenwood, .....						
D. L. and W. R. R. Co. Storrs, .....						
Temple Iron Co. North West, .....						
Lackawanna, .....	Lackawanna, ..	F. H. Hemeiright,	Scranton, .....	Joseph Reese, .....	Olyphant, .....	D. L. and W. N. Y., O. and W.
North West, .....						
North End Coal Co. North End, .....	Lackawanna, ..	Edward Roderick, ..	Scranton, .....	.....	.....	N. Y., O. and W.
Morris Hill Coal Co. Morris Hill, .....	Lackawanna, ..	Joseph W. Wilce, ..	Simpson, .....	Patrick F. Tighe, ...	Carbondale, ...	N. Y., O. and W.



TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County.	Number of tons of coal shipped to market.	Number of tons used at collieries for steam and heat.	Number of tons sold to local trade and used by employes.	Total production of coal in tons	Number of days worked. (Totals are averages, 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
Johnson, .....	Lackawanna.	358,383	40,000	4,244	402,627	191	1,142	3	3	14,502	15,384	96
Raymond, .....		18,250	4,875	4,875	309,978	182	796	.....	2	8,775	5,800	60
Ritardo, .....		30,000	2,690	2,690	352,685	206	1,034	4	1	11,970	78,300	89
Richmond No. 3, .....		7,500	1,500	2,255	165,913	269	529	4	1	6,000	8,800	60
Richmond No. 4, .....		16,400	329	329	79,900	133	300	2	.....	4,730	3,062	30
Richmond No. 4, .....		1,600	1,600	141	6,483	32	115	.....	.....	.....	.....	5
Raymond Washery, .....	Lackawanna.	1,089,202	113,800	14,124	1,217,126	169	3,916	13	13	46,637	111,946	342
Totals, .....		70,495	6,475	1,828	77,798	154	32	.....	.....	.....	.....	.....
		1,159,697	119,275	15,962	1,294,934	169	3,948	13	13	46,637	111,946	342
Delaware and Hudson Co.	Lackawanna.	474,515	20,750	.....	495,265	268	1,082	4	3	16,475	7,710	74
Coal Brook, .....		87,510	87,510	5,098	380,069	268	797	7	8	16,955	22,927	55
Leggitts Creek, .....		234,009	27,984	3,425	265,413	258	771	4	5	11,534	6,186	78
Marvine, .....		895,985	136,244	8,523	1,140,752	245	2,650	15	16	44,964	36,823	207
Leggitts Creek Washery, .....	Lackawanna.	296	.....	.....	296	2	18	.....	.....	.....	.....	.....
Totals, .....		996,281	136,244	8,523	1,141,048	245	2,668	15	16	44,964	36,823	207
Hillside Coal and Iron Co.	Susquehanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Forest City, .....		*204,744	21,623	8,531	440,406	221	904	6	4	17,309	17,634	67

\*Some of the coal mined at Forest City was prepared at Clifford

TABLE 2.—Continued

Names of Operators and Collieries	County.	Number of tons of coal shipped to market.	Number of tons used at collieries for steam and heat.	Number of tons sold to local trade and used by employes.	Total production of coal in tons	Number of days worked. (Totals are averages, 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
Clifford	Susquehanna.	*259,139	12,963	272	166,865	207	403	.....	5	7,029	10,139	53
Glenwood	Lackawanna.	70,081	21,213	.....	91,254	147	269	1	1	3,219	3,365	24
Totals	.....	633,964	55,739	8,804	698,567	192	1,576	7	10	27,567	31,138	144
Delaware, Lackawanna and Western R. R. Co.	Lackawanna.	565,250	46,686	5,860	617,796	221	1,517	9	13	26,736	19,244	84
Storrs	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lackawanna	Temple Iron Co.	207,983	14,183	8,124	220,990	190	618	3	5	11,019	19,492	79
North West	Lackawanna.	171,223	10,308	88	182,117	189	428	2	2	7,147	10,361	72
Totals	.....	379,206	24,491	8,710	412,407	190	1,046	5	7	18,166	29,853	151
North End	North End Coal Co.	94,643	12,710	3,178	110,531	233	416	4	2	4,050	5,500	26
Morss Hill	Morss Hill Coal Co.	4,550	900	3,390	8,750	204	62	.....	.....	400	600	6
Grand totals	.....	3,823,591	396,105	54,337	4,284,033	298	11,223	53	61	168,520	235,104	960

\*Some of the coal mined at Forest City was prepared at Clifford.

TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number and used by employes	Total production of coal in tons	Number of days worked. (Totals are averages, 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
Scranton Coal Co., .....	Lackawanna, ..	1,159,697	119,275	15,962	1,294,934	169	3,948	13	13	46,637	111,946	342
Delaware and Hudson Co., .....	Lackawanna, ..	996,281	136,244	8,523	1,141,048	245	2,668	15	16	44,864	36,523	207
Hillside Coal and Iron Co., .....	Lackawanna, ..	633,964	55,799	8,804	698,567	192	1,576	7	10	27,567	31,138	144
Delaware, Lackawanna and Western R. R. Co., ..	Lack. & Susq.,	565,250	46,686	5,860	617,796	221	1,517	9	13	26,736	19,244	84
Temple Iron Co., .....	Lackawanna, ..	379,296	24,491	8,710	412,497	190	1,046	5	7	18,166	29,853	151
North End Coal Co., .....	Lackawanna, ..	94,613	12,710	3,178	110,531	233	418	4	2	4,050	5,300	26
Morss Hill Coal Co., .....	Lackawanna, ..	4,550	900	3,300	8,750	264	62	.....	.....	400	600	6
Totals, .....	.....	3,833,591	396,105	54,337	4,284,033	298	11,233	53	61	168,520	235,104	960

TABLE 2.—Part 2.

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	Total horse power	Steam	Air	Electric							
Scranton Coal Co.															
Johnson, .....		7	14	1,054	40	4,275	5,359	11	6,777	19	14,389	10,515	6	1	1
Raymond, .....		105	8	330	3	330	330	4	250	4	650	400	5	1	1
Ontario, .....	Lackawanna,	25	6	655	6	460	1,115	4	2,060	5	2,980	1,650	5	2	2
Richmond No. 3, .....		4	3	144	3	300	444	2	455	1	380	580	1	1	1
Riverside, .....		9	5	180	5	400	580	.....	1,101	1	1,200	1,050	1	.....	.....
Richmond No. 4, .....		.....	4	420	4	420	420	.....	290	1	1,400	300	.....	.....	.....
Raymond Washery, .....	Lackawanna,	45	40	1,084	40	4,275	5,359	11	6,777	19	14,389	10,515	6	1	1
Totals, .....		45	43	1,084	43	4,605	5,689	11	7,027	23	15,030	10,915	6	1	1
Delaware and Hudson Co.															
Coal Brook, .....		.....	11	1,650	11	1,650	1,650	4	4,517	.....	.....	.....	.....	2	4
Leggitts Creek, .....	Lackawanna,	24	16	1,150	16	4,000	5,150	.....	6,260	3	7,200	5,200	1	7	7
Marvine, .....		43	.....	869	.....	860	860	.....	2,951	6	4,800	3,500	.....	.....	.....
Leggitts Creek Washery, .....	Lackawanna,	67	27	2,010	27	5,650	7,660	4	12,728	8	12,000	8,700	3	11	11
Totals, .....		67	27	2,010	27	5,650	7,660	4	12,728	8	12,000	8,700	3	11	11
Hillside Coal and Iron Co.															
Forest City, .....	Susquehanna,	.....	18	1,420	18	1,420	1,420	2	2,250	2	1,400	1,250	3	.....	.....
Clifford, .....	Susquehanna,	.....	8	800	8	800	800	1	495	4	2,040	1,200	.....	.....	.....
Glenwood, .....	Lackawanna,	.....	12	900	12	900	900	.....	325	11	4,500	3,700	.....	.....	.....
Totals, .....		.....	38	3,120	38	3,120	3,120	3	3,170	17	7,940	6,150	3	.....	.....

Delaware, Lackawanna and Western R. R. Co. Storrs, .....	13	3,025	3,025	4	.....	11	29	2,510	2	2,160	1,150	3			
Lackawanna, .....	7	1,440	1,440	1	.....	15	15	1,396	9	10,500	4,000	2			
North West, .....	3	750	750	3	.....	9	9	730	.....	.....	.....	.....			
Totals, .....	10	2,190	2,190	4	.....	24	24	2,036	9	10,500	4,900	2			
North End, .....	6	580	580	.....	.....	2	7	285	1	500	500	1			
Morss Hill, .....	1	125	125	.....	.....	3	105	.....	.....	.....	.....	.....			
Grand totals, .....	112	3,094	138	19,295	22,389	26	27	32	309	27,861	60	48,130	32,015	16	14

TABLE 2.—Part 2.

Scranton Coal Co., .....	45	1,064	43	4,605	5,689	11	.....	6	102	7,027	23	15,030	10,915	6	1
Delaware and Hudson Co., .....	67	2,010	27	5,650	7,660	4	27	4	112	12,728	8	12,000	8,700	3	11
Hillside Coal and Iron Co., .....	.....	.....	38	3,120	3,120	3	.....	9	32	3,170	17	7,940	6,150	3	.....
Delaware, Lackawanna and Western R. R. Co. Temple Iron Co., .....	.....	.....	13	3,025	3,025	4	.....	11	29	2,510	2	2,160	1,150	3	.....
North End Coal Co., .....	.....	.....	10	2,190	2,190	4	.....	.....	24	2,036	9	10,500	4,900	2	.....
Morss Hill Coal Co., .....	.....	.....	6	580	580	.....	.....	2	7	285	1	500	500	1	.....
Totals, .....	112	3,094	138	19,295	22,389	26	27	32	309	27,861	60	48,130	32,015	16	14





Glenwood, .....	1	.....	61	68	25	5	6	1	16	153	.....	1	3	9	15	15	.....	43	86	289
Totals, .....	5	1	424	433	132	24	17	123	50	1,209	1	3	23	37	51	49	4	199	367	1,576
D., L. and W. R. Co. ....	4	2	10	430	464	116	6	156	53	1,263	.....	2	10	24	68	17	2	131	254	1,517
Temple Iron Co. ....	2	1	.....	151	60	15	7	48	17	462	1	1	9	13	50	12	2	68	156	618
North West, .....	2	.....	124	142	40	6	3	25	11	353	1	1	6	8	19	6	2	32	75	428
Totals, .....	4	1	.....	303	100	21	10	73	28	835	2	2	15	21	69	18	4	100	231	1,046
North End Coal Co. ....	1	1	109	130	33	3	2	48	12	340	1	1	4	12	21	10	1	26	76	416
Morss Hill Coal Co. ....	1	.....	20	20	3	2	.....	1	.....	47	1	1	1	3	2	6	1	.....	15	62
Grand totals, .....	28	17	34	2,936	2,920	1,032	88	670	544	8,490	9	23	144	312	595	402	28	1,290	2,743	11,233

TABLE 3.—Recapitulation

Seranton Coal Co., .....	8	4	1,031	968	387	83	36	.....	314	2,814	4	8	58	136	276	181	9	462	1,134	3,948
Delaware and Hudson Co., .....	5	1	647	662	261	66	17	269	57	2,062	.....	6	33	79	108	121	7	312	666	2,068
Hillside Coal and Iron Co., .....	4	2	424	433	132	24	17	123	50	1,269	1	3	23	37	51	49	4	199	367	1,576
D., L. and W. R. Co., .....	4	1	.....	330	464	116	6	156	33	1,283	.....	2	10	24	68	17	2	131	254	1,517
Temple Iron Co., .....	4	1	.....	275	303	100	21	73	28	835	2	2	15	21	69	18	4	100	231	1,046
North End Coal Co., .....	1	1	109	130	33	3	2	48	12	340	1	1	4	12	21	10	1	26	76	416
Morss Hill Coal Co., .....	1	.....	20	20	3	2	.....	1	.....	47	1	1	1	3	2	6	1	.....	15	62
Totals, .....	28	17	34	2,936	2,920	1,032	88	670	544	8,490	9	23	144	312	595	402	28	1,290	2,743	11,233

TABLE 3.—Part 2.

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total	
		January	February	March	April	May	June	July	August	September	October	November	December		
Scranton Coal Co.															
Johnson, .....		18	9	.....	20	22	21	15	15	18	17	18	18	18	191
Raymond, .....		13	13	18	19	20	20	14	13	13	13	13	13	13	182
Ontario, .....		17	15	24	21	23	22	15	15	7	16	14	17	17	206
Richmond No. 3, .....		18	16	24	21	22	18	14	14	15	16	15	16	15	203
Riverside, .....		16	17	21	20	20	16	13	14	14	14	14	14	14	193
Richmond No. 4, .....		7	10	10	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	32
Delaware and Hudson Co.															
Coal Brook, .....		20	19	25	23	24	24	23	23	24	21	23	20	20	289
Leggitts Creek, .....		20	16	23	23	3	24	18	17	15	15	16	18	18	208
Marvine, .....		23	19	24	23	25	24	23	20	21	19	17	20	20	236
Hillside Coal and Iron Co.															
Forest City, .....		15	8	17	22	25	25	15	19	21	16	18	20	20	221
Clifford, .....		14	8	9	21	25	16	18	18	21	14	17	19	19	207
Glenwood, .....		11	9	5	13	16	17	12	13	12	11	12	16	16	147
D., L. and W. R. R. Co.															
Storris, .....		18	17	14	20	24	22	17	17	19	19	19	18	221	
Temple Iron Co.															
Lackawanna, .....		14	16	15	16	17	17	13	16	16	16	16	17	16	190
North West, .....		13	13	18	16	17	18	16	16	15	15	16	16	16	189
North End Coal Co.															
North End, .....		21	23	24	21	21	16	13	15	16	22	23	18	233	
Morss Hill Coal Co.															
Morss Hill, .....		.....	.....	26	11	20	17	23	17	23	22	24	21	204	

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of mine	County	Nature and Cause of Accident in Brief
Jan. 7	George Lucoschic, .....	Polish, .....	Miner, .....	45	M.	1	5	Lackawanna, ....	Lackawanna, ..	By cars. Squeezed between car and pillar on gangway road while on his way home.
3	Charles Gragais, .....	Lithuanian, .....	Laborer, .....	31	S.	.....	.....	Storrs No. 3, ....	Lackawanna, ..	By fall of rock while assisting his miner to stand a discharged prop near the face of chamber.
16	John Wanish, .....	Austrian, ..	Company laborer, ..	45	M.	1	1	Richmond No. 3, ..	Lackawanna, ..	By cars. He was engaged in cleaning railroad cars and stepped backward on another track and the engine instantly killed him. It is supposed that on account of the noise in the breaker he failed to hear the locomotive. Outside.
Feb. 6	Powell Atchue, .....	Polish, .....	Laborer, .....	30	S.	.....	.....	Richmond No. 3, ..	Lackawanna, ..	By cars. Stepped directly in front of a car of supply coal. Outside.
March 1	Alonzo Summers, .....	English, ...	Laborer, .....	24	S.	.....	.....	Storrs No. 3, .....	Lackawanna, ..	By fall of rock. Examined place before starting to work in the morning, but it must have contained a slip that they failed to detect. Started to work too soon after falling blast.
7	Bruno Malaio, .....	Italian, ....	Laborer, .....	32	S.	.....	.....	Coal Brook, .....	Lackawanna, ..	By fall of rock. The miner tried to take it down and after falling pronounced it safe. It contained a slip that he did not detect.
13	Walter Poweskie, .....	Polish, .....	Laborer, .....	32	S.	.....	.....	Storrs No. 3, ....	Lackawanna, ..	By cars. A car became derailed at a switch and pinned him against a prop. His leg was badly lacerated. Died March 23.
16	Charles Atkinson, .....	American, ..	Brakeman, ...	16	S.	.....	.....	Storrs No. 2, ....	Lackawanna, ..	By fall of coal. Started to work without making thorough examination of place. Internally injured.
April 8	Frank Cheseny, .....	Polish, .....	Miner, .....	44	M.	1	4	Johnson No. 2, ..	Lackawanna, ..	By fall of rock while he and his miner were standing a prop. Killed instantly.
20	William Macclavige, .....	Polish, .....	Laborer, .....	24	S.	.....	.....	Forest City, .....	Susquehanna, ..	By railroad cars. A runaway car bumped the car he was on and threw him under the wheels. He was instantly killed. Outside.
24	John Kugor, .....	Austrian, ...	Slate-picker, ..	47	M.	1	4	Ontario, .....	Lackawanna, ..	

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of mine	County	Nature and Cause of Accident in Brief
April 26	Phillip Davis, .....	Welsh, .....	Laborer,.....	41	M.	1	4	Coal Brook, .....	Lackawanna, ..	By fall of roof. He and his miner were preparing to stand a discharged prop, when the roof fell on him.
May 3	William Davis, .....	American, .	Motor-runner	19	S.	.....	.....	Marvine, .....	Lackawanna, ..	By cars. He stumbled while getting off the motor while it was in motion and the wheels passed over his body.
6	Raymond Fields, .....	American, .	Bar-tender,...	15	S.	.....	.....	Lackawanna, ....	Lackawanna, ..	He was found dead in the jig pit. The manner in which he came to his death is a mystery. At the jury's request, several employees in that vicinity failed to bring any light on the matter.
20	Thomas Hudson, .....	English, ....	Miner,.....	64	M.	1	.....	Forest City, .....	Susquehanna, ..	By fall of roof. While examining after a blast a large piece fell on him.
26	Maxon Chekofski, .....	Slavonian, .	Miner,.....	40	M.	1	6	Forest City, ....	Susquehanna, ..	By fall of roof. While standing a discharged prop from a blast the roof fell on him.
27	Anthony McAndrew, ...	Irish, .....	Miner,.....	43	*	.....	2	Storrs No. 3, ....	Lackawanna, ..	By fall of roof. He had neglected to take down or stand a prop under it.
27	John Roginski, .....	Polish, ....	Miner,.....	36	M.	1	1	Storrs, .....	Lackawanna, ..	He was killed by a piece of timber thrown out of the breaker window. The person that threw the timber testified that he looked down and saw no one, but as the piece was falling the victim came out from under the breaker through a place that was never used and was struck. Outside.
June 3	William Yambo, .....	American, .	Juncton-tender,	18	S.	.....	.....	Storrs No. 2, ....	Lackawanna, ..	By cars. The motor runner lost control of the trip on a heavy grade and Yambo in getting off fractured his skull.
3	Wilfred Gerrity, .....	American, .	Slate-picker,	15	S.	.....	.....	Leggitts Creek, .	Lackawanna, ..	By falling into machinery. He climbed on top of a dust fan casing to get a broom. The casing broke and he fell into the fan. Outside.
6	Andrew Nimitto, .....	Russian, ...	Miner,.....	36	M.	1	2	North West, ....	Lackawanna, ..	By fall of rock that slid down from the gob where he was robbing a pillar. He died from a fractured leg.

\*Widower.

June	12	Anthony Kroproskile, . . . Polish, . . . . .	Laborer, . . . . .	22	S. . . . .	Storrs No. 2, . . . . .	Lackawanna, . . . . .	By fall of roof while he was engaged assisting a miner and laborer to stand a discharged prop. His spine was fractured.
July	3	Stanley Mutzeavage, . . . Polish, . . . . .	Miner, . . . . .	28	M. 1	Leggitts Creek, . . . . .	Lackawanna, . . . . .	By fall of roof that gave no indication of danger. It contained a smooth back.
	5	Michael McNamara, . . . American, . . . . .	Headman, . . . . .	45	S. . . . .	North End, . . . . .	Lackawanna, . . . . .	By cars. He was riding on top of a loaded prop car and was squeezed between low roof and the props. He died the same day.
	11	Anthony Powleski, . . . . .	Miner, . . . . .	40	M. 1	Forest City, . . . . .	Susquehanna, . . . . .	By fall of roof that he failed to bar down.
	17	Slaney Davis, . . . . .	Miner, . . . . .	40	M. 1	Leggitts Creek, . . . . .	Lackawanna, . . . . .	By fall of roof that gave no indication of danger. He had examined after blasting and started to work. Instantly killed.
	18	Alfred Evans, . . . . .	Header, . . . . .	16	S. . . . .	Johnson No. 2, . . . . .	Lackawanna, . . . . .	By cars. It is supposed that a car on which he was riding into the foot of a plane became derailed, throwing him off. He was dragged about 50 feet and found in an unconscious state with a fractured skull from which he died.
	21	George Bosaki, . . . . .	Miner, . . . . .	53	M. 1	Glenwood, . . . . .	Lackawanna, . . . . .	By fall of rock in a tunnel on his way home from work on the main road.
	24	Albert Klein, . . . . .	Miner, . . . . .	24	S. . . . .	Leggitts Creek, . . . . .	Lackawanna, . . . . .	By fall of rock that gave indication of danger and contained a smooth back. Instantly killed.
	24	Patrick Moran, . . . . .	Laborer, . . . . .	36	M. 1	Leggitts Creek, . . . . .	Lackawanna, . . . . .	By cars. The motor in pushing a car into the face became derailed and caught his leg against the bottom rock.
Aug.	5	James Merrigan, . . . . .	Driver, . . . . .	17	S. . . . .	Riverside, . . . . .	Lackawanna, . . . . .	By cars. A miner, by blasting, started a car which ran onto the gangway, killing Merrigan.
	8	John Metchasfiski, . . . . .	Laborer, . . . . .	47	M. 1	Johnson No. 1, . . . . .	Lackawanna, . . . . .	By fall of roof. He disregarded the orders of the miner after blasting to wait until he examined before starting to work.
	8	Jacob Ljapko, . . . . .	Miner, . . . . .	42	M. 1	Storrs No. 2, . . . . .	Lackawanna, . . . . .	By fall of roof. He had examined the roof only a short time previous and thought it safe.
	12	Pavetto Marlo, . . . . .	Slate-picker, . . . . .	15	S. . . . .	Riverside, . . . . .	Lackawanna, . . . . .	By machinery. He was playing with the machinery when his foot got caught in the conveyors. Outside.
	23	Joseph Zubliss, . . . . .	Miner, . . . . .	22	S. . . . .	Marvine, . . . . .	Lackawanna, . . . . .	By explosion of fire-boss and walked over a danger signal into a pocket of fire-damp.
	28	August Komenski, . . . . .	Laborer, . . . . .	44	M. 1	Forest City, . . . . .	Susquehanna, . . . . .	By fall of bell roof that gave no indication of danger.
	28	Mike Ritzka, . . . . .	Miner, . . . . .	42	M. 1	Ontario, . . . . .	Lackawanna, . . . . .	By fall of bell roof that gave no indication of blasting. He was lighting a sulphur squib in a hole where there was a feeder.
Sept.	7	Thomas Davis, . . . . .	Miner, . . . . .	35	M. 1	Richmond No. 3, . . . . .	Lackawanna, . . . . .	The sulphur squib set the feeder off and discharged the blast.
	21	John Galenski, . . . . .	Laborer, . . . . .	32	S. . . . .	Lackawanna, . . . . .	Lackawanna, . . . . .	By fall of bell roof. It was examined only a short time previous and thought safe.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of mine	County	Nature and Cause of Accident in Brief
Sept. 23	James Gillhooley, .....	American, .	Runner,.....	21	S. ....	.....	.....	Marvine, .....	Lackawanna, .	By blasting. A miner was firing and Gillhooley came through the second cross-cut and the face from the third chamber and walked directly into the blast.
23	Stephen Grebooski, .....	Lithuanian, .	Miner,.....	42	M. 1	6	Forest City, ....	Susquehanna, .		By fall of roof. He went under some treacherous roof to mine out some loose coal when a piece fell on him.
25	Martin Barrett, .....	Irish, .....	Laboret,.....	41	M. 1	6	North End, .....	Lackawanna, .		By fall of coal. This coal had been examined by his miner and another laborer and thought to be safe.
Oct. 2	James Shovelan, .....	American, .	Sinker,.....	32	S. ....	.....	Marvine, .....	Lackawanna, .		By falling down shaft. He was arranging lines to timber by and it is supposed he stumbled while crossing the shaft on a plank.
13	Michael Suteski, .....	Polish, ....	Miner,.....	35	M. 1	4	North End, .....	Lackawanna, .		By blasting. He was firing two blasts at the same time and it is supposed that he thought they had missed and he returned just as they exploded.
Nov. 10	Andrew Yurko, .....	Russian, ...	Miner,.....	23	M. 1	2	North West, .....	Lackawanna, .		By fall of roof. He had fired four successive blasts and returned to examine, when a large slab fell on him.
21	Andrew Yanko, .....	Hungarian, .	Laboret,.....	20	S. ....	.....	Ontario, .....	Lackawanna, .		By fall of rock. He was shoveling coal to the car when a large slab fell, killing him instantly. The roof was thought to be safe, but it contained a thin seam and smooth back that could not be detected.
21	Costic Smeiguski, .....	Polish, ....	Miner,.....	32	M. 1	1	Johnson No. 2, .	Lackawanna, .		By fall of roof. He overlooked a treacherous stone in his examination and started to work under it, when he fell on him.
25	Robert Mitchell, .....	Scotch, ....	Company man.	66	S. ....	.....	North End, .....	Lackawanna, .		By cars. He tried to prevent a mule from stepping in front of moving rock car, stumbled in his effort and fell under the car.



Nov.	29	Anthony Golden, .....	Irish, .....	Miner, .....	62	M.	1	6	Coal Brook, .....	Lackawanna, .....	By fall of roof. He failed to bar down a head piece of roof the previous day.
Dec.	8	Jacob Phillpot, .....	American, .....	Laborer, .....	24	M.	1	1	Coal Brook, .....	Lackawanna, .....	By fall of roof. He was stooping to pick up a T rail in his father's chamber.
	12	Frank Smith, .....	Polish, .....	Laborer, .....	25	S.	.....	.....	Richmond No. 3, .....	Lackawanna, .....	By fall of roof. He was cleaning coal away to restand a discharged prop after a blast.
	15	Robert Lake, .....	American, .....	Miner, .....	23	M.	1	2	Leggitts Creek, .....	Lackawanna, .....	By fall of roof. He started to work after blasting before making an examination.
	21	Alfred Bell, .....	American, .....	Motor-engl- near.	20	S.	.....	.....	Leggitts Creek, .....	Lackawanna, .....	By cars. He was pushing a car into a chamber with a motor, when his light ignited a small pocket of gas, and in his effort to escape he must have fallen under the motor.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of mine	County	Nature and Cause of Accident in Brief
Jan. 5	Joseph Beliski, .....	Russian, .....	Miner, .....	40	M.	Marvine, .....	Lackawanna.	By fall of top coal while working out loose coal. Injured internally.
9	Richard Williams, .....	Welsh, .....	Miner, .....	45	M.	Storrs No. 3, .....	Lackawanna.	By fall of roof while standing some props. Arm fractured.
16	John Murphy, .....	American, .....	Company mhaer .....	55	M.	North End, .....	Lackawanna.	By fall of roof on gangway. Two ribs fractured.
21	Hayden John, .....	American, .....	Motorman, .....	19	S.	Storrs No. 2, .....	Lackawanna.	By cars. Leg fractured while replacing a derailed car.
Feb. 4	David Thomas, .....	American, .....	Driver, .....	16	S.	Storrs No. 2, .....	Lackawanna.	By cars. Collar bone broken by derailed car.
6	John Hughes, .....	Welsh, .....	Miner, .....	45	M.	Leggitts Creek, ...	Lackawanna.	By fall of bone. While barring down loose roof after a blast a piece fell, fracturing both legs.
9	Michael Prebula, .....	Polish, .....	Miner, .....	24	M.	Lackawanna, .....	Lackawanna.	By fall of roof. Was working out a blast before thoroughly examining. Spine fractured.
9	John Guba, .....	Polish, .....	Miner, .....	52	M.	North West, .....	Lackawanna.	By fall of roof. Was barring down loose coal after a blast. Back injured.
20	Charles Perkins, .....	American, .....	Brakeman, .....	19	S.	Storrs No. 1, ....	Lackawanna.	By cars. Was riding on a motor that became derailed at a switch. He was thrown against the rib and received a fractured leg.
24	John Spragor, .....	Slavonian, .....	Driver, .....	18	S.	Ontario, .....	Lackawanna.	By mule. He became tangled in the mule's traces and was dragged a distance and received a fractured ankle.
27	Charles Roshle, .....	Polish, .....	Driver, .....	17	S.	Forest City, .....	Susquehanna.	Kicked by a mule. Leg fractured.
March 9	Frank Brown, .....	Polish, .....	Miner, .....	31	M.	Leggitts Creek, ..	Lackawanna.	He persisted in riding up the shaft on an empty truck and in getting off stumbled and broke his collar bone
20	John Hall, .....	English, .....	Driver, .....	17	S.	Storrs No. 3, .....	Lackawanna, ...	By cars. A mule kicked him and he fell backwards through the shaft. The oil box caught and broke his ribs.
24	Evan Bateridge, .....	Welsh, .....	Miner, .....	30	S.	Coal Brook, .....	Lackawanna.	In barring down a piece of roof it slid over on him, breaking his leg.

March 28	Thomas Twist,	English,	Sinker,	31	M. Storrs No. 1.	Lackawanna,	By falling down shaft. Instead of waiting for the bucket to come to a stop or go through the opening, they shoved it onto a plank where Twist was standing and the jar broke the plank, throwing him down the shaft 48 feet, fracturing him skull.
31	John Campbell,	American,	Driver,	16	S. Leggits Creek,	Lackawanna,	By cars. Attempted to mount the head end of a trip of cars and fell under. Arm badly lacerated.
April 6	Charles Zachoviz,	Lithuanian,	Miner,	41	M. Storrs No. 3.	Lackawanna,	By blasting. He was holding a door open while three were firing five holes at the same time. The concussion threw him and dislocated his arm.
8	George Doses,	Polish,	Laborer,	25	M. Clifford,	Susquehanna,	By fall of rock. A small piece of rock fell, breaking one of the small bones of the ankle, which was later amputated.
12	John Loshaski,	Polish,	Miner,	44	M. Storrs No. 2.	Lackawanna,	By fall of boney, while drilling a hole. His thigh was broken.
29	Charles Williams,	Welsh,	Laborer,	41	M. Lackawanna,	Lackawanna,	He stumbled while carrying a rail and fractured an arm. Outside.
May 2	Mike Honeychuck,	Polish,	Miner,	46	M. Raymond,	Lackawanna,	He was clearing coal from under a large slab of fallen rock when it slid, pinioning him against the car and fracturing his leg.
3	Thomas Walsh,	Irish,	Miner,	45	M. North End,	Lackawanna,	By fall of rock, while examining after a blast. Leg fractured.
12	Matthew Scott,	American,	Driver,	17	S. Johnson No. 1.	Lackawanna,	By cars. He was riding on the bumpers and fell under the car. The oil box fractured his leg.
16	David S. Jones,	Welsh,	Brattice-man,	50	M. Storrs No. 3.	Lackawanna,	By a fall of roof that he had examined and thought safe. His leg was fractured.
June 16	Michael Hall,	English,	Driver,	17	S. Glenwood,	Lackawanna,	By cars. He stumbled while unhitching his mule, and the wheels of the car fractured his leg.
22	Michael Julian, John Cushin,	Russian, Russian,	Miner, Laborer,	40 29	Ontario, Ontario,	Lackawanna, Lackawanna,	In blasting. A spark from a lamp came between with a broken cartridge. Their bodies and arms were burned.
July 6	Joseph Frohne,	Hungarian,	Driver,	17	S. Lackawanna,	Lackawanna,	Had his arm over the mule's bridle when it suddenly raised its head and fractured his arm.
17	Edward Davis,	Welsh,	Headman,	17	S. Ontario,	Lackawanna,	He disobeyed orders of the driver-boss to unhitch cars on top of slope until they came to a stop; a car became derailed and fractured his ankle.
22	Bernard McNulty,	American,	Driver,	16	S. Coal Brook,	Lackawanna,	By blasting. A miner in the next chamber fired a blast that broke through a blind cross-cut and fractured his arm in two places.
24	Mike Timko,	Slavonian,	Door-tender,	17	S. Forest City	Susquehanna,	By cars. Was on an electric motor and when he came near his door he attempted to open it, but got caught, fracturing his ankle, which was afterward amputated.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of mine	County	Nature and Cause of Accident in Brief
July	Joseph Wagner, .....	American, .....	Motorman, .....	18	S.	Coal Brook, .....	Lackawanna,	He was running a motor over a branch when the end of the latch flew up and fractured his arm.
29	Daniel Rodman, .....	American, .....	Runner, .....	19	S.	Clifford, .....	Susquehanna,	By cars. He was about to sprag an empty car when it became derailed, fracturing his ankle.
31	Stanley Lackoswitch, ..	Polish, .....	Laborer, .....	25	S.	Storrs No. 3, .....	Lackawanna,	By fall of roof. He was pushing a car into the chamber when a piece of roof fell, fracturing his leg.
Aug. 11	Alex. Winkofski, .....	Polish, .....	Miner, .....	21	S.	Lackawanna, .....	Lackawanna,	By an explosive cap that he threw on the floor, thinking it was useless. The explosion destroyed his eye.
23	Peter Plowska, .....	Russian, .....	Laborer, .....	20	S.	Marvine, .....	Lackawanna,	By explosion of gas. Disregarded orders of fire-boss and walked over the danger rail into a pocket of gas. Was severely burned.
23	Anthony Zecus, .....	Polish, .....	Driver, .....	19	S.	Clifford, .....	Susquehanna,	By mule suddenly turning and throwing him against the car. His leg was fractured.
26	Anthony Gobliski, .....	Lithuanian, .....	Miner, .....	40	S.	Leggitts Creek, ...	Lackawanna,	By a blast that he thought missed; when he returned it exploded, fracturing his leg.
28	George Obshute, .....	Polish, .....	Miner, .....	37	M.	Ontario, .....	Lackawanna,	By fall of roof that gave no indication of danger and that contained a smooth back. Was seriously injured.
Sept. 2	Lots Shuikitis, .....	Polish, .....	Laborer, .....	24	S.	Clifford, .....	Susquehanna,	The miner was driving a spike in a tie when he struck the spike squarely and the head flew off, destroying Shuikitis's eye.
5	William B. Jones, .....	Welsh, .....	Miner, .....	26	S.	Storrs No. 3, .....	Lackawanna,	By cars. While removing the block to start the car from the face, it became derailed and fractured his leg.
6	Thomas Hodgson, .....	American, .....	Miner, .....	41	M.	Marvine, .....	Lackawanna,	By blasting. He returned to what he thought was a missed shot, when it exploded, fracturing his arm.

Sept.	7	John Burytzki, .....	Polish, .....	Laborer, .....	28	S.	Johnson No. 1, ...	Lackawanna, ..	By fall of coal while barring it down. Legs fractured.
	13	David Jones, .....	American, .....	Engineer, .....	22	M.	Leggitts Creek, ...	Lackawanna, ..	By machinery. He was prying an air-compressor off the centre with a bar. The bar came in contact with another moving compressor, fracturing his arm. Outside.
	27	Lawrence Hart, .....	Irish, .....	Rock miner, .....	44	M.	Leggitts Creek, ...	Lackawanna, ..	By turning a burr on a rock machine with wrench that slipped and fractured his arm.
Oct.	4	Edward Harrington, ..	American, .....	Driver, .....	16	S.	Marvine, .....	Lackawanna, ..	By cars. He fell under, injuring his leg so that amputation was necessary.
	7	Dora Muturvey, .....	Italian, .....	Miner, .....	21	S.	Ontario, .....	Lackawanna, ..	By fall of rock, while making preparation to stand a prop under it. His leg was fractured.
	10	George Meliski, .....	Polish, .....	Miner, .....	45	M.	Raymond, .....	Lackawanna, ..	By fall of rib coal. While barring down, it slid over and fractured his leg.
	14	John Zovic, .....	Austrian, .....	Laborer, .....	46	M.	Lackawanna, .....	Lackawanna, ..	By fall of rock sliding from the rib, fracturing his leg.
	16	William Zekenski, .....	Polish, .....	Laborer, .....	23	M.	Forest City, .....	Susquehanna, ..	By fall of coal. He disobeyed the miner's orders and started to work before he stood a prop. His leg was fractured.
Nov.	2	Vicheck Yerrisk, .....	Polish, .....	Miner, .....	50	M.	Johnson No. 1, ...	Lackawanna, ..	By fall of rock while working out a shot. His leg was fractured.
	6	James Hoppbns, .....	Lithuanian, ..	Laborer, .....	32	M.	Leggitts Creek, ...	Lackawanna, ..	By fall of rock. While trying to escape, his hand was badly crushed.
	7	Frank Griger, .....	Polish, .....	Laborer, .....	53	M.	North West, .....	Lackawanna, ..	By cars. Running a car into the chamber and did not use the prop. The car got away and his leg was fractured.
	11	Edward Zellinkl, .....	Slavonian, .....	Miner, .....	34	M.	Ontario, .....	Lackawanna, ..	By fall of roof that he failed to bar down. His back and hip were seriously injured.
	20	Michael Powman, .....	Austrian, .....	Brakeman, .....	17	S.	Forest City, .....	Susquehanna, ..	Burned by powder. He was taking a car into a chamber with an electric motor and in passing over a quantity of powder, the electric current exploded it, burning his face and limbs.
	23	Anthony Sigursis, .....	Polish, .....	Footman, .....	20	S.	Clifford, .....	Susquehanna, ..	By an explosive cap. While playing with it it went off, severing two fingers.
	24	Thomas Griffiths, .....	American, .....	Runner, .....	21	S.	Storrs No. 2, .....	Lackawanna, ..	By cars. He was gathering his trips and in bumping too hard, derailed a car which fractured his leg.
	25	David Simons, .....	Welsh, .....	Miner, .....	23	S.	Leggitts Creek, ...	Lackawanna, ..	By cars. He loaded the coal away from the front end car, allowing it to run into the face and fracturing his leg.
Dec.	12	Frank Rosteaky, .....	Polish, .....	Laborer, .....	33	M.	Richmond No. 3, ...	Lackawanna, ..	By a fall of roof, while he and another laborer were clearing away to restand a discharged prop. His face and body were lacerated.
	23	Herbert Woodruff, .....	English, .....	Miner, .....	33	M.	Marvine, .....	Lackawanna, ..	By a fall of roof, while he was hanging a piece of canvas. His collar bone was broken.
	30	Gardner Telford, .....	English, .....	Driver, .....	16	S.	Storrs No. 3, .....	Lackawanna, ..	By riding on the bumpers. His foot got caught, causing lacerations.

## CONDITION OF COLLIERIES

	Ventilation.	Drainage.
Scranton Coal Company.		
Johnson, .....	Good.	Good.
Raymond, .....	Good.	Good.
Ontario, .....	Good.	Good.
Richmond No. 3, .....	Good.	Good.
Riverside, .....	Fair.	Fair.
Richmond No. 4, .....	Fair.	Fair.
Delaware and Hudson Company.		
Coal Brook, .....	Good.	Good.
Leggitts Creek, .....	Good.	Fair.
Marvine, .....	Good.	Good.
Hillside Coal and Iron Company.		
Forest City, .....	Good.	Good.
Clifford, .....	Good.	Fair.
Glenwood, .....	Fair.	Fair.
Delaware, Lackawanna and Western R. R. Company.		
Storrs, .....	Good.	Good.
Temple Iron Company.		
Lackawanna, .....	Good.	Fair.
North West, .....	Fair.	Good.
North End Coal Company.		
North End, .....	Fair.	Fair.
Morss Hill Coal Company.		
Morss Hill, .....	Fair.	Fair.

The conditions as to safety at all the collieries are good.

## IMPROVEMENTS

## SCRANTON COAL COMPANY

At Richmond No. 3 a new shaft, known as No. 2 shaft, has been sunk from the surface to No. 3 Dunmore vein. It is 12x30 in the clear, with two hoistways and an upcast. The depth from the surface is 519 feet, 70 feet of which, from the surface down through a bed of quicksand and other porous material, is lined with re-inforced concrete. This concrete also forms the foundation for a steel tower, built by the Fort Pitt Bridge Co., and connected with the upcast by a masonry air duct is a thirty foot Guibal fan driven by a 24x48 single engine. The hoisting engines are 24x48, first motion, built by the Finch Mfg. Company, and are housed in a brick building 40x41.

The old steam plant is being replaced by a brick boiler house 36x54, having a steel truss roof covered with corrugated iron. Steam will be furnished by three 200 H. P. Maxim boilers.

The surface landing of the shaft, as well as the foundation of all buildings, have been raised to a point seven feet above the surrounding surface of the ground as a precaution against high water from the river.

As soon as these improvements are completed, probably about the first of April next, the present hoisting shaft will be abandoned for that purpose and used as a second opening and supply shaft. Extensive inside alterations and improvements have been made to meet this change.



## DELAWARE AND HUDSON COMPANY

Coal Brook Colliery.—One 13-ton and three 4½-ton electric motors have been installed at the Wilson Creek opening. Also one 17 foot and one 20 foot fans to ventilate the Grassy and Top Coal workings, the electric power being supplied from the power plant at the breaker.

## DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY.

Storrs Colliery.—A nest of eight boilers with a total horse power of 2400. Also one locomotive boiler at No. 3 plant rated at 125 horse power. Also No. 1 shaft has been sunk from the Big Vein to the Dunmore a distance of 330 feet.

## TEMPLE IRON COMPANY

Lackawanna Colliery.—The 12x30 shaft commenced in 1903 has been completed; it was sunk from the surface to the Dunmore vein a distance of 580 feet, and the veins are now being opened out.

The Lillibridge shaft, which was sunk from the surface to the Grassy vein, has been moiled out where it was too small, and is now being sunk from the Grassy to the Dunmore vein; it is 10x12 feet, and large enough for one cage and counter balance.

Permanent head frames have been erected over each shaft, and a brick engine house 38x60 feet built to accommodate the engines of both shafts.

A pair of 26x48 foot hoisting engines have been ordered from the Exeter Machine Works, and are now about completed.

An 8x20 foot fan, driven by an 18x30 inch engine has been erected at the head of of the main shaft to ventilate the workings of the Dunmore vein.

The tracks have been laid between the breaker and the shaft, also the branches and connections with the new shaft.

All of these improvements are for the purpose of developing a tract of coal that it was impracticable to take through the present openings.

The 250 H. P. Maxim boilers have been erected at the breaker in connection with the present plant, and an 8 inch steam line has been laid between the boiler plant and the new shaft.

## Mine Foremen's Examinations.

During the year certificates of qualification were granted as follows:

## Mine Foremen

Alfred Baileys, David Parry, Fred K. Derby, John A. Robinson, Thomas Muldowny, Joseph W. Wilce, James W. Nicholls, George S. Cooper, Richard Walsh, David B. Thomas, David M. Williams Thomas Butler.

## Assistant Mine Foremen

Patrick McNulty, David Morris, Craddoe Morris, James Watson, David P. Thomas, Evan B. Williams, William T. Pearce, Thomas R. Jones, James Cook, Stephen C. Middleton, Michael Kane, John Davison, James B. Loftus, Martin J. McGowan, William S. Davis, William F. McCrone.



## Second District

LACKAWANNA AND WAYNE COUNTIES

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Carbondale, Pa., February 2, 1906.

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

Sir: I have the honor to submit herewith my report as Inspector of Mines for the Second Anthracite District, for the year ending December 31, 1905.

The usual tables of statistics accompany the report, showing that there were 554,409 tons more of coal mined during the year 1905 than in 1904. Also that there was an increase in the number of fatal accidents of 14.3 per cent.

Respectfully submitted,

P. J. MOORE,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	20
Number of mines, .....	46
Number of mines in operation,.....	46
Number of tons of coal shipped to market,.....	3,866,495
Number of tons used at mines for steam and heat,.....	281,132
Number of tons sold to local trade and used by employes,	44,976
Number of tons produced,.....	4,192,603
Number of persons employed inside of mines,.....	7,554
Number of persons employed outside,.....	2,361
Number of fatal accidents inside of mines,.....	28
Number of fatal accidents outside,.....	4
Number of non-fatal accidents inside of mines,.....	51
Number of non-fatal accidents outside,.....	15
Number of tons of coal produced per fatal accident inside,	149,736
Number of persons employed per fatal accident inside,...	270
Number of persons employed per fatal accident outside,...	590
Number of persons employed per non-fatal accident inside,	148
Number of persons employed per non-fatal accident outside,	158
Number of wives made widows, .....	20
Number of children orphaned,.....	56
Number of steam locomotives used inside of mines,.....	6
Number of steam locomotives used outside,.....	18
Number of compressed air locomotives used inside,.....	8
Number of electric motors used inside,.....	4
Number of fans in use,.....	33
Number of gaseous mines in operation,.....	5
Number of non-gaseous mines in operation,.....	41
Number of new mines opened,.....	11
Number of old mines abandoned,.....	2

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Delaware and Hudson Company,.....	1,913,251
Price-Pancoast Coal Company,.....	543,701
Pennsylvania Coal Company,.....	448,978
Sterrick Creek Coal Company,.....	402,705
Dolph Coal Company,.....	247,087
Hillside Coal and Iron Company,.....	173,391
Mt. Jessup Coal Company,.....	141,901
Moosic Mountain Coal Company,.....	112,801
Carney and Brown Coal Company,.....	57,842
Black Diamond Coal Company,.....	45,157
Edgerton Coal Company,..	43,289
Sunny Side Coal Company,.....	30,207
Finn Coal Company,.....	24,125
Mowry and Wilson Coal Company,.....	5,623
East Mountain Coal Company,.....	2,545
<b>Total, .....</b>	<b>4,192,603</b>

Production by Counties

Lackawanna, .....	4,132,774
Wayne, .....	59,829
<b>Total. ....</b>	<b>4,192,603</b>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	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
Delaware and Hudson Co., .....	5	2	11	20	6	26	212,584	35,663	3,247	939	4,177	361	465	162	155
Price-Pennock Coal Co., .....	6	.....	6	9	3	12	90,617	60,411	1,070	231	1,301	178	.....	119	77
Pennsylvania Coal Co., .....	1	.....	1	5	2	7	448,978	89,786	943	254	1,197	943	.....	189	127
Sterrick Creek Coal Co., .....	3	.....	3	3	.....	3	201,353	131,235	693	214	883	335	.....	223	.....
Dolph Coal Co., .....	2	.....	2	.....	.....	.....	123,544	.....	3-0	249	639	195	.....	.....	.....
Hillside Coal and Iron Co., .....	1	.....	1	2	1	4	173,391	57,737	421	128	577	429	.....	143	128
Mt. Jessup Coal Co., .....	.....	.....	.....	1	1	2	70,951	30,271	224	104	328	.....	.....	32	104
Moosic Mountain Coal Co., .....	.....	.....	.....	1	.....	1	28,200	112,801	229	40	269	57	.....	229	.....
Black Diamond Coal Co., .....	.....	.....	.....	3	.....	3	22,579	15,052	117	52	169	59	.....	39	.....
Finn Coal Co., .....	.....	.....	.....	.....	.....	.....	24,125	.....	76	25	101	76	.....	.....	.....
East Mountain Coal Co., .....	1	.....	1	.....	.....	.....	.....	.....	19	7	26	.....	.....	.....	.....
Miscellaneous companies, .....	.....	.....	.....	.....	.....	.....	.....	.....	141	128	269	.....	.....	.....	.....
Totals and averages for district, .....	28	4	32	51	15	66	149,736	82,208	7,554	2,361	9,915	270	570	348	158



TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Falls of coal, .....			2	2	3		1	2	1	2	1	2	1	20	3.57
Falls of roof, .....	1	1	1	2	3		1	2	1	2	2	2	2	20	71.43
Mine cars, .....					1	1			1					3	7.14
Premature blasts, .....				1				1						2	10.72
Falling into shafts, .....								1						2	7.14
Totals, .....	1	2	4	2	4	1	1	3	2	2	3	3	23	100	
Causes of Accidents Outside															
Cars, .....					1								1	1	25
Machinery, .....	1												1	3	50
Suffocation in chutes, etc., .....						1							1	1	25
Totals, .....	1				1	1							1	4	100
Grand totals inside and outside, .....	2	2	4	2	5	2	1	3	2	2	3	4	32		

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Falls of coal, .....			1		2	1					1		5	9.61	
Falls of roof, .....	2	1	3	1	2	1	4				1		15	28.85	
Mine cars, .....		2	3	2	3	2	1	1	2		1		15	28.85	
Premature blasts, .....	1			1	1	1	1		1				3	15.38	
By mules, .....				1	1	1	1						3	5.77	
Miscellaneous, .....	1		1	1	1	1						1	6	11.54	
Totals, .....	4	3	8	6	9	6	6	1	3	2	2	2	52	100	
Causes of Accidents Outside															
Cars, .....		1	1			1	2		1	2	1		9	64.29	
Machinery, .....									1	1			1	7.14	
Miscellaneous, .....		2						1				1	4	28.57	
Totals, .....		3	1			1	2	1	1	3	1	1	14	100	
Grand totals inside and outside, .....	4	6	9	6	9	7	8	2	4	5	3	3	66		

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

Inside	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Miners, .....	1	2	1	1	3	1	...	1	2	1	1	2	16
Miners' laborers, .....	...	...	2	1	1	...	1	1	...	...	2	1	10
Drivers and runners, .....	...	...	1	...	...	...	...	1	...	...	...	...	1
All other employes, .....	...	...	...	...	...	...	...	...	...	...	...	...	1
Totals, .....	1	2	4	2	4	1	1	3	2	2	3	3	28
Outside													
Slatepickers (boys), .....	1	...	...	...	1	...	...	...	...	...	...	1	3
All other employes, .....	...	...	...	...	...	1	...	...	...	...	...	...	1
Totals, .....	1	...	...	...	1	1	...	...	...	...	...	1	4
Grand totals inside and outside, .....	2	2	4	2	5	2	1	3	2	2	3	4	32

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

Inside	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Assistant mine foremen, .....	...	...	...	1	...	...	...	...	...	...	...	...	1
Miners, .....	1	...	2	1	5	2	4	1	1	...	2	...	19
Miners' laborers, .....	1	1	3	1	1	2	2	...	1	1	...	...	14
Drivers and runners, .....	...	...	1	3	1	2	2	...	1	1	...	...	13
Doorboys and helpers, .....	...	...	1	...	...	...	...	1	...	...	...	...	2
Pumpmen, .....	...	...	...	...	1	...	...	...	...	...	...	...	1
Company men, .....	...	1	...	...	...	...	...	...	...	...	...	...	1
All other employes, .....	...	1	...	...	...	...	...	...	...	...	...	...	1
Totals, .....	4	3	8	6	9	6	6	1	3	2	2	2	52
Outside													
Blacksmiths and carpenters, .....	...	...	...	...	...	...	...	...	...	...	...	1	1
Engineers and firemen, .....	...	1	...	...	...	...	1	...	...	...	...	...	2
Slatepickers (boys), .....	...	2	...	...	...	...	1	1	...	1	...	...	4
All other employes, .....	...	...	1	...	...	1	1	...	1	2	1	...	7
Totals, .....	...	3	1	...	...	1	2	1	1	3	1	1	14
Grand totals inside and outside, .....	4	6	9	6	9	7	8	2	4	5	3	3	66

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months											Totals	
	January	February	March	April	May	June	July	August	September	October.	November		December.
American, .....	.....	1	1	.....	2	.....	.....	1	.....	.....	.....	1	4
Welsh, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Irish, .....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	4
Polish, .....	.....	.....	2	1	1	1	.....	.....	.....	.....	.....	.....	5
Italian, .....	1	1	1	.....	1	1	.....	1	.....	.....	.....	.....	6
Slavonian, .....	.....	.....	.....	1	.....	1	.....	1	.....	.....	.....	1	3
Lithuanian, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Austrian, .....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	3
Russian, .....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
Totals, .....	2	2	4	2	5	2	1	3	2	2	3	4	32

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months											Totals	
	January	February	March	April	May	June	July	August	September	October.	November		December.
American, .....	1	3	3	1	1	3	2	1	2	2	.....	3	22
English, .....	1	.....	.....	1	1	.....	1	.....	.....	.....	.....	.....	6
Welsh, .....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	2
Irish, .....	.....	.....	.....	.....	1	2	.....	1	.....	.....	.....	.....	3
German, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Polish, .....	2	1	1	1	.....	1	1	.....	.....	.....	.....	.....	7
Hungarian, .....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
Italian, .....	.....	1	2	1	2	1	.....	1	1	.....	.....	.....	9
Slavonian, .....	.....	1	.....	.....	.....	.....	.....	.....	1	3	.....	.....	5
Austrian, .....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	4
Russian, .....	.....	.....	.....	1	.....	.....	4	.....	.....	1	.....	.....	6
Totals, .....	4	6	9	6	9	7	8	2	4	5	3	3	66

TABLE I.—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 person per minute

Names of Operators and Mines	Kind of opening	Kind of atmosphere	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 provided for each person
Delaware and Hudson Co.																
Clinton, .....	Slope, ..	Non-gas.	Fan, ... [ 17	4	4	4 $\frac{1}{4}$	110	1.5	Guibal, ...	Steam, ..	8	72,796	67,132	73,000	200	335
Clinton, River Side, .....	Slope, ..	Non-gas.	Fan, ... [ 20	5	5 $\frac{1}{2}$	5	75	1.2	Guibal, ...	Steam, ..	1	59,552	59,688	59,688	186	301
Clinton, Dunmore vein, .....	Drift, ..	Non-gas.	Fan, ... [ 150	4	4 $\frac{1}{4}$	4 $\frac{1}{4}$	150	1.0	Guibal, ...	Steam, ..	1	60,302	60,414	60,414	189	282
Clinton, Grassy vein,* .....	Slope, ..	Non-gas.	Fan, ... [ 10	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	140	.6	Guibal, ...	Steam, ..	1	47,000	45,500	48,500	75	606
Carbondale No. 1, .....	Drift, ..	Non-gas.	Fan, ... [ 20	5	5	5	50	.5	Guibal, ...	Electric, ..	2	50,000	47,000	48,500	169	470
Carbondale No. 1, .....	Slope, ..	Non-gas.	Fan, ... [ 10	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	120	.5	Guibal, ...	Electric, ..	1	71,700	77,300	77,600	169	374
Carbondale No. 1, .....	Drift, ..	Non-gas.	Fan, ... [ 10	4	4 $\frac{1}{4}$	4 $\frac{1}{4}$	140	.4	Guibal, ...	Electric, ..	7	49,800	44,700	54,500	158	573
Powderly, .....	Slope, ..	Non-gas.	Natural, ..	16	4	4	64	.5	Guibal, ...	Steam, ..	1	18,755	14,280	19,140	110	123
Powderly, .....	Tunnel, ..	Non-gas.	Natural, ..	...	...	...	...	...	Guibal, ...	Steam, ..	2	32,128	20,000	26,000	148	135
Powderly, .....	Drift, ..	Non-gas.	Natural, ..	22	5	5 $\frac{1}{2}$	65	1 $\frac{1}{2}$	Guibal, ...	Steam, ..	2	185,720	123,050	200,500	589	208
Jermyn, .....	Shaft, ..	Non-gas.	Fan, ... [ 17	5	5	5	70	.7	Guibal, ...	Steam, ..	3	52,000	24,600	58,940	139	177
White Oak, .....	Tunnel, ..	Non-gas.	Natural, ..	...	...	...	...	...	Guibal, ...	Steam, ..	3	66,200	56,100	69,400	154	364
White Oak, .....	Drift, ..	Non-gas.	Fan, ... [ 28	7	8	8	40	.3	Guibal, ...	Steam, ..	3	132,885	128,320	172,320	484	265
Grassy Island, .....	Slope, ..	Non-gas.	Fan, ... [ 22	5	5 $\frac{1}{2}$	5 $\frac{1}{2}$	85	2.0	Guibal, ...	Steam, ..	2	44,215	35,530	50,710	106	338
No. 2 Olyphant, .....	Drift, ..	Gaseous.	Fan, ... [ 10	3 $\frac{1}{2}$	2	2	80	.5	Guibal, ...	Steam, ..	2	45,045	35,640	51,040	78	475
Eddy Creek, .....	Drift, ..	Non-gas.	Fan, ... [ 8	3	2 $\frac{1}{2}$	2 $\frac{1}{2}$	100	.5	Guibal, ...	Steam, ..	2	32,800	29,210	33,280	142	295
Eddy Creek, .....	Drift,* ..	Non-gas.	Fan, ... [ 10	3 $\frac{1}{2}$	2	2	80	.5	Guibal, ...	Steam, ..	2	32,800	29,210	33,280	142	295
Price-Pancoat Coal Co.																
Pancoat, .....	Shaft, ..	Gaseous.	Fans, ... [ 35	9	8 $\frac{1}{2}$	5	55	2.2	Guibal, .....	Steam, ..	11	363,870	272,940	336,130	1,070	236
									Guibal, .....	Steam, ..	6					
Pennsylvania Coal Co.																
No. 1, .....	Shaft, ..	Gaseous.	Fan, ... [ 17.5	5	4 $\frac{1}{4}$	4 $\frac{1}{4}$	70	.6	Guibal, .....	Steam, ..	8	108,700	62,400	111,400	361	172
No. 2, .....	Tunnel & shaft.	Non-gas.	Fan, ... [ 17.5	5	4 $\frac{1}{4}$	4 $\frac{1}{4}$	70	.1	Guibal, .....	Steam, ..	4	35,935	47,125	61,810	283	166

\*Opening out.

Gipsy Grove, .....	Shaft, ..	Non-gas.	Fan, .....	17.5	5	4%	70	.1	Guibal, .....	Steam, ..	6	90,800	80,000	92,440	299	267
Sterrick Creek Coal Co.																
Sterrick Creek, .....	Shaft, ..	Gaseous,	Fans, ..	20	7	5½	70	2.0	Guibal, .....	Steam, ..	5	90,000	87,500	95,300	269	232
Sterrick Creek, Old shaft, ...	Shaft, ..	Non-gas.	Fan, .....	22	5	4½	45	.8	Guibal, .....	Steam, ..	3	75,135	56,655	93,375	410	142
Dolph, .....	Slope & 2 drifts.	Non-gas.	Fan, .....	20	6	6	60	1.6	Guibal, .....	Steam, ..	4	112,740	76,650	112,750	238	322
Hannabel, .....	Slope, ...	Non-gas.	Fan, .....	22	5	6	60	1.0	Guibal, .....	Steam, ..	4	52,825	47,275	53,195	152	311
Hillside Coal and Iron Co.																
Erie, .....	Shaft, ..	Non-gas.	Fans, ..	19	4½	6	75	1.0	Guibal, .....	Steam & electric,	6	98,675	93,200	108,650	347	268
Keystone, .....	3 drifts, ..	Non-gas.	Natural, ..	12	4	4½	75	.4	Guibal, .....	.....	3	87,120	86,070	62,000	82	1,049
Mt. Jessup Coal Co.																
Mt. Jessup, .....	Slope, ...	Gaseous,	Fans, ..	16	6	4½	78	1.2	Guibal, .....	Steam, ..	5	60,729	20,734	71,735	224	93
Moosic Mountain Coal Co.																
Moosic Mountain, .....	Drift, .....	Non-gas.	Fan, .....	12	4	4½	75	.3	Guibal, .....	Steam, ..	2	72,800	40,150	75,300	229	175
Black Diamond Coal Co.																
Black Diamond, .....	5 drifts, ..	Non-gas.	Fan, .....	12	4	4	66	.2	Guibal, .....	Steam, ..	2	61,500	56,600	61,000	117	478
Finn Coal Co.																
Finn, .....	Drift, .....	Non-gas.	Fan, .....	10	3%	2½	65	.1	Guibal, .....	Steam, ..	2	28,900	17,600	27,800	76	231
Carney and Brown Coal Co.																
Carney and Brown, .....	Shaft, ..	Non-gas.	Natural, ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mowry and Wilson Coal Co.																
Mowry, .....	3 drifts, ..	Non-gas.	Natural, ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Mountain Coal Co.																
East Mountain, .....	2 drifts, ..	Non-gas.	Natural, ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Edgerton Coal Co.																
Edgerton, .....	Slope, ...	Non-gas.	Fan, .....	12	3%	3%	70	1.1	Guibal, .....	Steam, ..	.....	22,400	19,300	25,200	63	306

Robbing pillars.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Names of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Delaware and Hudson Co. Clinton, .....	Lackawanna and Wayne	C. C. Rose, .....	Scranton, .....	.....	.....	Delaware and Hudson
No. 1 Carbondale, .....	Lackawanna,	C. C. Rose, .....	Scranton, .....	.....	.....	Delaware and Hudson
Powderly, .....						
Jermyn, .....						
White Oak, .....						
No. 2 Olyphant, .....						
Eddy Creek, .....	Lackawanna,	C. C. Rose, .....	Scranton, .....	.....	.....	Delaware and Hudson
Racket Brook washery, .....						
Grassy Island washery, .....						
Price-Panocoast Coal Co. Panocoast, .....						
Panocoast washery, .....						
No. 1 Pennsylvania Coal Co. Gipsy Grove, .....	Lackawanna, Lackawanna,	John R. Bryden, John R. Bryden, ..	Scranton, .. Scranton, ..	Joseph Birtley, Joseph Birtley, ..	Throop, .. Throop, ..	Ontario and Western Ontario and Western
Sterrick Creek Coal Co. Sterrick Creek, .....	Lackawanna, Lackawanna,	W. W. Inglis, .. W. W. Inglis, ..	Scranton, .. Scranton, ..	John Reid, John Reid, ..	Dunmore, Dunmore, ..	Erie Erie
Dolph, .....	Lackawanna,	F. Hemelright, ..	Jermyn, ..	Joseph Reese, ..	Olyphant, ..	Delaware and Hudson
Hillside Coal and Iron Co. Keystone, .....	Lackawanna, Lackawanna,	W. G. Robertson, ..	Scranton, ..	.....	.....	Delaware and Hudson and Erie
Mt. Jessup Coal Co. Mt. Jessup, .....	Lackawanna,	V. L. Petersen, .. V. L. Petersen, ..	Dunmore, .. Dunmore, ..	John F. Gallagher, John F. Gallagher, ..	Mayfield, .. Mayfield, ..	Erie Erie
Moosic Mountain Coal Co. Moosic Mountain, .....	Lackawanna,	Charles P. Ford, ..	Winton, ..	.....	.....	D., L. and W. Erie and Ontario and Western
Carney and Brown Coal Co. Carney and Brown, .....	Lackawanna,	Charles P. Ford, ..	Winton, ..	.....	.....	D., L. and W. Erie and Ontario and Western
Black Diamond Coal Co. Black Diamond, .....	Lackawanna,	John Carney, ..	Dunmore, ..	Thomas Mullen, ..	Dunmore, ..	D., L. and W. O. and W. and Erie
	Lackawanna,	W. G. Thomas, ..	W. Pittston, ..	G. J. Thomas, ..	Carbondale, ..	



Edgerton Coal Co. Edgerton, .....	Lackawanna, .....	F. Hemsright, ....	Jermyn, .....	.....	D. and H. and Erie
Sunny Side Coal Co. Sunny Side washery, .....	Lackawanna, .....	M. Dolphin, .....	Scranton, .....	.....	Erie
Finn Coal Co. .....	Lackawanna, .....	Wade M. Finn, ....	Scranton, .....	.....	Ontario and Western
Mowry and Wilson Coal Co. Mowry, .....	Lackawanna, .....	Albert Mowry, ...	Dunmore, .....	.....	Local sale
East Mountain Coal Co. East Mountain, .....	Lackawanna, .....	John E. Watkins, ..	Carbondale, .....	.....	Local sale

\* Abandoned.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked. (Totals are averages, 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 mule
Clinton, .....	Lackawanna and Wayne	316,625	29,345	2,427	339,297	242	710	3	3	14,949	48,200	69
No. 1 Carbondale, .....		17,878	13,011	.....	30,889	271	406	1	7	4,333	2,333	54
Powderly, .....		356,631	25,884	.....	382,515	265	531	.....	1	3,697	5,610	49
Jermyn, .....		325,918	20,965	3,766	353,649	249	682	2	5	8,587	425	52
White Oak, .....		179,203	6,785	2,156	179,154	236	566	1	3	5,965	40,263	51
Eddy Creek, .....		505,236	21,928	858	528,020	244	1,240	4	7	25,045	8,976	81
No. 2 Olyphant, .....		1,654,491	108,926	9,207	1,813,624	251	4,115	11	26	62,636	105,747	356
Racket Brook washery, .....	Lackawanna,	46,871	5,000	.....	51,871	157	25	.....	.....	.....	.....	.....
Grassy Island washery, .....	Lackawanna,	40,456	7,300	.....	47,756	200	37	.....	.....	.....	.....	.....
Totals, .....		57,327	12,306	.....	99,627	.....	62	.....	.....	.....	.....	.....
Price-Pancoast Coal Co. ....		1,782,818	121,226	9,207	1,913,251	251	4,177	11	26	62,636	105,747	358
Pancoast, .....	Lackawanna,	455,276	36,500	2,739	494,515	239	1,950	6	12	26,613	22,675	124
Pancoast washery, .....	Lackawanna,	49,186	.....	.....	49,186	108	51	.....	.....	.....	.....	.....
Totals, .....		504,462	36,500	2,739	543,701	239	1,301	6	12	26,633	22,675	124

\*Coal prepared at Eddy Creek.

Pennsylvania Coal Co.												
No. 1 Pennsylvania,	281,612	3,733	2,223	286,975	189	878	5	14,221	8,127	65		
Gipsy Grove,	161,880	323	.....	162,003	206	319	1	7,561	2,058	40		
Totals,	442,693	4,062	2,223	448,978	198	1,197	7	21,782	10,185	105		
Sterrick Creek Coal Co.												
Sterrick Creek,	377,331	22,730	2,524	402,705	189	883	2	15,570	18,750	90		
Dolph Coal Co.												
Dolph,	221,642	25,000	1,045	247,087	189	639	2	9,550	8,250	52		
Hillside Coal and Iron Co.												
Erle,	109,263	13,694	2,212	125,169	174	459	3	5,087	5,416	47		
Keystone,	47,490	732	.....	48,222	158	98	1	1,109	627	10		
Totals,	156,753	14,426	2,212	173,391	166	557	4	6,206	6,043	57		
Mt. Jessup Coal Co.												
Mt. Jessup,	102,861	37,000	1,940	141,801	222	928	2	4,600	21,875	45		
Moosic Mountain Coal Co.												
Moosic Mountain,	103,620	7,300	1,881	112,801	196	969	4	4,300	2,125	43		
Carney and Brown Coal Co.												
Carney and Brown,	51,591	150	6,101	57,842	223	94	.....	1,513	1,406	20		
Black Diamond Coal Co.												
Black Diamond,	38,077	3,490	3,590	45,157	251	169	2	3,365	4,500	20		
Edgerton Coal Co.												
Edgerton,	40,635	2,450	204	43,289	160	97	.....	1,592	183	22		
Sunny Side Coal Co.												
Sunny Side washery,	25,765	3,678	763	30,207	205	54	.....	.....	.....	.....		
Finn Coal Co.												
Finn,	18,686	1,600	3,939	24,125	155	101	1	1,800	3,000	7		
Mowry and Wilson Coal Co.												
Mowry,	.....	1,500	4,123	5,622	185	23	.....	375	.....	3		
East Mountain Coal Co.												
East Mountain,	.....	60	2,485	2,545	160	26	.....	140	8	6		
Grand totals,	3,866,495	281,122	44,976	4,192,603	200	9,915	32	159,682	204,737	652		

TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked. (Totals are averages, 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 and Hudson Co., .....	Lackawanna and Wayne  Lackawanna.	1,782,818	131,226	9,207	1,913,251	251	4,177	11	26	62,636	105,747	438	
Price-Pancoat Coal Co., .....		504,462	36,500	2,739	543,701	239	1,301	6	12	24,653	32,675	124	
Pennsylvania Coal Co., .....		442,693	4,062	2,223	448,978	198	1,183	1	7	21,782	10,185	105	
Sterrick Creek Coal Co., .....		377,391	22,790	2,524	402,705	189	683	2	3	11,570	18,750	90	
Dolph Coal Co., .....		221,042	25,000	1,045	247,087	189	629	2	4	9,250	8,250	52	
Hillside Coal and Iron Co., .....		166,753	14,426	2,212	173,391	166	557	1	1	6,255	6,043	57	
Miscellaneous companies, .....		331,336	57,123	23,026	463,490	195	1,161	9	14	16,685	33,107	166	
Totals, .....			3,866,495	281,132	44,976	4,192,603	290	9,915	32	66	159,082	214,757	952

TABLE 2.—Continued

Names of Operators	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	Total horse power	Steam	Air	Electric							
Delaware and Hudson Co.,	Lackawanna & Wayne	79	21	2,196	4,296	8	8	91	10,397	29	41,720	15,160	3	2	
Price-Panocast Coal Co.,	Lackawanna	12	9	1,585	1,585	3	3	29	1,788	5	1,200	1,000	2	2	
Pennsylvania Coal Co.,	Lackawanna	4	10	1,400	1,400	6	3	41	1,860	6	4,267	1,764	1	3	
Sterrick Creek Coal Co.,	Lackawanna	8	7	1,370	1,850	3	6	16	2,040	4	2,764	2,100	1	3	
Dolph Coal Co.,	Lackawanna	25	8	1,345	1,425	3	3	27	1,250	6	1,563	300	3	2	
Hillside Coal and Iron Co.,	Lackawanna	3	14	520	520	2	1	11	380	6	4,330	3,450	1	1	
Mt. Jessup Coal Co.,	Lackawanna	3	1	1,050	1,050	1	1	15	1,500	4	1,500	1,000	1	1	
Moosic Mountain Coal Co.,	Lackawanna	3	1	75	150	1	1	1	50	2	900	500	1	1	
Corney and Brown Coal Co.,	Lackawanna	16	3	360	360	1	4	4	115	1	1	1	1	1	
Black Diamond Coal Co.,	Lackawanna	10	1	150	150	1	4	4	111	1	1	1	1	1	
Edgerton Coal Co.,	Lackawanna	16	1	376	476	1	1	3	328	1	1	1	1	1	
Sunny Side Coal Co.,	Lackawanna	1	3	375	375	1	3	3	180	1	1	1	1	1	
Finn Coal Co.,	Lackawanna	1	1	100	100	1	1	1	20	3	1	1	1	1	
Mowry and Wilson Coal Co.,	Lackawanna	1	1	100	100	1	1	1	100	1	1	1	1	1	
East Mountain Coal Co.,	Lackawanna	1	1	30	30	1	1	1	100	1	1	1	1	1	
Totals,		135	80	3,857	13,567	24	24	253	19,799	65	58,250	25,304	10	12	

TABLE 3.--Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)		Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Delaware and Hudson Co.	Lackawanna & Wayne	1	3	....	190	191	86	30	6	26	33	566	....	1	6	14	43	25	1	54	144	710	
Clinton, .....	Wayne	1	2	....	197	139	41	4	2	18	10	324	....	1	4	11	2	12	1	51	82	406	
No. 1 Carbondale, .....	Lackawanna.	1	1	....	119	139	50	7	2	22	5	366	....	1	4	10	42	35	1	72	165	531	
Powderly, .....		1	2	....	266	220	71	18	3	38	31	589	....	1	7	10	10	26	1	58	93	682	
Jermyan, .....		1	2	....	130	136	79	7	1	16	7	489	....	1	4	12	39	6	1	64	127	566	
White Oak, .....		1	1	....	....	....	....	....	2	....	....	3	....	....	1	1	1	....	....	....	....	18	21
No. 2 Olyphant, .....		2	4	4	325	336	97	18	4	29	82	960	1	1	13	4	43	59	3	115	239	1,159	
Eddy Creek, .....	8	14	4	1,077	1,299	424	84	20	140	168	3,247	1	6	38	78	179	163	9	394	868	4,115		
Racket Brook washery, .....	Lackawanna.	....	....	....	....	....	....	....	....	....	....	....	....	1	1	2	....	....	....	14	25	25	
Grassy Island washery, .....	Lackawanna.	....	....	....	....	....	....	....	....	....	....	....	....	1	1	2	....	....	....	1	22	37	
Totals, .....	....	8	14	4	1,077	1,299	424	84	20	149	168	3,247	1	8	40	82	184	175	10	430	930	4,177	
Price-Pancoat Coal Co.	Lackawanna.	2	2	6	341	353	166	59	6	41	94	1,070	1	1	9	17	48	34	4	66	180	1,250	
Pancoat washery, .....	Lackawanna.	2	2	6	341	353	166	59	6	41	94	1,070	1	2	12	19	48	39	4	106	231	1,301	
Totals, .....	....	2	2	6	341	353	166	59	6	41	94	1,070	1	2	12	19	48	39	4	106	231	1,301	



Pennsylvania Coal Co.	2	2	1	229	266	78	8	2	73	48	710	1	7	15	40	21	2	82	168	878
No. 1 Pennsylvania, .....	1	1	118	49	40	8	.....	4	4	12	223	.....	2	2	32	6	1	43	86	319
Gipsy Grove, .....	3	3	347	315	118	17	2	77	60	943	.....	1	9	17	72	27	3	125	254	1,197
Totals, .....	4	4	237	213	89	30	3	78	14	689	1	1	14	22	57	10	2	107	214	883
Stierlek Creek Coal Co.	5	5	177	168	71	8	3	14	7	330	1	1	13	23	35	88	6	82	249	639
Stierlek Creek, .....	1	1	133	130	43	3	2	23	16	352	1	1	4	9	12	12	2	66	107	459
Dolph Coal Co.	1	1	30	30	11	.....	.....	2	3	77	1	1	2	2	5	4	.....	7	21	98
Hillside Coal and Iron Co.	2	2	163	160	54	3	2	25	19	429	1	2	6	11	17	16	2	73	128	557
Erie, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Keystone, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....	1	1	99	47	31	5	8	26	5	224	1	2	9	19	45	.....	3	25	104	328
Mt. Jessup Coal Co.	1	1	79	73	40	13	2	13	7	229	1	.....	5	5	.....	.....	1	28	40	269
Mt. Jessup, .....	1	1	26	22	.....	.....	.....	.....	17	.....	60	1	1	2	2	12	.....	1	15	34
Moosic Mountain Coal Co.	2	2	40	54	16	3	.....	2	2	.....	117	1	.....	2	2	11	12	1	23	52
Moosic Mountain, .....	1	1	21	27	4	2	.....	5	3	63	.....	1	3	2	4	8	1	15	34	97
Carney and Brown Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carney and Brown, .....	1	1	30	30	10	2	.....	1	2	76	1	1	2	2	12	3	1	2	25	101
Black Diamond Coal Co.	1	1	5	5	3	.....	.....	4	.....	18	1	.....	.....	.....	.....	.....	.....	1	1	5
Black Diamond, .....	1	1	6	8	2	.....	.....	2	.....	19	1	.....	.....	.....	.....	.....	.....	1	.....	7
Edgerton Coal Co.	30	22	13	2,642	2,714	1,028	296	46	454	379	7,554	13	23	123	214	507	378	38	1,065	2,361
Edgerton, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,915
Sunny Side Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sunny Side washery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Finn Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Finn, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mowry and Wilson Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mowry, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Mountain Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Mountain, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand totals, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE 3.—Recapitulation

Names of Operators	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks		All other employes	Total outside
Delaware and Hudson Co., ..	Lackawanna & Wayne	8	14	4	1,077	1,289	424	84	2)	149	168	3,247	1	8	40	82	184	175	10	480	980	4,177
Price-Pancoat Coal Co., ...	Wayne	3	3	6	341	353	166	59	6	41	94	1,070	1	2	12	18	48	39	4	106	231	1,301
Pennsylvania Coal Co., ...	Wayne	3	3	1	347	315	118	17	2	77	60	943	...	1	9	17	72	27	3	125	254	1,197
Sterrick Creek Coal Co., ...	Lackawanna,	4	...	1	237	213	89	30	3	78	14	668	1	1	14	22	57	10	2	107	214	883
Dolph Coal Co., .....	Lackawanna,	2	1	...	177	108	71	8	3	14	7	390	1	1	13	23	35	88	6	82	249	689
Hillside Coal and Iron Co.,	Lackawanna,	3	2	...	163	100	54	3	2	25	19	425	1	2	6	11	17	16	2	73	128	557
Miscellaneous companies, ..	Lackawanna,	3	2	1	500	266	106	25	10	70	17	806	8	8	29	40	94	23	11	142	355	1,161
Totals, .....		30	22	13	2,642	2,714	1,028	226	46	454	379	7,554	13	23	123	214	507	378	38	1,665	2,361	9,945





TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 24	John Spedina, .....	Italian,.....	Slate-picker, ..	15	.....	.....	.....	Mt. Jessup, ..		Fatally injured in an unknown manner by an automatic lever in breaker. Outside.
31	Frank Opaka, .....	Austrian, ..	Miner, .....	42	M.	1	2	Clinton, .....		Killed by a fall of roof while he was barring down coal near face of chamber.
Feb. 4	William Jones, .....	Welsh, .....	Miner, .....	41	M.	1	5	Keystone, .....		Fatally injured by a fall of roof which he was barring down on heading road.
13	John Fontana, .....	Italian,.....	Miner, .....	43	M.	1	4	Moosic Mountain.		Fatally injured by being struck with a loaded car that was being run from the airway.
March 2	James George, .....	Italian,.....	Mason's helper, .....	50	M.	1	2	Sterrick Creek, ..		Killed by falling from a landing in shaft on to the top of cage.
8	David Lewis, .....	Welsh, .....	Miner, .....	24	S.	.....	.....	Black Diamond, ..		Killed by fall of roof near face of chamber.
24	John Plisko, .....	Polish, .....	Laborer, .....	27	S.	.....	.....	Dolph, .....		Killed by a trip of loaded cars which struck him, on heading road.
29	Peter Karoulehik, .....	Polish, .....	Laborer, .....	40	M.	1	5	Gipsy Grove, ..	Lackawanna.	Killed instantly by a fall of roof near heading road while shoveling coal to car.
April 10	Simon Evanshock, .....	Slavonian, ..	Miner, .....	40	M.	1	4	Moosic Mountain.		Killed by fall of roof while opening a chamber.
21	Michael Zdybik, .....	Polish, .....	Laborer, .....	40	M.	1	4	No. 2 Olyphant, ..		Killed by fall of roof near face of chamber.
May 5	John Daley, .....	Irish, .....	Laborer, .....	60	M.	1	2	Grassy Island, ..		Fatally injured by a fall of fire-clay roof on heading road while assisting to hang a door.
8	Nazarane Delfoni, .....	Italian,.....	Miner, .....	23	S.	.....	.....	Sterrick Creek, ..		Killed by a fall of roof near face of chamber.
13	Frank Gillespie, .....	American, ..	Slate-picker, ..	14	S.	.....	.....	White Oak, .....		Fatally injured by a locomotive on which he was riding the bumpers, and fell inside.
20	Marth Roman, .....	Polish, .....	Miner, .....	48	M.	1	3	Dolph, .....		Fatally injured by a fall of roof at face of chamber.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
May 31	John Cresco, .....	American, ..	Miner, .....	36	M.	1	1	Clinton, .....		Fatally injured while tamping a hole charged with dynamite and percussion cap. The charge ignited and threw a large piece of rock upon him.
June 23	Patrick McGinley, .....	Irish, .....	Company miner, .....	32	M.	1	4	No. 1 Carbon-dale, .....		Killed by being smothered by a bank of earth falling upon him, while timbering for a water way. Outside.
July 21	John Ronko, .....	Italian, .....	Miner, .....	34	S.	.....	.....	Pancoast, .....		Killed instantly by a blast which he was firing.
July 18	Moicsek Mechofski, .....	Polish, .....	Laborer, ...	30	M.	1	2	No. 2 Olyphant, .....		Killed by a fall of roof near face of chamber.
Aug. 11	John Pendel, .....	American, ..	Driver, .....	18	.....	.....	.....	Pancoast, .....		Killed instantly by falling into shaft.
Aug. 23	Joseph Monosky, .....	Polish, .....	Laborer, ...	21	.....	.....	.....	No. 2 Olyphant, .....		Fatally injured by a fall of "separation," rock near face of working.
30	George Kapola, .....	Slavonian, ..	Miner, .....	34	M.	1	4	Pancoast, .....		Fatally injured by a fall of roof near face of chamber while barring out a shot.
Sept. 8	Anthony Gedritus, .....	Russian, .....	Miner, .....	35	M.	1	1	Pancoast, .....	Lackawanna.	Killed instantly by a blast while assisting another miner to fire it. The squib was shortened.
9	Charles Niemman, .....	Austrian, ..	Miner, .....	30	S.	.....	.....	Pancoast, .....		Killed instantly by a fall of roof near face of chamber.
Oct. 4	John Govitch, .....	Lithuanian, ..	Miner, .....	34	M.	1	1	Pancoast, .....		Killed instantly by a fall of roof near face of chamber, while removing rock which he had blasted down.
31	Anthony Themic, .....	Austrian, .....	Laborer, ...	39	M.	1	5	Clinton, .....		Fatally injured by a fall of fire-clay roof while shoveling coal near face of chamber.
Nov. 7	John Gallagher, .....	Irish, .....	Laborer, ...	35	M.	1	.....	Jermyn, .....		Fatally injured by a fall of roof while loading a car twenty feet back from face of chamber.
11	Thomas Coglias, .....	Polish, .....	Laborer, ...	25	S.	.....	.....	Jermyn, .....		Fatally injured by a fall of fourteen inch bench of coal, while gathering tamping near face of chamber.



Nov.	21	George Henry, ....	Irish, .....	Miner, .....	27	M.	1	2	Flinn, .....	Lackawanna,	Killed by fall of roof near face of pillar which he was working.	
Dec.	5	Michael Ward, .....	American, ..	Slatepicker, ..	14	....	....	....	Mt. Jessup, ....			Fatally injured by being caught in the scraper line in breaker. Outside.
	13	Frank Przyback, .....	Polish, .....	Laborer, ...	23	S.	....	....	Black Diamond,			Killed by a fall of rock near pillar where he was working.
	15	Jacob Zabura, .....	Slavonian, ..	Miner, .....	39	M.	1	5	Moosic Moun- tain.			Killed near face of heading by a fall of roof.
	15	Max Kohler, .....	Polish, .....	Miner, .....	45	M.	1	....	Moosic Moun- tain.			Killed near face of heading by a fall of roof, while putting a new piece of track down.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single.	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 6	Anthony Lojas, .....	Polish, .....	Laborer, .....	48	M.	No. 2 Olyphant, ..		Fractured ankle. While loading a car near face of chamber a piece of rock fell on him.
10	Michael Rumnoswik, ..	Polish, .....	Laborer, .....	20	S.	Black Diamond, ..		Leg and back injured by a piece of rock which fell on him near face of chamber.
19	Patrick Hammond, ....	American, .....	Driver, .....	17	S.	Eddy Creek, .....		Leg fractured by being struck with a sheave wheel.
31	William Williams, .....	English, .....	Miner, .....	26	S.	Pancoast, .....		Fractured arm. Was struck with flying coals from a blast which he thought missed fire, while he was returning to the surface.
Feb. 6	Anthony Jamacusky, ..	Polish, .....	Laborer, .....	33	M.	White Oak, .....		Back and shoulder injured by a fall of roof while getting a place ready to stand a prop.
20	James Mutta, .....	Italian, .....	Slatepicker, ..	17	....	Pancoast, .....		Fractured leg by falling while running across a chute in breaker. Outside.
21	William Armson, .....	American, .....	Footman, .....	38	M.	Pancoast, .....	Lackawanna.	Leg injured by being caught between cage and car, while assisting to place the car on cage.
22	John Marsanik, .....	Slavonian, ....	Driver, .....	18	....	Mt. Jessup, .....		Legs injured by being caught between a car of props and the pillar.
11	John Coates, .....	American, .....	Locomotive fireman.	15	....	White Oak, .....		Foot bruised by the locomotive, while uncoupling it from a mine car. Outside.
March 1	Stanley Moran, .....	American, .....	Slatepicker, ..	15	....	White Oak, .....		Compound fracture of instep by being caught under a set screw on collar of revolving shaft in breaker. Outside.
6	Fasko Farro, .....	Italian, .....	Culm-dumper, ..	38	M.	Clinton, .....		Leg fractured by culm car tipping on him. Outside.
8	Robert Taylor, .....	Welsh, .....	Miner, .....	30	S.	Black Diamond, ..		Body injured by a piece of roof falling on him, while barring out a shot.
8	Jacob Sherosky, .....	Polish, .....	Miner, .....	40	M.	Sterrick Creek, ...		Thigh fractured by a fall of roof, while barring out a shot at face of chamber.

March	9	John Eldvidge, .....	English, .....	Doorboy, .....	16	....	Moosic Mountain, .....	Leg fractured by a trip of loaded cars he was trying to sprag.
	14	William Arthur, .....	English, .....	Laborer, .....	39	M.	Jermyn, .....	Head and foot injured by a fall of roof in face of chamber.
	14	Rose Scarpell, .....	Italian, .....	Laborer, .....	45	M.	No. 1 Carbondale, .....	Leg fractured by a piece of top coal falling on car which he was loading and rolled against him.
	16	Robert Davis, .....	American, .....	Driver, .....	18	S.	Clinton, .....	Compound fracture of arm by falling off an empty car while taking it into the heading. He was sitting on the bumper and slipped.
	21	Frederick Davis, .....	American, .....	Laborer, .....	23	S.	Grassy Island, ..	Hand crushed by a locomotive while coupling to a trip of cars.
	29	Albert Morgan, .....	American, .....	Locomotive fireman, .....	21	S.	Mt. Jessup, .....	Scalded about the face and hands by steam and hot water which escaped from a small blow-off pipe that was broken.
April	7	Morgan Thomas, .....	Welsh, .....	Assistant foreman, .....	62	S.	No. 1 Carbondale, .....	Leg fractured by a fall of roof in face of chamber, while examining the place.
	6	James Kerins, .....	American, .....	Driver, .....	19	S.	No. 1 Carbondale, .....	Stomach injured by being kicked by a horse.
	11	John Labock, .....	Polish, .....	Runner, .....	24	S.	Mt. Jessup, .....	Leg fractured by an empty car which he was following up to chamber. The mule stopped and left it back, catching him.
	18	Ralph Atkinson, .....	English, .....	Driver, .....	19	S.	Panocoast, .....	Leg injured severely between empty cars while bumping them.
	25	Dominick Matal, .....	Italian, .....	Laborer, .....	31	M.	Mt. Jessup, .....	Foot injured by running against a miner's needle.
	28	Alexander Dudar, .....	Russian, .....	Miner, .....	38	M.	Panocoast, .....	Scalp and face injured by flying coals from a premature blast.
May	4	Robert Judge, .....	American, .....	Driver, .....	17	....	No. 1 Carbondale, .....	Knee injured by a mule falling on him.
	5	John Ploor, .....	German, .....	Pumpman, ..	54	M.	No. 1 Carbondale, .....	Leg fractured by falling while walking up a slope.
	18	Joseph J. Jenkins, .....	English, .....	Miner, .....	40	M.	Black Diamond, ..	Leg fractured by a piece of coal falling on him while barring it down.
	26	Martin Prutchie, .....	Italian, .....	Miner, .....	50	M.	Sterrick Creek, ..	Foot fractured by a fall of roof while tamping a hole in face of chamber.
	26	John Frestco, .....	Austrian, .....	Miner, .....	39	M.	No. 2 Pennsylvania, ..	Face and head seriously injured while returning to examine the result of a blast. They were firing two holes with fuse and dynamite. One exploded, and the other exploded when they returned.
	26	Andrew Ruszin, .....	Austrian, .....	Miner, .....	29	S.	No. 2 Pennsylvania, ..	Leg fractured by a piece of coal which fell and rolled against him.
	29	Peter Yoncovitch, .....	Austrian, .....	Laborer, .....	28	M.	Keystone, .....	Body and hips injured by a piece of roof falling on him while barring it down.
	29	Angello Manche, .....	Italian, .....	Miner, .....	24	S.	Sterrick Creek, ..	Hand and head injured while assisting his mine mate to change with dynamite. The mine mate changed with dynamite.
	31	Frank Skubic, .....	Austrian, .....	Laborer, .....	30	S.	Clinton, .....	Leg fractured while attempting to cross to the opposite side, ahead of a loaded car. The car struck him.
June	2	John Nolan, .....	Irish, .....	Runner, .....	21	S.	Erie, .....	

Lackawanna,

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single.	Name of Mine	County	Nature and Cause of Accident in Brief
June 9	Albert Lee, .....	American, .....	Laborer, .....	23	M.	Jermyn, .....		Arm fractured, caught between mule and car.
14	Arthur Swigert, .....	American, .....	Dumper, .....	23	S.	Erie, .....		Arm fractured while taking car off the cage. He was squeezed between the car and a timber. Outside.
19	Anthony Brara, .....	Italian, .....	Laborer, .....	46	M.	No. 2 Pennsylvania,		Ribs broken and injured internally by a fall of roof while loading a car. The chamber being opened.
20	John Hammond, .....	American, .....	Driver, .....	19	S.	Eddy Creek, .....		Three fingers cut off & rope which he was putting on a sheave.
24	John Scratch, .....	Polish, .....	Miner, .....	22	S.	Pancoast, .....		Leg fractured by flying coals from a blast. He shortened the squib.
28	Michael Mannion, .....	Irish, .....	Miner, .....	46	M.	Powderly, .....		Head and back injured by top coal falling on him while barring it down.
July 5	Michael Ordoek, .....	Russian, .....	Laborer, .....	22	S.	Jermyn, .....		Head and ear bruised by being kicked by a mule.
10	Adam Evanitski, .....	Russian, .....	Miner, .....	39	M.	Pancoast, .....	Lackawanna,	Back and one leg fractured by fall of roof.
19	John Grove, .....	Russian, .....	Car-runner, .....	36	M.	Pancoast, .....		Arm squeezed badly while coupling cars. Outside.
19	John May, .....	English, .....	Miner, .....	43	M.	Pancoast, .....		Both legs fractured by a fall of roof which appeared as a thin scale. He attempted to pull it down with his hand.
19	John Mosty, .....	Polish, .....	Laborer, .....	20	S.	Erie, .....		Arm fractured by fall of roof while loading a car near face of chamber.
22	George Manslokorski, ..	Russian, .....	Miner, .....	32	M.	Pancoast, .....		Head injured seriously by flying coals from a blast.
27	George Bennett, .....	American, .....	Miner, .....	29	M.	Jermyn, .....		The first two fingers on right hand cut off by a fall of roof, while assisting to replace a car that was off the track.
30	Frank Missett, .....	American, .....	Locomotive runner.	20	S.	No. 2 Olyphant,		Leg injured by being squeezed between the front of a locomotive and a mine car. Outside.

Aug.	16	Anthony O'Hara, .....	Irish, .....	Miner, .....	44	M.	No. 1 Carbondale	Hips injured by being squeezed between a car and pillar.
	31	Charles Pilger, .....	American, .....	Statepicker, ..	14	....	Gipsy Grove, ....	Arm fractured by falling while crossing a chute. Outside.
Sept.	11	Shanadoa Baun, .....	Hungarian, ....	Doorman, .....	53	M.	Pancoast, .....	Hip fractured, by being struck with an empty car.
	14	William Priestly, .....	American, .....	Driver, .....	17	....	Finn, .....	Leg fractured and crushed by a loaded car. While reaching to the top of car for his dinner pail, he slipped and fell under.
	19	Donato Zaccagnine, .....	Italian, .....	Miner, .....	41	M.	No. 2 Pennsylv'a,	Thigh fractured by fall of roof near face of chamber.
	25	Louis Simpson, .....	American, .....	Driver, .....	17	....	No. 1 Carbondale,	Hand badly lacerated by being caught between a car and headlock.
Oct.	12	Samuel Woolen, .....	American, .....	Car-oller, .....	14	....	No. 2 Olyphant, ..	Foot crushed by locomotive. Outside.
	23	Charles Gibbs, .....	American, .....	Statepicker, ..	14	....	East Mountain, ..	Foot crushed by being caught in rolls. Outside.
	26	Ralph Scance, .....	Italian, .....	Headman, ....	31	M.	Pancoast, .....	Leg injured by a car jumping off the track while removing it from cage. Outside.
	30	John Berls, .....	Russian, .....	Laborer, .....	22	M.	Jermyn, .....	Leg cut by flying coals from a blast.
	30	Jehn Whitcoo, .....	Slavonian, ....	Runner, .....	20	S.	Mt. Jessup, .....	Body and legs injured by being squeezed between car and rib.
Nov.	9	Stephen Moscow, .....	Slavonian, ....	Laborer, .....	14	....	Gipsy Grove, ....	Injured internally by a culm car under the breaker. Outside.
	14	John Kappe, .....	Slavonian, ....	Miner, .....	34	M.	Eddy Creek, .....	Injured internally by being squeezed between cars while attempting to couple them.
Dec.	24	Frank Motso, .....	Slavonian, ....	Miner, .....	36	M.	No. 2 Pennsylv'a,	Spine injured by a fall of top coal.
	21	Daniel O'Connor, .....	American, .....	Carpenter, ....	29	S.	Mt. Jessup, .....	Knee cap cracked by falling from a boiler that he was directing to be raised for a stack. Outside.
	23	Richard Harding, .....	American, .....	Runner, .....	25	S.	Mt. Jessup, .....	Body and legs injured seriously by being squeezed between car and pillar.
	28	Stephen Powanda, .....	American, .....	Driver, .....	17	S.	Mt. Jessup, .....	Leg fractured by being struck with a rope on slope. While pulling the trip from foot, the rope swung to the side.

Lackawanna.

## FATAL ACCIDENTS

## By Falls of Coal, Slate and Roof

There were 32 fatal and 66 non-fatal accidents reported during the year. 28, or 87.5 per cent. of the fatal accidents occurred inside the mines, and 4, or 12.5 per cent. outside. The fatal accidents from falls of coal and roof increased 50 per cent. over 1904, and 23.53 per cent. over 1903. The number of tons produced increased almost 15.25 per cent. over that of 1904, and the number of tons mined per fatal accident decreased 9.45 per cent. Of the 12 miners who lost their lives from falls, 10, or 83 1-3 per cent. could have been saved; and of the 9 miners' laborers, 6, or 66 2-3 per cent. could have been saved, as these accidents can all be attributed to incompetency and carelessness.

The above statement shows that the number of accidents of this kind might have been 5 instead of 21, or a reduction in the number of about 76 per cent. I have made special effort to discover the causes of so many accidents happening from these falls, and conclude that there are two, viz: incompetency and carelessness.

I have met a number of miners who could not speak a word of English. These miners are necessarily incompetent and have no conception of the dangers attending their work. It is absurd to think that they can take care of themselves or their laborers. Nevertheless they hold certificates of competency.

The second cause, carelessness or indifference, is found to exist principally among the miners having the most experience. When their attention is called to any dangerous condition of the roof, they will answer by saying, "We are aware of it and are providing against it," but frequently we find these same men among the victims from falls of roof. When the roof is in a "faulty" condition, it is necessary to use more care and judgment to keep safe, and when such conditions exist, if it is found practicable, especially in small veins, the roof should not be disturbed by blasting for height, for by doing so, the dangers are increased to a great extent. Height sufficient may be obtained by taking up the bottom. When the above conditions prevail, I would respectfully suggest that the proper officials of the companies take up bottom instead of taking down top. It would be well for the miners of this district to pay more attention to the necessity of standing more temporary props close to the face of the workings. It can be proved that 95 per cent. of the fatal and non-fatal accidents from falls of roof are happening within six or eight feet from the face of the workings. I wish respectfully to call the attention of all miners to General Rule 14, of the mine law, which reads as follows: "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." If the proper attention is given to the above remarks, it may be the means of reducing the number of accidents from falls of roof, below the awful mark it has reached.



### By Mine Cars—Inside

There were two fatal accidents inside by mine cars, one less than in 1904, and three less than in 1903. One of those unfortunates was a miner. While attempting to get out of the way of a car which was being run out to the heading, he stepped into the airway and was struck by a loaded car that was being run from the airway. The other was a laborer who had finished his day's work, and while traveling out the heading, he stepped aside to allow a trip of loaded cars to pass, and the trip was uncoupled before it reached him. He jumped on the rear end of the trip while passing him and the other part of the trip bumped the cars on which he was riding and killed him.

I am pleased to state that not one fatal accident from this cause happened to any driver or runner, and the careless habit of riding with one foot sliding along the rail is disappearing.

### By Blasts

There were two fatal accidents due to this cause. There is a very dangerous habit which seems to be increasing among the foreign element of miners—shortening the squib, with the usual result— forfeiture of life. The above two accidents happened in this manner, and I know of nothing better to suggest to reduce accidents of this kind than a strict adherence to General Rule 32 of the mine law.

### By Dynamite

There was one miner lost his life by tamping a hole with an iron bar that was charged with dynamite and percussion cap. This habit has been condemned repeatedly, and the danger attending such practice fully explained. As a means of reducing accidents of this kind, all companies should furnish wooden tamping bars to the miners at a nominal cost.

### By Falling Into Shafts

There were two lives lost by falling into shafts. Every precaution was taken to provide against accidents of this kind, but still there are two to record. One of these occurred while the victim was taking a ladder from the cage, which was 16 feet lower than the landing on which he stood. He overbalanced and fell on the top of the cage and was fatally injured. The other occurred while the victim was attempting to cross from one side of the shaft to the other. He walked into the open shaft. They were hoisting from this lift at the time, and he thought the cage was down on the side he walked into.

### By Machinery—Outside

More attention should be given to prevent accidents to boys in and around breakers. Very often when repairs are made in the breakers, the revolving machinery, and other dangerous places are left exposed, and are sources of danger. Two boys lost their lives in breakers during the year. Inquests held on both cases rendered a verdict of accidental death.

## CONDITION OF COLLIERIES

## DELAWARE AND HUDSON COMPANY

The ventilation in some of the mines can be greatly improved. The current is not conducted properly to the face of workings. The conditions as to safety are good; roads and drainage good.

## PRICE-PANCOAST COAL COMPANY

Ventilation very good. Roads and drainage good. Condition as to safety good.

## PENNSYLVANIA COAL COMPANY

The ventilation has been improved, but there is need for more improvement. Roads and drainage fair. Condition as to safety good.

## STERRICK CREEK COAL COMPANY

The ventilation is being improved. Roads and drainage good. Condition as to safety good.

## DOLPH COAL COMPANY

Ventilation fair. Roads and drainage good. Condition as to safety good.

## HILLSIDE COAL AND IRON COMPANY

Ventilation good. Roads and drainage fair. Condition as to safety fair.

## MT. JESSUP COAL COMPANY

Ventilation bad. Roads and drainage bad. Condition as to safety fair.

## MOOSIC MOUNTAIN COAL COMPANY

Ventilation fair. Roads and drainage bad. Condition as to safety fair.

## CARNEY AND BROWN COAL COMPANY

Ventilation, roads and drainage fair. Condition as to safety fair.

## BLACK DIAMOND COAL COMPANY

Ventilation good. Roads and drainage fair. Condition as to safety fair.

## EDGERTON COAL COMPANY

Ventilation, roads and drainage fair. Condition as to safety fair.

## FINN COAL COMPANY

Ventilation fair. Roads and drainage fair. Condition as to safety fair.

## MOWRY AND WILSON COAL COMPANY

Ventilation, roads and drainage fair. Condition as to safety fair.

## EAST MOUNTAIN COAL COMPANY

(General condition fair.

## IMPROVEMENTS

## DELAWARE AND HUDSON COMPANY

Clinton.—New tail rope installed 1,000 feet in length, with a pair of double engines 14x20 inch in River Side Slope to pull coal north and south. A new hospital "First Aid," and wash house has been erected outside for employes of the Dunmore vein. Two new ventilating fans erected, each 20 feet in diameter.

No. 1. Carbondale.—Tail rope has been extended 1,000 feet, delivering cars to main line.

Powderly.—New car shop, supply house and blacksmith shop erected.

Jermyn.—Rock tunnel completed from the Archbald vein to the Dunmore vein, distance 125 feet. New electric motor  $4\frac{1}{2}$  tons with 12x18 inch reel on top for lowering loaded and hoisting empty cars in chambers.

White Oak.—New car shop has been erected. New plane in Dunmore vein finished.

## PRICE-PANCOAST COAL COMPANY

A rock slope has been sunk in the Diamond vein over the "Anti-clinal." A pair of double engines has been put in same vein to hoist the coal from this slope; size of engines 24x36 inch. In No. 3 vein a slope has been sunk 600 feet in length to the river line, and a pair of engines put in to hoist the coal, 12x12 inch in size. No. 2 Gravity Plane that was abandoned six years ago has been opened. In the Clark vein a new plane has been built, 600 feet in length. Dunmore No. 2 vein, the west slope, 900 feet in length, has been graded, and a pair of engines 12x12 inch in size erected outside to hoist the coal. One 250 horse power boiler was installed.

## PENNSYLVANIA COAL COMPANY

No. 1 Colliery, Outside—In 1904, work was commenced on the installation of 300 additional horse power "Babcock and Wilcox" boilers, and new 10 foot forced draft fan; also new "Cochrane" feed water heater and 12x8x12 inch "Duplex Scranton Pump" and new 50,000 gallon water tank. This work has all been completed during the year. The following buildings have been erected during the year. A new stone powder house 12x14 feet; a new stone oil house 12x12 feet 7 inch; also new brick wash house for miners 16x24 feet. Work is progressing on new brick building 16x36 feet to contain three rooms; office for outside foreman, shifting shanty for firemen, and shifting place for breaker men.

No. 2 Shaft, Outside.—The fan and head house, which was burned during the year, has been replaced by concrete buildings. A 12 inch concrete wall has been built between the down-cast and up-cast from foot of shaft to fan.

No. 1 Shaft, Inside.—Water tunnel from Lackawanna river to No. 1 Shaft. No. 1 Colliery has been driven in 1,600 feet during the year, and on the No. 1 end, 1,900 feet. Total distance driven since the tunnel was commenced, 5,200 feet. Distance yet to be driven, 1,600 feet. Another tunnel has been driven 675 feet from the third Dunmore vein to the second Dunmore vein, to carry the water to main tunnel, sectional area 6x9 inch.

No. 2 Shaft, Inside.—The new engine plane that was commenced in 1904, has been completed and is now in operation. A new air-bridge has been built on engine plane, sectional area, 120 square feet.

#### STERRICK CREEK COAL COMPANY

Sterrick Creek.—The Dummore fan, which was located above the Clark vein water level, about 4,000 feet east of breaker, was removed to the Clark vein air shaft, a distance of 3,000 feet south westerly. The new location is 400 feet from the Dummore haulage engines and the fan receives its steam from the pipe line which supplies these engines. The friction is reduced by this change, three thousand feet, and the efficiency of the fan increased.

A ten inch bore hole was driven from the surface to the Clark vein, depth 265 feet, and 2,000 feet of 6 inch wooden pipe laid to carry the culm from the breaker to the Clark vein workings. Eight new shaking screens were installed in the breaker with decks ranging from 18 to 24 feet in length, to take the place of eight 12 foot shakers, which were inadequate with the increased output.

Three balance planes above the water level in the Dummore vein were changed to one plane, and a pair of 12x12 inch engines installed to operate the same.

#### DOLPH COAL COMPANY

Air shaft completed from the surface to the Clark vein. A new ventilating fan, 20 feet in diameter, erected at head of air shaft. Extensive improvements were made outside. Previous to 1905, no box cars could be run under the breakers, owing to their height. With the improvements made, this condition is changed. The new chain hoist at head of breaker works very satisfactorily, and with the electric motor which conveys the mine cars to and from the "chain hoist," a great many mules are dispensed with, and all trouble in this line eliminated.

#### MT. JESSUP COAL COMPANY

A new ventilating fan has been erected at the head of the "North pitch" air shaft to ventilate the Clark vein workings. The diameter of fan is 14 feet.

#### HILLSIDE COAL AND IRON COMPANY

Erie.—One new 900 H. P. Sterling type water tube boiler plant with Sturdevant cold air blast and exhaust steam boiler feed heater.

Two 12x6x12 inch duplex plunger pumps for boiler feed and fire protection in boiler plant. One new washery; capacity 800 tons per day. New steam plane 7x12 inch in area and 4,200 feet in length. The same is equipped with a pair of engines 16x20 inch cylinder.

# Third District

LACKAWANNA COUNTY

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Scranton, Pa., February 23, 1906.

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

Sir: I have the honor of transmitting my report as Inspector of Mines for the Third Anthracite District for the year 1905, as provided in the act of 1903.

It contains the usual statistics, together with the accidents tabulated as required by law.

Respectfully submitted,

H. O. PRYTHERCH,

Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	20
Number of mines, .....	25
Number of mines in operation, .....	25
Number of tons of coal shipped to market, .....	4,009,891
Number of tons used at mines for steam and heat, .....	239,286
Number of tons sold to local trade and used by employes, .....	259,028
Number of tons produced, .....	4,508,205
Number of persons employed inside of mines, .....	7,482
Number of person employed outside, .....	2,383
Number of fatal accidents inside of mines, .....	34
Number of fatal accidents outside, .....	3
Number of non-fatal accidents inside of mines, .....	88
Number of non-fatal accidents outside, .....	13
Number of tons of coal produced per fatal accident inside, .....	132,594
Number of persons employed per fatal accident inside, ..	220
Number of persons employed per fatal accident outside, ..	794
Number of persons employed per non-fatal accident inside, ..	85
Number of persons employed per non-fatal accident outside, .....	183
Number of wives made widows, .....	17
Number of children orphaned, .....	26
Number of steam locomotives used outside, .....	13
Number of compressed air locomotives used inside, .....	5
Number of electric motors used inside, .....	50
Number of fans in use, .....	27
Number of gaseous mines in operation, .....	19
Number of non-gaseous mines in operation, .....	6



TABLE A

## PRODUCTION OF COAL

## Names of Operators

## Tons

Delaware, Lackawanna and Western Railroad Company,	2,028,270
Scranton Coal Company, .....	1,139,100
Delaware and Hudson Company, .....	475,416
People's Coal Company, .....	324,661
Pennsylvania Coal Company, .....	192,927
Green Ridge Coal Company, .....	153,297
A. D. and F. M. Spencer, .....	64,775
Economy Light, Heat and Power Company, .....	56,639
Nay Aug Coal Company, .....	38,254
Bull's Head Coal Company, .....	19,371
J. J. Gibbons, .....	12,000
Mountain Lake Coal Company, .....	3,495
Total, .....	<u>4,508,205</u>

## Production by Counties

Lackawanna, .....	<u>4,508,205</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	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									
D., L., and W. R. R. Co., .....	15	.....	15	35	4	39	135,218	57,951	3,433	925	4,371	229	.....	98	.....
Scranton Coal Co., .....	1	.....	1	16	1	17	162,729	71,194	1,825	690	2,515	261	.....	114	690
Delaware and Hudson Co., .....	3	.....	3	8	6	14	158,472	59,427	1,053	273	1,326	351	.....	132	46
People's Coal Co., .....	5	.....	5	15	1	16	64,322	21,644	280	132	412	56	.....	19	132
Pennsylvania Coal Co., .....	2	.....	2	10	1	11	96,463	19,232	353	92	445	176	.....	35	92
Green Ridge Coal Co., .....	2	.....	2	2	.....	2	76,648	76,648	311	87	398	156	.....	44	156
Bulls Head Coal Co., .....	.....	.....	.....	2	.....	2	.....	.....	37	22	59	18	.....	.....	.....
Miscellaneous companies, .....	.....	.....	.....	.....	.....	.....	.....	.....	190	149	339	.....	.....	.....	.....
Totals and averages for district, .....	34	3	37	88	13	101	132,594	51,229	7,482	2,383	9,865	220	794	85	183

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages
	January	February	March	April	May	June	July	August	September	October	November	December	
Falls of roof, .....	2	1	3	2	1	3	3	1	3	1	1	19	55.88
Mine cars, .....	1	1	1	1	2	1	2	1	1	1	1	10	29.41
Explosions of gas and dust, .....	1	1	1	1	1	1	1	1	1	1	1	1	8.94
Premature blasts, .....	1	1	1	1	1	1	1	1	1	1	1	1	8.94
Falling into shafts, .....	1	1	1	1	1	1	1	1	1	1	1	1	8.94
Miscellaneous, .....	1	1	1	1	1	1	1	1	1	1	1	1	2.94
Totals, .....	3	2	6	4	1	5	3	2	3	3	2	34	100
Causes of Accidents Outside													
Suffocation in chutes, etc., .....	1	1	1	1	1	1	1	1	1	1	1	1	100
Totals, .....	1	1	1	1	1	1	1	1	1	1	1	1	100
Grand totals inside and outside, .....	4	2	6	6	1	5	3	2	3	3	2	37	.....

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Falls of coal, .....	1	1	1	1	1	1	1	1	1	1	1	1	1.14	
Falls of roof, .....	1	1	1	1	1	1	1	1	1	1	1	1	23.41	
Mine cars, .....	1	1	1	1	1	1	1	1	1	1	1	1	23.41	
Explosions of gas and dust, .....	1	1	1	1	1	1	1	1	1	1	1	1	18.18	
Explosions of powder and dynamite, .....	1	1	1	1	1	1	1	1	1	1	1	1	2.27	
Premature blasts, .....	1	1	1	1	1	1	1	1	1	1	1	1	11.36	
By mules, .....	1	1	1	1	1	1	1	1	1	1	1	1	3.41	
Miscellaneous, .....	1	1	1	1	1	1	1	1	1	1	1	1	6.82	
Totals, .....	2	14	15	7	11	3	5	6	2	9	8	6	88	100
Causes of Accidents Outside														
Cars, .....	1	1	1	1	1	1	1	1	1	1	1	1	15.38	
Machinery, .....	1	1	1	1	1	1	1	1	1	1	1	1	15.39	
Miscellaneous, .....	3	3	2	2	2	2	2	2	1	1	1	1	9	69.23
Totals, .....	3	3	2	2	2	2	2	2	2	1	1	1	13	100
Grand totals inside and outside, .....	2	17	18	9	11	5	5	6	2	11	9	6	101	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

Inside	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Miners, .....			1	3	1	1	1	2	.....	.....	1	1	11
Miners' laborers, .....		2	1	1	1	.....	1	1	.....	.....	.....	.....	13
Drivers and runners, .....		.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	4
Doorboys and helpers, .....		.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	3
Company men, .....		1	.....	1	.....	.....	1	.....	.....	.....	.....	.....	3
Totals, .....		3	2	6	4	1	5	3	2	3	3	2	31
Outside													
Slatepickers (boys), .....		.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	2
All other employes, .....		1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Totals, .....		1	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	3
Grand totals inside and outside, .....		4	2	6	6	1	5	3	2	3	3	2	37

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

Inside	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Fire bosses and assistants, .....		.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Miners, .....		6	2	2	.....	.....	.....	.....	.....	.....	.....	.....	12
Miners' laborers, .....		.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Drivers and runners, .....		.....	.....	.....	.....	.....	1	.....	1	1	.....	.....	4
Doorboys and helpers, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Pumpmen, .....		.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Company men, .....		.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	3
All other employes, .....		1	1	1	1	.....	.....	.....	.....	.....	1	1	6
Totals, .....		2	14	15	7	11	3	5	6	2	9	8	66
Outside													
Engineers and firemen, .....		1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Slatepickers (boys), .....		.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	2
All other employes, .....		.....	.....	2	.....	1	.....	.....	.....	2	1	.....	10
Totals, .....		.....	3	3	2	.....	2	.....	.....	2	1	.....	13
Grand totals inside and outside, .....		2	17	18	9	11	5	5	6	2	11	9	66

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....		1	2	1	.....	1	2	2	1	1	.....	1	13
English, .....				1									1
Welsh, .....		1			1								4
Scotch, .....							1						1
Irish, .....				2	2		1				1		6
German, .....					1		1						2
Polish, .....				1					1	1			3
Italian, .....		2									2		2
Slavonian, .....					1		1	1					3
Lithuanian, .....					1								1
Totals, .....	4	4	2	6	6	1	5	3	2	3	3	2	37

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	1	2	2	2	2	.....	1	.....	3	.....	1	21
English, .....			2							1	1	1	4
Welsh, .....	1	1	2	1				3	1	1	2	2	14
Scotch, .....							1	1	1	1			5
Irish, .....		10	5		2			1	1	4	1		22
German, .....											1		2
Polish, .....		2	2	2	2	2	2			1	2	1	15
Italian, .....		1									1		2
Slavonian, .....		1			1						1		3
Lithuanian, .....				1	1		1						3
Austrian, .....				1									1
Swedish, .....				1						1			2
Totals, .....	2	17	18	9	11	5	5	6	2	11	9	6	101

TABLE I.—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 person 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	Power used	Area of furnace bars in square feet	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.																
Bellevue, .....	Shaft, ..	Gaseous, ..	Fans, ..	18	4.5	4.5	120	1.9		.....	14	229,600	192,000	347,040	539	356
Bellevue, .....	Slope, ..	Non-gas, ..	Fan, ..	14	4.0	4.0	132	1.9		.....	3	42,400	32,000	52,700	61	595
Hyde Park, .....	Shaft, ..	Gaseous, ..	Fan, ..	12	3.5	3.5	160	5		.....	13	105,010	90,030	134,980	370	243
Diamond, .....	Shaft, ..	Gaseous, ..	Fan, ..	14	4.0	4	121	5.5		.....	10	212,818	192,678	234,626	236	516
Tripp, .....	Shaft, ..	Gaseous, ..	Fan, ..	16	4.0	4.5	108	1.7		.....	1	34,000	32,040	34,000	12	2,666
Tripp, .....	Slope, ..	Gaseous, ..	Fan, ..	14	6.0	4.5	108	1	Steam,	.....	3	65,550	58,000	72,000	152	382
Tripp, .....	Drift, ..	Gaseous, ..	Fan, ..	14	4	4	96	8		.....	4	35,600	29,975	45,700	133	325
Brisblin, .....	Shaft, ..	Gaseous, ..	Fan, ..	14	4	4	116	8		.....	10	109,647	128,929	365	246	246
Cayuga, .....	Shaft, ..	Gaseous, ..	Fan, ..	12	3.5	4	138	9		.....	10	136,300	116,000	123,640	324	347
Manville, .....	Shaft, ..	Gaseous, ..	Fans, ..	20	6	5.6	65	.....		.....	10	204,070	188,540	257,350	349	540
Scranton Coal Co.																
Pine Brook, .....	Shaft, ..	Gaseous, ..	Fans, ..	17	4	4	5	1.2	Steam, ..	10	.....	226,000	205,010	239,330	486	422
Capouse, .....	Shaft, ..	Gaseous, ..	Fans, ..	20	5.5	5	102	1.2		.....	9	140,000	125,000	152,000	268	467
Mount Pleasant, .....	Shaft, ..	Gaseous, ..	Fan, ..	18	5	5	75	1		.....	5	151,250	143,150	162,230	260	550
West Ridge, .....	Slope, ..	Gaseous, ..	Fan, ..	20	5	5	75	1.1	Guibal, ..	3	.....	60,000	54,000	83,000	113	477
Delaware and Hudson Co.																
Dickson, .....	Shaft, ..	Gaseous, ..	Fans, ..	20	6	5	75	2.8	Open running, Steam, ..	11	.....	306,275	216,000	282,000	433	475
Von Storch, .....	Slope, ..	Gaseous, ..	Fan, ..	20	6	5	75	1.4	Guibal, ..	10	.....	134,200	139,460	174,090	445	358
People's Coal Co.																
Oxford, .....	Shaft, ..	Gaseous, ..	Fan, ..	16	4.7	4	90	.7	Open running, Steam, ..	9	.....	125,400	122,700	127,400	205	598



Pennsylvania Coal Co. No. 5, .....	Shaft, ..	Gaseous,	Fan,.....	20	6.5	5	75	1.2	Guibal, .....	Steam, ..	9	144,950	94,050	167,250	235	400
Green Ridge Coal Co. Green Ridge, .....	Slope, ...	Gaseous,	Fan,.....	14	4	4	48	2.5	Open running,	Steam, ..	9	136,600	121,300	154,160	218	556
A. D. and F. M. Spencer Spencer No. 1, .....	Shaft, ..	Gaseous,	Fan,.....	12	3	3	120	.6	Open running,	Steam, ..	...	48,150	17,500	49,160	43	407
Spencer No. 2, .....	Shaft, ..	Non-gas.	Fan,.....	8	3	3	120	.7	Open running,	Steam, ..	1	8,000	2,000	2,800	17	418
Nay Aug Coal Co. Nay Aug, .....	Slope, ...	Non-gas.	Fan,.....	8	4	3.6	60	.2	Open running,	Steam, ..	2	20,000	17,300	19,500	20	865
Bulls Head Coal Co. Bulls Head, .....	Slope, ...	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	3	46,000	21,000	46,000	31	677
J. J. Gibbons Gibbons, .....	Drift,....	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....
Mountain Lake Coal Co. Mountain Lake, .....	Drift,....	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....

\*Variable quantities.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
D., L. and W. R. R. Co. Bellevue, .....	Lackawanna,	R. A. Phillips, ....	Scranton, .....	E. L. Evans, Thos. I. Williams, Walter Reese, ....	Scranton, .....	D., L. and W.	Scranton, .....	D., L. and W.
Hyde Park, .....								
Diamond, .....								
Crisbin, .....								
Mayville, .....								
Diamond washery, .....								
Scranton Coal Co. Pine Brook, .....	Lackawanna,	W. L. Allen, .....	Peckville, .....	John Van Bergen, John Van Bergen, John Van Bergen, J. F. Cummings, ..	Scranton, .....	Ontario and Western	Scranton, .....	Ontario and Western
Capouse, .....								
Mount Pleasant, .....								
West Ridge, .....								
Capouse washery, .....	Lackawanna,	C. C. Rose, .....	Scranton, .....	C. C. Rose, .....	Scranton, .....	Delaware and Hudson	Scranton, .....	Delaware and Hudson
Mount Pleasant washery, .....								
Delaware and Hudson Co. Dickson, .....	Lackawanna,	C. C. Rose, .....	Scranton, .....	C. C. Rose, .....	Scranton, .....	Delaware and Hudson	Scranton, .....	Delaware and Hudson
Von Storch, .....								
Von Storch washery, .....	Lackawanna,	James G. Sheperd,	Scranton, .....	John G. Hayes, ..	Scranton, .....	D., L. and W.	Scranton, .....	D., L. and W.
People's Coal Co. Oxford, .....								
Pennsylvania Coal Co. No. 5 shaft, .....	Lackawanna,	Wm. W. Inglis, ..	Scranton, .....	John Reed, .....	Dunmore, .....	Erle	Dunmore, .....	Erle
Green Ridge Coal Co. Green Ridge, .....								
A. D. and F. M. Spencer Spencer, .....	Lackawanna,	W. L. Connell, ....	Scranton, .....	W. L. Connell, ...	Scranton, .....	Erle and Delaware and Hudson	Scranton, .....	Erle and Delaware and Hudson
Economy Light, Heat and Power Co. Economy washery, .....								
Nay Aug Coal Co. Nay Aug slope, .....	Lackawanna,	A. D. and F. M. Spencer	Dunmore, .....	H. M. Spencer, ...	Dunmore, .....	Erle and Delaware and West-ern	Dunmore, .....	Erle and Delaware and West-ern
Nay Aug washery, .....								
	Lackawanna,	E. M. Stack, ....	Scranton, .....		Scranton, .....	No railroad		No railroad
	Lackawanna,			Thomas H. Bray,...	Scranton, .....	Erle	Scranton, .....	Erle
	Lackawanna,			Thomas H. Bray,...	Scranton, .....	Erle	Scranton, .....	Erle

Bulls Head Coal Co. Bulls Head, .....	Lackawanna, ..	D. I. Whiteford, ..	Scranton, .....	Jonathan Vison, ..	Scranton, .....	No railroad
Gibbons, .....	Lackawanna, ..	J. J. Gibbons, ....	Dunmore, .....	.....	.....	No railroad
Mountain Lake Coal Co. Mountain Lake, .....	Lackawanna, ..	M. I. Ruddy, .....	Dunmore, .....	.....	.....	No railroad

TABLE 2.—Number of tons of coal mined, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked. (Totals are averages, not including washers)	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,	413,959	.....	16,259	430,218	219	927	2	11	16,712	8,387	72
Bellevue, .....		272,681	4,905	19,008	296,594	215	645	3	9	13,546	9,275	74
Hyde Park, .....		389,827	33,510	6,998	430,335	298	858	1	8	17,340	7,636	88
Diamond, .....		331,970	16,060	5,325	353,355	244	678	3	2	12,855	7,611	58
Brisbin, .....		216,873	11,130	8,676	236,679	184	725	6	4	12,101	10,972	50
Cayuga, .....		172,380	12,887	2,608	187,875	232	483	.....	5	14,144	20,000	46
Manville, .....		1,797,690	78,592	58,274	1,934,556	221	4,316	15	39	86,798	54,881	383
Diamond washery, .....		90,714	3,000	.....	93,714	89	55	.....	.....	1	.....	.....
Totals, .....	1,888,404	31,592	58,274	2,028,270	221	4,371	15	39	86,799	54,881	392	.....
Scranton Coal Co.	Lackawanna,	271,519	20,075	1,675	283,269	163	889	3	3	15,622	20,692	82
Pine Brook, .....		230,154	14,600	3,176	247,930	151	616	1	3	8,859	7,919	75
Capouse, .....		167,006	10,950	3,463	181,424	136	610	1	2	10,681	4,400	62
Mount Pleasant, .....		43,643	6,000	1,445	51,088	132	267	2	6	4,700	8,850	28
West Ridge, .....		712,822	51,625	9,764	773,711	148	2,382	7	16	39,762	41,761	247
Capouse washery, .....	157,055	7,900	96	164,951	167	74	.....	1	.....	.....	.....	.....
Mount Pleasant washery, .....	139,659	9,125	2,324	201,008	179	59	.....	.....	.....	.....	.....	.....
Totals, .....	346,614	16,425	2,350	365,389	173	133	1	1	.....	.....	.....	.....
Totals, .....	1,058,936	68,050	12,114	1,139,100	148	2,515	8	17	39,762	41,761	247	.....

Delaware and Hudson Co.											
Dickson, .....	150,485	.....	2,836	153,341	171	575	.....	4	9,614	7,836	50
Von Storch, .....	259,506	50,734	3,895	314,185	244	780	.....	10	12,637	16,300	68
Totals, .....											
Von Storch washery, .....	409,991	50,734	6,731	467,476	202	1,305	.....	14	22,251	24,117	118
Totals, .....											
People's Coal Co.											
Oxford, .....	417,931	50,734	6,751	475,416	203	1,326	.....	14	22,251	24,117	118
Totals, .....											
Pennsylvania Coal Co.											
No. 5 shaft, .....	197,086	18,377	109,198	324,661	275	412	.....	5	12,481	15,675	127
Totals, .....											
Green Ridge Coal Co.											
Green Ridge, .....	169,129	2,418	21,380	192,927	199	445	.....	2	10,801	4,341	67
Totals, .....											
A. D. and F. M. Spencer											
Spencer, .....	114,048	11,790	27,459	158,297	233	398	.....	4	7,470	5,800	98
Totals, .....											
Economy Light, Heat and Power Co.											
Economy washery, .....	64,775	.....	.....	64,775	84	218	.....	.....	1,650	2,250	36
Totals, .....											
Economy Light, Heat and Power Co.											
Economy washery, .....	54,719	1,920	.....	56,639	236	13	.....	.....	.....	.....	.....
Totals, .....											
Nay Aug Coal Co.											
Nay Aug slope, .....	10,969	2,325	109	13,403	45	63	.....	.....	225	1,300	10
Nay Aug washery, .....	24,851	.....	.....	24,851	136	.....	.....	.....	.....	.....	.....
Totals, .....											
Bulls Head Coal Co.											
Bulls head, .....	35,820	2,325	109	38,254	45	63	.....	.....	225	1,300	10
Totals, .....											
J. J. Gibbons											
Gibbons, .....	7,258	1,500	10,613	19,371	114	59	.....	2	800	150	14
Totals, .....											
Mountain Lake Coal Co.											
Mountain Lake, .....	1,785	100	1,610	3,495	186	19	.....	.....	205	.....	5
Totals, .....											
Grand totals, .....											
Grand totals, .....											
Grand totals, .....											

\*Included with employees for Nay Aug slope.

TABLE 2.—Recapitulation

Delaware, Lackawanna and Western R. Co., .....	1,888,404	81,532	58,274	2,028,270	221	4,371	15	39	86,799	54,881	392
Scranton Coal Co., .....	1,058,986	68,050	12,114	1,139,100	148	2,515	8	17	89,762	41,761	247
Delaware and Hudson Co., .....	417,831	50,734	6,751	475,416	203	1,326	.....	14	22,251	24,117	118
Miscellaneous companies, .....	644,020	38,910	181,889	866,419	172	1,653	11	31	34,232	29,516	300
Totals, .....											
Totals, .....											

TABLE 2.—Continued

Names of Operators	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	Total horse power	Steam	Air	Electric								
D., L. and W. R. R. Co., .....	Lackawanna	18	4,086	30	4,345	8,481	11	38	119	10,837	28	21,128	12,196	8	.....	
Scranton Coal Co., .....		12	180	24	3,385	3,565	2	.....	7	40	3,637	21	13,115	11,700	5	.....
Delaware and Hudson Co., .....		10	3,000	.....	.....	3,000	.....	5	.....	65	3,489	3	2,960	480	.....	1
People's Coal Co., .....		5	1,500	.....	.....	1,500	.....	.....	.....	14	857	3	1,576	450	1	.....
Pennsylvania Coal Co., .....		.....	.....	6	450	450	.....	.....	.....	17	482	2	484	532	.....	.....
Green Ridge Coal Co., .....		3	375	.....	.....	375	.....	.....	.....	12	1,462	1	400	360	.....	.....
Economy Light, Heat and Power Co., .....		11	250	3	900	1,150	.....	.....	.....	22	1,080	.....	.....	.....	.....	.....
Nay Aug Coal Co., .....		.....	.....	3	180	180	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bulls Head Coal Co., .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. J. Gibbons, .....		.....	.....	1	60	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mountain Lake Coal Co., .....		.....	.....	1	12	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....		.....	59	9,068	73	9,537	18,605	13	50	393	22,139	59	40,402	26,188	16	5





TABLE 3.—Continued

Names of operators and Collieries	County	Inside										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	Foremen	Blacksmiths and carpenters	Enginers and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employes	Total outside	
Mount Pleasant washery, ...	Lackawanna, ...												1	1	2	5	5				45	59	59
Totals, .....		5	2	14	596	550	336	54	15				313	1,925	6	36	50	184	88	8	312	690	2,515
Delaware and Hudson Co.																							
Dickson, .....	Lackawanna, ...	1	2	5	148	148	70	29	2	65	4	468									49	109	575
Von Storch, .....	Lackawanna, ...	1	1	5	189	192	85	19		93	2	587	1	1	15	20	6	38	2	60	143	730	
Von Storch washery, .....	Lackawanna, ...	2	3	10	337	340	155	39	2	159	6	1,053	1	2	18	32	36	49	5	109	252	1,305	
Totals, .....		2	3	10	337	340	155	39	2	159	6	1,053	1	3	18	36	39	55	5	116	273	1,326	
People's Coal Co.																							
Oxford, .....	Lackawanna, ...	1	1	2	90	105	36	9	2	18	16	280	1	1	13	8	47	3	6	53	132	412	
Pennsylvania Coal Co.																							
No. 5 shaft, .....	Lackawanna, ...	1		1	138	137	38	4	1	14	19	353		1	4	5	11	29	2	40	92	445	
Green Ridge Coal Co.																							
Green Ridge, .....	Lackawanna, ...	2		3	106	100	55	13	2	12	24	311	1	1	6	13	8	2	3	53	87	398	
A. D. and F. M. Spencer																							
Spencer, .....	Lackawanna, ...	1	1		44	44	20	3	2	18		133	1	1	2	11	22	3	2	43	85	218	







TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Feb. 5	William H. Parry, .....	Welsh, .....	Laborer, .....	28	M.	1	2	Cayuga, .....		Instantly killed by a fall of a bell shaped roof rock.
14	Angelo Tony, .....	Italian, .....	Laborer, .....	18	S.	.....	Mt. Pleasant washery, .....			Smothered by falling into coal pockets. Outside.
18	Phelix Reaker, .....	Italian, .....	Laborer, .....	24	S.	.....	Oxford, .....			Killed by a fall of rock at face of chamber in Diamond vein.
27	Thomas Haggerty, .....	American, ..	Carpenter, ..	48	S.	.....	Von Storch, ...			Killed by mine cars in the Rock vein workings.
March 7	Frank Sweeney, .....	American, ..	Laborer, .....	31	M.	1	3	Cayuga, .....		Caught between top rail of car and roof and killed.
26	James Carter, .....	American, ..	Miner, .....	22	S.	.....	Brisbin, .....			Instantly killed by a premature blast.
April 4	John Tomas, .....	Irish, .....	Miner, .....	36	M.	1	2	Pennsylvania No. 5, .....		He was in the act of tamping the charge when the explosion took place.
8	Patrick Hennigan, .....	Irish, .....	Miner, .....	44	S.	.....	Pine Brook, ...			Killed by a fall of roof while resting a discharged prop.
14	John Richards, .....	Welsh, .....	Miner, .....	51	M.	1	.....	Brisbin, .....	Lackawanna,	Instantly killed by a fall of roof at face of chamber.
22	Frederick Tremmers, .....	American, ..	Doorboy, .....	16	S.	.....	Pine Brook, ...			Killed by a fall of bony at face of chamber in Clark vein.
26	John Maugher, .....	Polish, .....	Laborer, .....	35	M.	1	3	Mount Pleasant, .....		Killed by a runaway mine car.
26	George Rose, .....	English, .....	Company man, .....	46	S.	.....	West Ridge, ...			Killed by an explosion of gas.
May 4	Anthony Harding, .....	Irish, .....	Miner, .....	28	S.	.....	Brisbin, .....			Walked into outside shaft and fell down.
5	George Leonard, .....	Slavonian, ..	Slatepicker, ..	15	S.	.....	Green Ridge, ..			Killed by a fall of roof at the face of chamber in Rock vein.
5	Joe Fogarty, .....	Irish, .....	Slatepicker, ..	16	S.	.....	Green Ridge, ..			{ While playing in the breaker both boys ran into the coal pockets and were smothered. Outside.
9	Paul Klotzer, .....	German, .....	Driver, .....	14	S.	.....	Pennsylvania No. 5, .....			Killed by a fall of roof at the face of chamber in Rock vein.
13	Joseph Colesky, .....	Lithuanian, ..	Laborer, .....	28	M.	1	.....	Capouse, .....		{ While playing in the breaker both boys ran into the coal pockets and were smothered. Outside.
26	Griffith Ellis, .....	Welsb, .....	Doorman, .....	59	S.	.....	Diamond, .....			Killed by a fall of rock in a pillar robbing place.
June 10	Thomas Boyd, .....	American, ..	Miner, .....	28	M.	1	.....	Cayuga, .....		Squeezed between car and rib. Died same day.
										Killed by a fall of roof following a blast.



July	9	George O'Donnell, .....	American, ..	Laborer, ....	20	S. ....	Oxford, .....	Killed by a fall of rock at the head of inside slope.
	13	Benjamin Davidson, ..	Scotch, .....	Driver, ....	17	S. ....	Green Ridge, ..	Fatally injured by cars. Died July 14.
	14	Thomas Morris, .....	American, ..	Company man, ..	29	S. ....	Oxford, .....	Struck by a piece of rock on inside of shaft and killed.
	20	Michael Donnegan, ....	Irish, .....	Laborer, ....	45	M. 1	Oxford, .....	Killed by a runaway car on inside slope.
	24	Charles Vovoslicak, ...	Slavonian, ..	Laborer, ....	19	S. ....	Green Ridge, ..	Killed by a fall of rock while laboring for his father.
Aug.	2	Fish Kinshalk, .....	Slavonian, ..	Laborer, ....	35	M. 1	Von Storch, ....	Instantly killed by a fall of rock at face of chamber in Fourteen Foot vein.
	8	George Palley, .....	American, ..	Miner, .....	39	M. 1	Cayuga, .....	Killed by a fall of rock in chamber in Four Foot vein.
	22	Edward Morgan, .....	American, ..	Mfner, .....	23	M. 1	Bellevue, .....	Killed by a fall of rock at face of a gangway in Clark vein.
Sept.	21	Thomas Reese, .....	American, ..	Doorboy, ...	16	S. ....	Von Storch, ....	Fatally injured by falling under moving mine cars.
	25	John Sabina, .....	Polish, .....	Driver, ....	17	S. ....	Bellevue slope, ..	Fatally injured while assisting in the work of erecting a drum.
Oct.	13	Edward Reed, .....	American, ..	Laborer, ....	36	M. 1	Hyde Park, ...	Walked into shaft and fell to bottom.
	27	Joseph Butcavitz, .....	Polish, .....	Laborer, ....	38	S. ....	Cayuga, .....	Killed by fall of roof at face of chamber in New County vein.
	30	Mike Killack, .....	German, .....	Laborer, ....	28	M. 1	Hyde Park, ...	Fatally injured by falling roof rock.
Nov.	11	Frank Kalatka, .....	Polish, .....	Laborer, ....	30	M. 1	Pine Brook, ...	Died same day.
	13	Joe Petershunis, .....	Polish, .....	Miner, .....	45	M. 1	West Ridge, ...	Killed by a fall of rock in China vein.
	23	Michael Cuff, .....	Irish, .....	Laborer, ....	28	M. 1	Hyde Park, ....	Killed by falling rock in New County vein.
Dec.	12	William I. Thomas, ..	Welsh, .....	Miner, .....	33	M. 1	Cayuga, .....	Killed by a fall of rock in Four Foot vein.
	27	Dennis Sullivan, .....	American, ..	Driver, ....	21	S. ....	Oxford, .....	Fatally injured by falling under moving mine cars. Died in West Side Hospital.

Lackawanna.

Note.—October 28, Thomas McHale, aged 58 years, died from natural causes while at work in the Von Storch mine. December 19, James McAndrew, aged 69 years, died from natural causes while at work in the Mount Pleasant mine.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 21	Elesworth Davies, .....	American, .....	Company man, .....	23	S.	Tripp slope, .....		Leg fractured by cars inside.
Feb. 2	William Lewis, .....	Welsh, .....	Humberman, .....	33	S.	Bellevue slope, .....		Finger crushed by sticking hammer.
4	Joseph Poler, .....	Italian, .....	Miner, .....	27	M.	West Ridge, .....		Face and hand cut by flying coal from blast.
7	John McDermott, .....	Irish, .....	Miner, .....	50	M.	Capouse, .....		Hand injured by falling roof rock.
8	Thomas Golden, .....	Irish, .....	Laborer, .....	30	M.	Green Ridge, .....		Foot injured by falling roof rock.
9	Michael Barrett, .....	Irish, .....	Laborer, .....	23	M.	Von Storch, .....		Shoulder injured by falling roof rock.
10	John Munschir, .....	Polish, .....	Laborer, .....	26	M.	Bulls Head, .....		Wrist cut by falling coal.
11	Patrick Marrah, .....	American, .....	Carpenter, .....	20	M.	Von Storch, .....		Arm injured between car and door post.
19	William Jones, .....	Polish, .....	Driver, .....	18	M.	West Ridge, .....		Arm injured between car and roof.
14	John Starrucca, .....	Slavonian, .....	Laborer, .....	29	M.	Capouse washery, .....		Leg fractured by frozen ice rolling from dump, outside.
14	Michael McNulty, .....	Irish, .....	Fireman, .....	39	S.	Von Storch, .....		Injured by falling against feed pipe, outside.
15	Evan Lewis, .....	Welsh, .....	Miner, .....	47	M.	Bellevue shaft, .....		Back injured by falling roof rock.
15	John Graham, .....	Irish, .....	Miner, .....	34	M.	Bellevue slope, .....		Foot crushed by falling roof rock.
15	Anthony Moran, .....	Irish, .....	Runner, .....	27	M.	Von Storch, .....		Slightly injured by mule.
16	John Murphy, .....	Irish, .....	Laborer, .....	37	S.	Von Storch, .....	Lackawanna.	Slightly injured by hot ashes. Outside.
23	Anthony Labisaskle, .....	Polish, .....	Laborer, .....	30	M.	Hyde Park, .....		Leg fractured by falling roof rock.
25	Anthony Dougherty, .....	Irish, .....	Miner, .....	30	M.	Oxford, .....		Slightly injured by explosion of gas.
25	Thomas Higgins, .....	Irish, .....	Laborer, .....	39	S.	Oxford, .....		Slightly injured by an explosion of gas.
25	Thomas Lofus, .....	Irish, .....	Miner, .....	35	M.	Von Storch, .....		Hip bruised by falling under a load of tons.
March 3	Peter O'Hara, .....	American, .....	Runner, .....	18	S.	Von Storch, .....		Kicked in stomach by a mule.
4	Clarence Uley, .....	American, .....	Slatepicker, .....	16	S.	Dickson, .....		Arm fractured by falling in breaker, outside.
7	William Erlen, .....	English, .....	Laborer, .....	22	S.	Von Storch, .....		Ankle sprained by jumping off a mine car, outside.
9	Flova Millar, .....	Polish, .....	Driver, .....	29	S.	West Ridge, .....		Knee squeezed between the bumpers of mine cars.
12	Evan Hughes, .....	American, .....	Fireboss, .....	49	M.	Bellevue shaft, .....		Slightly injured by the concussion accompanying an explosion of gas.
12	John Thomas, .....	Welsh, .....	Machinist, .....	47	M.	Bellevue shaft, .....		Leg cut by a derailed mine car.
12	P. J. Ruane, .....	American, .....	Pumpman, .....	31	S.	Pennsylvania No. 5 shaft, .....		
14	Michael McGarry, .....	Irish, .....	Driver, .....	16	S.			

March	14	Charles Bowe, .....	American, .....	Laborer, .....	26	S.	Dickson, .....	Point of pick passed through left foot. Outside.
	15	John Price, .....	American, .....	Runner, .....	40	S.	Hyde Park, .....	Squeezed between a derall-d car and the rib.
	29	Arthur Vobospi, .....	Polish, .....	Runner, .....	17	S.	West Ridge, .....	Two fingers amputated between top rail of car and the roof.
	29	Richard O'Hora, .....	Irish, .....	Miner, .....	40	M.	Pennsylvania No. 5 shaft, .....	These men were more or less seriously injured by the premature explosion of a blast. They were in the act of charging at the time.
	20	Patrick O'Hora, .....	Irish, .....	Miner, .....	45	M.	Pennsylvania No. 5 shaft, .....	
	20	John O'Hora, .....	Irish, .....	Laborer, .....	23	S.	Pennsylvania No. 5 shaft, .....	
	27	David Davies, .....	American, .....	Runner, .....	19	S.	Manville, .....	Collar bone fractured by mine cars jumping the track.
	28	John W. Jones, .....	American, .....	Runner, .....	21	S.	Hyde Park, .....	Leg fractured, between the motor and mine car.
	28	David Griffiths, .....	Welsh, .....	Driver, .....	22	S.	Oxford, .....	Leg fractured in a collision of mine cars.
	31	Edward Casey, .....	Irish, .....	Laborer, .....	30	M.	Oxford, .....	Slightly injured by an explosion of gas.
April	1	W. E. Watrous, .....	American, .....	Teamster, .....	38	M.	Oxford, .....	Four ribs fractured in a runaway accident. Outside.
	4	Charles Mink t, .....	Lithuanian, .....	Miner, .....	40	M.	Dickson, .....	Ribs fractured by falling roof rock.
	5	Thomas Morgan, .....	American, .....	Dumper, .....	15	S.	Manville, .....	Two ribs fractured while playing tag. Outside.
	5	Herman Holberg, .....	Swedish, .....	Laborer, .....	22	S.	Hyde Park, .....	Leg fractured by falling roof rock.
	10	William Cresko, .....	Polish, .....	Laborer, .....	24	M.	Hyde Park, .....	Wounds on scalp by falling rock.
	13	Patrick Skrotsky, .....	Polish, .....	Footman, .....	18	S.	Capouse, .....	Arm injured by falling against a mine car.
	15	Michael Barnick, .....	Polish, .....	Miner, .....	45	M.	Pennsylvania No. 5 shaft, .....	Leg fractured by a fall of roof rock.
	17	Henry Thomas, .....	Welsh, .....	Miner, .....	59	M.	Bellevue shaft, .....	Side and arm injured by a fall of roof.
	21	Frank Croskie, .....	Austrian, .....	Company man, .....	23	S.	Tripp slope, .....	Leg fractured by falling roof rock.
May	14	Baldona Amedeo, .....	Italian, .....	Driver, .....	18	S.	Oxford, .....	Leg fractured by cars inside.
	8	Mathew Knovalis, .....	Lithuanian, .....	Laborer, .....	28	S.	Manville, .....	Leg fractured by a runaway mine car.
	13	John Boback, .....	Slavonian, .....	Laborer, .....	28	M.	Green Ridge, .....	Back injured by a fall of rock.
	15	Salvatore Carlotta, .....	Italian, .....	Laborer, .....	28	S.	Pennsylvania No. 5 shaft, .....	Leg fractured by a fall of roof rock.
	27	John Gallagher, .....	Irish, .....	Miner, .....	44	M.	Von Storch, .....	Hip dislocated by a fall of roof rock.
	27	James Carvy, .....	Irish, .....	Miner, .....	28	M.	Oxford, .....	Slightly injured by an explosion of gas while making an airway through old workings.
	27	Mike Mollisk, .....	Polish, .....	Laborer, .....	25	M.	Oxford, .....	
	27	Dave Leary, .....	American, .....	Trackman, .....	19	S.	Oxford, .....	
	27	Thomas Darts, .....	American, .....	Driver, .....	15	S.	Oxford, .....	
	31	Marion Fitzinski, .....	Polish, .....	Miner, .....	42	M.	Bellevue shaft, .....	Slightly injured by a premature blast.
June	6	Joseph Burns, .....	Irish, .....	Laborer, .....	40	M.	Bellevue shaft, .....	Leg fractured by cars outside. Outside.
	17	Anthony McDonnell, .....	American, .....	Brakeman, .....	18	S.	Cayuga, .....	Fingers crushed in pinion wheel. Outside.
	17	William Ketrick, .....	American, .....	Statepicker, .....	14	S.	Cayuga, .....	Slightly burned on face by explosion of gas.
	20	Frank Sharkey, .....	Polish, .....	Miner, .....	36	M.	Mount Pleasant, .....	Slightly burned on face and hands by an explosion of gas.
	21	Joe Bengill, .....	Polish, .....	Laborer, .....	32	M.	West Ridge, .....	Compound fracture of leg caused by a fall of roof.
	22	Joe Michillek, .....	Polish, .....	Laborer, .....	35	M.	Bellevue shaft, .....	Burned on hands and face by an explosion of gas.
July	8	August Sopko, .....	Polish, .....	Laborer, .....	50	M.	Oxford, .....	

Lackawanna.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
July 10	Charles McClusky, .....	Scotch, .....	Runner, .....	17	S.	Dickson, .....		Arm amputated by cars inside.
19	Samuel Sitar, .....	Slavonian, .....	Miner, .....	42	M.	Pennsylvania No. 5 shaft, .....		Leg fractured by flying coal from blast.
25	Mike Martoskink, .....	Polish, .....	Miner, .....	45	M.	Oxford, .....		Hands and face slightly burned by exploding gas.
27	John Spudis, .....	Lithuanian, .....	Laborer, .....	49	M.	Oxford, .....		Slightly burned by an explosion of gas.
Aug. 2	Roger Thomas, .....	Welsh, .....	Miner, .....	29	M.	Brislin, .....		Leg fractured while he was passing between mine cars.
12	Angus McDonald, .....	Scotch, .....	Driver, .....	23	S.	Oxford, .....		Fell from the bumper of a moving car and broke his leg.
18	James Williams, .....	Welsh, .....	Miner, .....	35	M.	Cayuga, .....		Seriously injured on face and hands by a premature blast.
19	William Jones, .....	Welsh, .....	Driver, .....	17	S.	Capouse, .....		Kicked by a mule—ribs bruised.
23	William Monaghan, .....	American, .....	Laborer, .....	25	S.	Capouse, .....		Head seriously cut by falling roof rock.
28	Patrick Kerrigan, .....	Irish, .....	Miner, .....	40	M.	Diamond shaft, ..		Hands and face slightly burned by gas explosion.
Sept. 2	Hugh Scullion, .....	Irish, .....	Laborer, .....	30	M.	Manville, .....		Thigh fractured by a fall of rock.
30	John Phillips, .....	Welsh, .....	Runner, .....	23	S.	Mount Pleasant, ..		Leg fractured by a haulage rope.
Oct. 2	Hugh McLane, .....	American, .....	Laborer, .....	19	S.	Pennsylvania No. 1 shaft, .....	Lackawanna,	Slightly injured by being squeezed against track. Outside.
5	John Fox, .....	American, .....	Driver, .....	19	S.	Pine Brook, .....		Leg fractured by cars inside while the victim was escaping from a kicking mule.
7	Joseph Levey, .....	Irish, .....	Driver, .....	17	S.	Pennsylvania No. 5 shaft, .....		Leg fractured by cars inside.
14	John Budstulka, .....	Polish, .....	Laborer, .....	22	S.	Hyde Park, .....		Hand injured by being caught between chain and pulley.
16	John McNulty, .....	Irish, .....	Miner, .....	45	M.	Hyde Park, .....		Cut on leg by sliding rock.
19	John Gray, .....	American, .....	Loader, .....	23	M.	Von Storch, .....		Small bone in leg cracked in a collision of railroad cars. Outside.
20	Michael Reilly, .....	Irish, .....	Driver, .....	29	S.	Oxford, .....		Leg fractured by cars inside.
20	Samuel Spear, .....	English, .....	Miner, .....	43	M.	Bulls Head, .....		Small bone in foot crushed by a fall of rock.
27	Michael O'Brian, .....	Irish, .....	Miner, .....	53	S.	Diamond shaft, ..		Leg fractured by a fall of roof rock.

Oct.	30	Edward Davis, .....	Welsh, .....	Miner, .....	46	S. Bellevue shaft, ...	Four ribs fractured by falling roof rock. Leg fractured by a fall of bony. Hand severely crushed in breaker machinery. Outside.
Nov.	3	Albert Johnson, .....	Swedish, .....	Miner, .....	22	M. Hyde Park, .....	
		3	Mike Shereia, .....	Polish, .....	19	S. Diamond, .....	Skull fractured by flying coal from a blast.
	4	John Howells, .....	Welsh, .....	Miner, .....	29	S. Diamond, .....	Wound on scalp and broken leg. Fall of roof.
	8	Peter Munick, .....	Irish, .....	Miner, .....	36	M. Hyde Park, .....	Arm crushed by a runaway car on slope.
	16	Joseph Stoker, .....	German, .....	Driver, .....	17	S. Pennsylvania No. 5 shaft.	Knee cap injured by cars inside.
	20	George Crubb, .....	English, .....	Doorman, .....	69	M. West Ridge, .....	Wrist broken by cars inside.
	23	Uives Cavalari, .....	Italian, .....	Laborer, .....	50	M. Octoraro, .....	Burned on hands and faces by exploding powder.
	27	Simon Barnoskie, .....	Polish, .....	Miner, .....	30	S. Pine Brook, .....	Collar bone fractured by mine cars inside.
	27	Charles Poletus, .....	Polish, .....	Laboret, .....	21	S. Pine Brook, .....	Back injured while unloading rock inside.
	27	Thomas Sumans, .....	Welsh, .....	Footman, .....	43	S. Manville, .....	Face injured by a premature blast of dynamite.
Dec.	2	Alec Sismstine, .....	German, .....	Driver, .....	21	S. Brisbin, .....	Face and head cut by falling bony.
	14	Isaac Davies, .....	Welsh, .....	Miner, .....	45	M. Tripp shaft, .....	Leg fractured by cars inside.
	14	William Shugg, .....	English, .....	Driver, .....	19	S. Capouse, .....	Leg fractured by cars inside.
	15	Oliver Jones, .....	American, .....	Driver, .....	16	S. Cayuga, .....	Eye injured while assisting to replace a derailed car.
	18	Morris Williams, .....	Welsh, .....	Company man, .....	71	M. Diamond shaft, ...	
	27	Joseph Ross, .....	Italian, .....	Driver, .....	18	S. Pennsylvania No. 5 shaft.	

Lackawanna.

## CONDITION OF COLLIERIES

## DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

With but few exceptions the ventilation in the mines of this company is good. The roads and drainage are properly attended to. The conditions as to safety are good.

## SCRANTON COAL COMPANY

Mines are well ventilated. Roads are good and properly drained.

## DELAWARE AND HUDSON COMPANY

Ventilation good. Roads and drainage good.

## PEOPLE'S COAL COMPANY

The ventilation has been re-established during the year, and will now compare favorably with any mine in the district. Roads are well drained.

## PENNSYLVANIA COAL COMPANY

The ventilation is fair to good. Drainage good. Conditions as to safety are also good.

## GREEN RIDGE COAL COMPANY

Ventilation fair to good. Drainage good.

## A. D. AND F. M. SPENCER

Ventilation fair to good. Drainage good.

## NAY AUG COAL COMPANY

Ventilation and drainage are good.

## BULLS HEAD COAL COMPANY, J. J. GIBBONS, MOUNTAIN LAKE COAL COMPANY

The mines of these operators are ventilated by natural means. The employes work in scattered groups. Ample ventilation is provided under the circumstances.

## IMPROVEMENTS

## DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Hyde Park Shaft.—During the year the Hyde Park Breaker was rebuilt and equipped with mechanical pickers. There is also in course of erection a small annex to prepare the smaller sizes of coal.

There was installed in the mines one 80 H. P. electric hoist on Slope No. 2, New County Vein.

Cayuga.—A washery was built at this colliery to take care of all the refuse from the main breaker.

A tunnel was driven from the Clark vein to the Dummore vein, a distance of 300 feet.

The cribbing in the hoisting shaft was replaced by concrete or expanding metal.

Brisbin.—A tunnel was driven from the Clark vein to the Dummore. This tunnel is 600 feet long, and is located near the center of the property.



Diamond.—The foundations are built for a new breaker which is designed to handle twenty-five hundred tons of coal per day.

New engines are installed at the Diamond shaft. These are equipped with steam brakes, steam reverse, and steam clutch.

#### PEOPLE'S COAL COMPANY

During the year the People's Coal Company constructed a modern wash house upon the most improved methods. The building is of brick and stone, and is fire proof throughout, the floor being of concrete and so constructed that all water will drain to a given point. The size of building is 34x68 and it is built with two apartments, one being used for shower baths while the other apartment is for dressing and contains the steel lockers for their 600 employes. Each man is provided with a separate locker, the size of which is 14"x5' 8" high. These lockers are made with expanded metal backs and steam pipes are arranged about the different sections of lockers so that any clothes placed therein that may be damp are properly dried out in a short time. Each locker is provided with suitable clothes hooks and shelves and equipped with regular safe locks. The shower bath and lockers are duplicates of those in use in the Scranton Y. M. C. A. building recently built.

The building is heated with automatic valves in such a manner that an even temperature is at all times found within the building and the hot water used for showers is passed through an automatic heating and cooling process so that it is always at an even temperature.

A man is kept in the building to attend to the wants of the men and also to provide the necessaries used for bath purposes.

#### Mine Foremen's Examination

The annual examinations of candidates for certificates of qualification as mine foremen and assistant mine foremen were held May 8 and 9, in the City Hall, Scranton. The following persons were recommended for certificates:

Mine Foremen.—William W. Davis, Michael F. Madden, John W. Jones, Benjamin R. Evans, Jacob Jenkins, Anthony E. Mayer, Charles A. Russell, Tudor I. Aston, Martin Quinn, David Harrison, Patrick I. Conway, Henry Coles, Archie C. Young, J. E. Gotshall, George T. Kellam, Thomas George Thorburn.

Assistant Mine Foremen.—Robert Carson, Christie Connors, William Love, Michael Ford, William Heath, David Price, Thomas Malia, William H. Williams, Henry Haswell, E. R. Allen, Samuel L. Morgans, William J. Williams, William Hughes, Thomas Davies, W. H. Powell.



## Fourth District

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LACKAWANNA AND LUZERNE COUNTIES

Scranton, Pa., February 20, 1906.

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, 1905.

In addition to the tabulated statistics, I send a statement of the condition of the mines and the improvements made during the year.

Respectfully submitted,

D. T. WILLIAMS,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	19
Number of mines, .....	42
Number of mines in operation, .....	42
Number of tons of coal shipped to market, .....	5,128,403
Number of tons used at mines for steam and heat, .....	222,472
Number of tons sold to local trade and used by employes, .....	56,696
Number of tons produced, .....	5,407,571
Number of persons employed inside of mines, .....	8,716
Number of persons employed outside, .....	3,035
Number of fatal accidents inside of mines, .....	29
Number of fatal accidents outside, .....	7
Number of non-fatal accidents inside of mines, .....	58
Number of non-fatal accidents outside, .....	11
Number of tons of coal produced per fatal accident inside, .....	186,468
Number of persons employed per fatal accident inside, .....	301
Number of persons employed per fatal accident outside, .....	434
Number of persons employed per non-fatal accident inside, .....	150
Number of persons employed per non-fatal accident outside, .....	276
Number of wives made widows, .....	18
Number of children orphaned, .....	53
Number of steam locomotives used inside of mines, .....	1
Number of steam locomotives used outside, .....	18
Number of electric motors used inside, .....	20
Number of fans in use, .....	29
Number of furnaces in use, .....	3
Number of gaseous mines in operation, .....	23
Number of non-gaseous mines in operation, .....	19
Number of new mines opened, .....	2

## TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Delaware, Lackawanna and Western Railroad Company,	3,335,691
Lehigh Valley Coal Company, .....	541,774
Pennsylvania Coal Company, .....	493,865
Jermyn and Company, .....	442,689
Delaware and Hudson Company, .....	309,809
Elliott, McClure and Company, .....	152,623
Austin Coal Company, .....	55,888
Gibbons Coal Company, .....	20,709
Brookside Coal Company, .....	38,404
Marian Coal Company, .....	16,119
Total, .....	<u>5,407,571</u>

## Production by Counties

Lackawanna, .....	5,279,729
Luzerne, .....	127,842
Total, .....	<u>5,407,571</u>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	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	Inside	Outside										
	Total	Total	Total	Total										
D. L. and W. R. R. Co., .....	16	4	26	8	34	298,481	198,295	4,386	1,499	5,885	974	375	169	187
Lehigh Valley Coal Co., .....	3	1	4	1	5	180,591	108,365	807	233	1,040	269	339	167	167
Pennsylvania Coal Co., .....	4	4	8	4	12	123,468	123,468	851	223	1,072	209	339	167	167
DeMay and Co., .....	2	2	4	2	4	110,672	55,336	1,082	549	1,432	270	174	135	174
Belmont and Hudson Co., .....	4	4	8	2	12	77,452	25,817	1,097	303	1,400	249	174	135	174
Elliptical McClure and Co., .....	2	2	4	1	3	76,311	76,311	438	186	624	219	174	135	174
Avonitz Coal Co., .....	1	1	2	1	3	76,311	76,311	118	52	170	219	174	135	174
Miscellaneous companies, .....	1	1	2	1	3	55,888	55,888	37	86	123	219	174	135	174
Totals and averages for district, .....	29	7	36	11	69	186,468	93,234	8,716	3,035	11,751	301	434	150	276



TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Falls of coal, .....	1					1								2	6.90
Falls of slate, .....					1	1								1	3.45
Falls of roof, .....	1	3		1	1	2	2	1		1	1	2	15	51.72	
Mine cars, .....									1				5	17.24	
Explosions of powder and dynamite, .....					1								3	10.34	
Premature blasts, .....						1						1	2	6.90	
Miscellaneous, .....					1								1	3.45	
Totals, .....	2	3		1	6	7	2	1	1	2	1	3	29	100.	
Causes of Accidents Outside.															
Cars, .....							1							1	14.29
Machinery, .....										1	1		2	28.57	
Miscellaneous, .....		1	1					1			1		4	57.14	
Totals, .....		1	1				1	1		1	2		7	100.	
Grand totals inside and outside, ..	2	4	1	1	6	7	3	2	1	3	3	3	36		

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Falls of coal, .....	1	2	2										5	8.62	
Falls of roof, .....	1	1	2	1	3	1	3	1	3		2	2	20	34.49	
Mine cars, .....		2	2	2	2	2	1	2	1				13	22.42	
Explosions of gas and dust, .....				1	1								2	3.45	
Explosions of powder and dynamite, .....						1			1				2	5.17	
Premature blasts, .....				1	1	1		1			1		5	8.62	
Falling into shafts, .....											1		1	1.72	
By mules, .....			1			1			1				3	5.17	
Machinery, .....				1									1	1.72	
Miscellaneous, .....		2	2							1			5	8.62	
Totals, .....	2	7	7	4	8	6	4	4	6	1	4	5	58	100.	
Causes of Accidents Outside															
Cars, .....			1						2	1	2		6	54.55	
Machinery, .....		1											1	9.09	
Miscellaneous, .....						2				1		1	4	36.36	
Totals, .....		1	1		2				2	2	2	1	11	100.	
Grand totals inside and outside, ....	2	8	8	4	10	6	4	4	8	3	6	6	69		

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

Inside	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Miners, .....	1	1	...	...	4	4	...	1	...	1	1	2	15
Miners' laborers, .....	1	1	...	1	...	2	1	...	...	...	...	1	8
Drivers and runners, .....	...	...	...	...	...	1	...	...	...	...	...	...	1
Doorboys and helpers, .....	...	...	...	...	...	...	1	...	1	...	...	...	1
Company men, .....	...	...	...	...	...	...	...	...	1	...	...	...	2
All other employes, .....	...	...	...	...	2	...	...	...	...	...	...	...	2
Totals, .....	2	3	...	1	6	7	2	1	1	2	1	3	29
Outside	...	...	...	...	...	...	...	...	...	...	...	...	...
Engineers and firemen, .....	...	...	...	...	...	...	...	...	...	...	1	...	1
Slatepickers (boys), .....	...	1	...	...	...	...	...	...	...	...	...	...	1
All other employes, .....	...	...	1	...	...	...	1	1	...	1	1	...	5
Totals, .....	...	1	1	...	...	...	1	1	...	1	2	...	7
Grand totals inside and outside, .....	2	4	1	1	6	7	3	2	1	3	3	3	36

TABLE F.—Occupations of persons injured inside and outside of mines.

Inside	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Miners, .....	1	2	4	3	3	2	1	1	2	...	2	1	23
Miners' laborers, .....	1	1	...	...	2	2	1	1	1	1	1	1	14
Drivers and runners, .....	...	3	1	...	...	1	1	1	1	...	...	2	12
Doorboys and helpers, .....	...	...	1	...	1	...	...	...	...	...	...	...	3
Company men, .....	...	...	1	1	...	...	1	...	1	...	1	...	5
All other employes, .....	...	1	...	...	...	...	1	...	...	...	...	...	2
Totals, .....	2	7	7	4	8	6	4	4	6	1	4	5	58
Outside	...	...	...	...	...	...	...	...	...	...	...	...	...
Slatepickers (boys), .....	...	1	...	...	1	...	...	...	2	1	2	1	3
All other employes, .....	...	...	1	...	1	...	...	...	...	...	...	...	3
Totals, .....	...	1	1	...	2	...	...	...	2	2	2	1	11
Grand totals inside and outside, .....	2	8	8	4	10	6	4	4	8	3	6	6	69

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	...	1	...	...	1	...	1	...	...	1	1	...	5
English, .....	...	...	...	...	...	...	1	...	1	...	...	...	1
Welsh, .....	...	...	...	...	...	1	...	...	...	1	...	...	2
Irish, .....	...	...	...	...	...	...	...	...	1	...	...	1	1
German, .....	...	...	...	1	4	3	2	1	...	...	2	2	19
Polish, .....	...	3	...	...	...	...	...	...	...	1	2	2	1
Hungarian, .....	1	...	1	...	1	2	...	...	...	...	...	...	4
Italian, .....	1	...	...	...	...	...	...	...	...	...	...	...	1
Austrian, .....	1	...	...	...	...	...	...	...	...	...	...	...	1
Totals, .....	2	4	1	1	6	7	3	2	1	3	3	3	36

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	...	2	...	1	3	1	1	2	1	1	1	3	16
English, .....	...	1	1	1	...	...	...	...	1	...	...	...	1
Welsh, .....	...	1	4	1	2	1	...	...	1	...	...	1	12
Irish, .....	1	1	1	1	2	3	...	1	2	2	1	1	1
German, .....	...	...	...	...	...	...	...	...	...	1	1	1	1
Polish, .....	1	1	2	1	3	3	1	3	2	2	2	1	20
Hungarian, .....	...	...	...	1	...	...	...	1	1	...	...	...	2
Italian, .....	...	1	1	1	1	1	3	...	1	...	1	1	9
Slavonian, .....	...	1	...	...	...	...	...	...	...	1	...	...	2
Lithuanian, .....	...	...	...	...	...	...	1	...	...	...	...	...	1
Totals, .....	2	2	8	4	10	6	4	4	8	3	6	6	69





TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Postoffice	Name of Superintendent	Postoffice	Railroad to Mine
Delaware, Lackawanna and Western Railroad Co.						
Archbold	Lackawanna	R. A. Phillips, ....	Scranton, .....	Thomas J. Williams,	Scranton, .....	D., L. and W.
Stuart and Central				Thomas J. Williams,		
Continental				Thomas J. Williams,		
Hampton				Thomas J. Williams,		
Pyne				E. J. Evans, .....		
Dodge				E. J. Evans, .....		
Brookside				E. J. Evans, .....		
Taylor				E. J. Evans, .....		
National				E. J. Evans, .....		
Washeries						
Hampton	Lackawanna	R. A. Phillips, ....	Scranton, .....	Fred C. Smith,	Scranton, .....	D., L. and W.
Pyne				Thomas J. Williams,		
Bellvue				Fred C. Smith, .....		
Taylor						
Lehigh Valley Coal Co.	Lackawanna	S. D. Warriner, ....	Wilkes-Barre, .....	W. D. Owens, .....	Pittston, .....	Lehigh Valley.
Willam A.	Lackawanna	S. D. Warriner, ....	Wilkes-Barre, .....	W. D. Owens, .....	Pittston, .....	Lehigh Valley.
Lawrence						
Old Forge	Lackawanna	W. W. Inglis, ....	Scranton, .....	Joseph P. Jennings,	Moosic, .....	Erie.
Jermyn No. 1	Lackawanna	J. J. Jermyn, .....	Scranton, .....	E. B. Jermyn, .....	Scranton, .....	N. Y. S. and W.
Jermyn No. 2		J. J. Jermyn, .....	Scranton, .....	E. B. Jermyn, .....	Scranton, .....	N. Y. S. and W.
Delaware and Hudson Co.	Lackawanna	C. C. Rose, .....	Scranton, .....	John Lovering, ....	Greenwood, .....	Delaware and Hudson.
Greewood Nos. 1 and 2	Lackawanna	C. C. Rose, .....	Scranton, .....	John Lovering, ....	Greenwood, .....	Delaware and Hudson.
Spring Brook						
Ellitt, McTigue and Co.	Lackawanna	R. W. Reese, .....	Rendham, .....	Henry W. Evans, .....	Taylor, .....	D., L. and W. and Lehigh Valley.
Sibley						
Austin Coal Co.	Lackawanna	W. G. Robertson, ..	Scranton, .....	E. W. Davis, .....	Old Forge, .....	Lehigh Valley.
Gibbons	Lackawanna	John Gibbons, .....	Scranton, .....	Michael Gibbons, ..	Scranton, .....	D., L. and W.
Brookside Coal Co.	Lackawanna	M. F. Dolphin, ....	Scranton, .....			N. Y. S. and W.
Brookside Washery						
Marlan Coal Co.	Lackawanna	W. P. Boland, ....	Scranton, .....	P. J. Holleran, ....	Scranton, .....	D., L. and W.
Marlan Washery						



TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked. (Totals are averages, 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 Railroad Co.												
Archbald, .....		403,403	11,080	512	421,285	234	768	4	1	19,070	1,388	98
Sloan and Central, .....		325,465	.....	288	326,353	227	611	1	1	13,295	1,784	55
Continental, .....		237,072	333	1,343	138,784	216	671	1	1	10,267	5,116	82
Hampton, .....		181,839	.....	2,413	493,491	224	373	2	3	7,997	.....	52
Pyne, .....		335,034	21,183	2,277	346,529	219	792	1	3	14,488	1,757	73
Dodge, .....		223,131	12,800	2,712	247,094	237	671	3	4	16,520	2,350	67
Holden, .....		207,134	12,800	6,153	307,558	200	425	1	2	9,529	130	61
Taylor, .....		303,664	41	8,240	132,632	155	544	1	3	13,024	2,365	77
National, .....		112,392	12,000	.....	.....	.....	.....	.....	.....	.....	.....	60
Meadow Brook Tunnel, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....		2,615,068	58,800	22,152	2,696,050	213	5,631	20	32	113,089	30,074	628
Bellevue Washery, .....		179,069	.....	.....	179,069	176	56	.....	.....	.....	.....	2
Taylor Washery, .....		183,787	.....	.....	183,787	254	45	.....	.....	7	6	4
Hampton Washery, .....		178,508	.....	.....	178,508	218	52	.....	1	.....	.....	.....
Pyne Washery, .....		95,296	2,981	.....	98,277	178	40	.....	.....	.....	.....	.....
.....		636,660	2,981	.....	639,641	206	194	.....	2	.....	.....	6
Dodge Boiler Plant, .....	Lackawanna,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Central Boiler Plant, .....	Lackawanna,	.....	.....	.....	.....	.....	23	.....	.....	.....	.....	.....
.....		.....	.....	.....	.....	.....	52	.....	.....	.....	.....	.....
.....		.....	.....	.....	.....	.....	55	.....	.....	.....	.....	.....



Austin Tunnel, .....	Austin Coal Co.	46,337	6,570	2,981	55,888	136	170	1	1,837	1,551	15
Gibbons, .....	Gibbons Coal Co.	3,458	1,060	16,251	20,769	250	63	.....	965	164	21
Brookside Washery, .....	Brookside Coal Co.	33,329	4,475	600	38,401	201	39	.....	.....	.....	2
Marian Washery, .....	Marian Coal Co.	15,039	480	600	16,119	48	21	.....	.....	.....	.....
Grand totals, .....		5,123,403	222,472	56,696	5,407,571	194	11,751	36	220,829	149,686	1,198

TABLE 2.—Recapitulation

D. L. and W. R. R. Co., .....	Lackawanna,	3,251,728	61,731	22,182	3,335,691	213	5,885	20	34	113,096	30,080	634
Lehigh Valley Coal Co., .....	Lack. and Luz.	479,119	44,718	3,337	541,774	219	1,146	4	5	22,536	18,455	198
Pennsylvania Coal Co., .....		493,562	14,280	23	493,565	195	1,072	.....	4	20,081	7,078	116
Jermyn and Co., .....		396,828	41,428	4,433	442,689	221	1,431	6	10	27,490	36,737	10
Delaware and Hudson Co., .....		272,939	33,740	3,670	309,809	167	1,300	4	12	26,946	30,737	148
Elliott, McClure and Co., .....		136,004	14,600	2,019	152,623	151	624	2	3	7,879	5,401	15
Austin Coal Co., .....	Lackawanna,	46,337	6,570	2,981	55,888	136	170	.....	1	1,837	1,551	15
Gibbons Coal Co., .....		3,458	1,060	16,251	20,769	250	63	.....	.....	.....	.....	.....
Brookside Coal Co., .....		33,329	4,475	600	38,404	301	39	.....	.....	.....	.....	.....
Marian Coal Co., .....		15,039	480	600	16,119	48	21	.....	.....	.....	.....	.....
Totals, .....		5,123,403	222,472	56,696	5,407,571	194	11,751	36	63	220,829	149,686	1,198

TABLE 2.—PART 2

Names of Operators	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.	Horse power.	Tubular	Horse power.	Total horse power.	Steam	Air.								
D. L. and W. R. R. Co.,	Lackawanna,	11	432	55	13,427	13,859	9	20	174	14,455	25	23,036	14,450	8	2	
Lehigh Valley Coal Co.,	Lack. and Luz.	7	2,100	7	2,100	2,100	1	.....	28	2,150	7	4,400	3,000	1	1	
Pennsylvania Coal Co.,	.....	8	1,984	8	1,984	1,984	3	.....	20	1,043	3	3,136	2,021	.....	1	
Jermyn and Co.,	.....	15	450	11	1,050	1,500	1	.....	20	1,000	3	4,200	2,450	.....	.....	
Delaware and Hudson Co.,	.....	14	420	11	1,600	1,920	4	.....	55	1,660	7	3,550	1,450	.....	.....	
Elliot, McClure and Co.,	.....	8	1,150	8	1,150	1,150	1	.....	16	270	1	2,500	891	.....	1	
Austin coal Co.,	Lackawanna,	7	140	3	375	515	1	.....	9	60	.....	.....	200	1	3	
Gibbons coal Co.,	.....	.....	.....	.....	90	90	.....	.....	3	.....	.....	.....	.....	.....	.....	
Brookside Coal Co.,	.....	.....	.....	.....	300	300	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marian Coal Co.,	.....	.....	.....	.....	200	200	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Totals,	.....	47	1,442	107	22,156	23,588	19	20	335	21,238	47	41,372	24,662	10	9	



TABLE 3.—Continued

Names of Operators and Col- leries	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside		
Central Water shaft, .....	Lackawanna, .....	14	5	31	1,471	1,494	523	113	27	318	390	4,386	.....	.....	29	67	117	400	174	24	697	1,499	5,885
Totals, .....	Lackawanna, .....																						
Lehigh Valley Coal Co. William A. Lawrence, .....	Lackawanna, .....	1	2	1	170	115	80	8	4	72	8	461	.....	.....	1	12	10	37	25	2	111	108	659
Babylon, .....	Lackawanna, .....	1	.....	1	41	30	20	4	1	18	3	119	.....	.....	1	9	2	30	.....	2	96	140	259
Totals, .....	Luzerne, .....	1	.....	1	168	55	26	7	4	25	.....	227	.....	.....	1	.....	1	.....	.....	.....	.....	1	228
Pennsylvania Coal Co. Old Forge, .....	Lackawanna, .....	2	2	1	352	258	135	40	4	35	21	851	.....	.....	1	15	16	56	5	2	126	221	1,072
Jermyn and Co. Jermyn No. 1, .....	Lackawanna, .....	2	.....	5	245	217	70	16	5	58	.....	618	.....	.....	1	8	12	66	58	2	59	296	824
Jermyn No. 2, .....	Lackawanna, .....	1	.....	5	188	157	38	16	4	30	25	464	.....	.....	1	5	9	68	10	3	47	143	607
Totals, .....	Lackawanna, .....	3	.....	10	433	374	108	32	9	88	25	1,682	.....	.....	2	13	21	134	68	5	106	349	1,431
Delaware and Hudson Co. Greenwood Nos. 1 and 2, .....	Lackawanna, .....	2	1	3	264	283	90	26	4	31	18	729	.....	.....	1	15	25	21	9	2	132	205	997
Spring Brook, .....	Lackawanna, .....	1	.....	.....	100	118	32	7	1	9	7	275	.....	.....	1	3	7	26	13	1	45	38	313
Totals, .....	Lackawanna, .....	3	1	3	364	401	122	33	5	40	25	997	.....	.....	2	18	32	47	24	3	177	303	1,300



Elliott, McClure and Co.	1	2	2	150	140	58	14	3	68	.....	438	.....	1	6	8	92	20	2	57	186	624
Sibley, .....	1	1	1	49	23	15	.....	1	11	7	118	.....	1	4	5	8	13	2	19	52	170
Austin Coal Co.	1	1	1	16	16	3	.....	.....	1	.....	37	.....	1	1	2	10	1	2	9	26	63
Austin tunnel, .....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	3	7	3	.....	1	24	39	39
Gibbons Coal Co.	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Gibbons, .....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Brookside Coal Co.	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Brookside washery, .....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Brookside washery, .....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Marian Coal Co.	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Marian washery, .....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Marian Coal Co.	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Marian washery, .....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Grand totals, .....	28	12	51	3,155	2,916	1,090	251	58	676	479	8,716	.....	32	148	223	820	330	46	1,436	3,035	11,751

TABLE 3.—Recapitulation

D., L. and W. R. R. Co., .....	14	5	31	1,471	1,494	523	113	27	318	390	4,386	.....	20	67	117	400	174	24	697	1,489	5,885	
Lehigh Valley Coal Co., .....	3	2	3	319	200	126	13	9	115	11	807	.....	.....	2	21	13	67	25	4	217	333	1,136
Pennsylvania Coal Co., .....	2	2	1	353	258	135	40	4	85	21	851	.....	1	15	16	56	5	2	136	291	1,072	
Jennyn and Co., .....	3	1	10	333	374	198	39	6	88	25	1,682	.....	2	13	17	114	68	2	136	270	1,430	
Delaware and Hudson Co., .....	3	1	2	334	374	192	33	5	40	25	438	.....	2	18	32	147	24	3	176	348	1,430	
Elliott, McClure and Co., .....	1	2	2	150	140	58	14	3	68	.....	438	.....	1	6	8	92	20	2	57	186	624	
Gibbons Coal Co., .....	1	1	1	16	16	3	.....	.....	1	.....	37	.....	1	4	5	8	13	2	19	52	170	
Gibbons, .....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	2	10	1	2	9	26	63	
Brookside Coal Co., .....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Brookside washery, .....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Brookside washery, .....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Marian Coal Co., .....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Marian washery, .....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Marian Coal Co., .....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Totals, .....	28	12	51	3,155	2,916	1,090	251	58	676	479	8,716	.....	32	148	223	820	330	46	1,436	3,035	11,751	



TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 16	Domonick Defatz, .....	Italian,.....	Miner, .....	47 S. ....				Jermyn No. 1, ..		Fatally injured by fall of top coal at face of chamber in Baltimore vein. Died same day.
23	John Suchostowski, ..	Austrian,....	Laborer, ....	45 M. 1 4				Spring Brook, ..		Fatally injured by fall of roof at face of chamber in Red Ash vein.
Feb. 8	Michael Buckdonvitch, ..	Polish,.....	Miner, .....	29 M. 1 1				Hampton, .....		These two men were opening a chamber in the Rock vein, and had just commenced to work when a large stone fell upon them, killing them both instantly.
8	Peter Schute, .....	Polish,.....	Laborer, ....	28 M. 1 5				Hampton, .....		
8	John Krouja, .....	Polish, .....	Laborer, ....	21 S. ....				Greenwood No. 1, ..		Killed by fall of roof at face of chamber in No. 3 Baltimore vein.
25	Michael Henly, .....	American, ..	Slatepicker, ..	15 S. ....				Taylor, .....		
March 14	George Coohy, .....	Hungarian, ..	Loader, ....	28 S. ....				Taylor, .....	Lackawanna.	Fatally injured by being struck in the stomach by a sheet iron chute while in the act of loading car. Outside.
April 29	Stanley Flakoffski, .....	Polish, .....	Laborer, ...	38 S. ....				Dodge, .....		Killed by fall of roof at face of chamber in New County vein.
May 5	Joseph Steppick, .....	Polish, .....	Other, .....	57 M. 1 2				Taylor, .....		Fatally injured by being squeezed between car and rib at foot of shaft. Died May 8.
10	John Krovitus, .....	Polish, .....	Miner, .....	48 M. 1 4				Holden, .....		Killed by fall of bony at face of chamber in Clark vein.
13	William Evans, .....	American, ..	Rope-riider, ..	21 M. 1				Jermyn No. 2, ..		
17	Adam Popson, .....	Polish, .....	Miner, .....	30 M. 1 4				Taylor, .....		Instantly killed by fall of roof at face of chamber in New County vein.
26	Tomassio Rossi, .....	Italian,.....	Miner, .....	32 S. ....				National, .....		Fatally burned by powder while inserting a cartridge into a hole with a scraper. Died June 2.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of wid- ows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
May 31	Edward Czykowski, ...	Polish, ...	Miner, ...	28	S.	...	...	Continental, ...		Suffocated by being covered with running goth on pitch.
June 5	August Fisher, ...	German, ...	Miner, ...	57	M.	1	2	Pyne, ...		Fatally injured by fall of coal at face of Clark vein.
6	Abraham Mashona, ...	Italian, ...	Laborer, ...	22	S.	...	...	Spring Brook, ...		Fatally burned by an explosion of powder while in the act of removing a charge from a hole. Died next day.
9	Frank Govotsky, ...	Polish, ...	Laborer, ...	24	S.	...	...	Lawrence, ...		Instantly killed by fall of roof while rob- bing pillars.
17	Louis Andries, ...	Polish, ...	Driver, ...	17	S.	...	...	Jermyn No. 3, ...		Fatally injured by being run over with loaded mine car. Died June 26.
19	Richard Nicholas, ...	Welsh, ...	Miner, ...	57	M.	1	...	Archbald, ...		Fatally injured by fall of roof at face of chamber in Rock vein. Died June 20.
26	George Meeshock, ...	Polish, ...	Miner, ...	34	M.	1	3	Archbald, ...		Fatally burned by explosion of powder. Died July 9.
27	Joseph C'limp, ...	Italian, ...	Miner, ...	28	M.	1	3	Jermyn No. 2, ...		Fatally burned by explosion of powder. Died same day.
July 5	Andrew Andruchuck, ...	Polish, ...	Compan y- man.	32	S.	...	...	Sibley, ...		Fatally injured by a fall of roof on main road. Died July 7.
25	Samuel I. Smith, ...	American, ...	Laborer, ...	49	S.	...	...	Taylor, ...	Lackawanna.	Fatally injured by being squeezed between box car and breaker timber. Outside.
26	Gusty Balton, ...	Polish, ...	Laborer, ...	35	M.	1	6	Sibley, ...		Instantly killed by fall of roof at face of chamber in New County vein.
Aug. 17	John Miscavish, ...	Polish, ...	Miner, ...	47	S.	...	...	Greenwood No. 1.		Fatally injured by fall of roof at face of chamber. Died same day.
19	John Bonnard, ...	English, ...	Driver, ...	16	S.	...	...	Lawrence, ...		Killed by falling off inside that he was taking to the barn. His coat caught in the harness and he was dragged a dis- tance of one-half mile. Outside.
Sept. 26	Dennis O'Donald, ...	Irish, ...	Door-boy, ...	17	S.	...	...	Sloan, ...		Fatally injured by falling under moving trolley cars. Died same day.
Oct. 4	David Joseph, ...	Welsh, ...	Compan y- man.	25	M.	1	2	Sloan, ...		Fatally injured by falling under empty trolley of mine cars. Died October 25.
13	John Koloj-ski, ...	Polish, ...	Miner, ...	45	M.	1	6	Dodge, ...		Instantly killed by fall of roof while in the act of cleaning his road after firing a blast.

Oct.	26	James R. Stephens, ..	American, ..	Laborer, .....	20	S.	.....	Archbald, .....		
Nov.	3	Michael Povish, .....	Polish, .....	Headman, ..	40	S.	.....	Jermyn No. 1, ..		
	28	Francis Hart, .....	American, ..	Engineer, ..	17	S.	.....	Jermyn No. 2, ..	Lackawanna,	Killed by being caught by governor belt fan engine and whirled around the fan on outside of tower shaft to the surface a distance of 98 feet. Outside.
	29	Martin Pazinski, .....	Polish, .....	Miner, .....	42	M.	1	7	Dodge, .....	Coroner's jury rendered a verdict of accidental death. Outside.
Dec.	7	Thomas Casper, .....	Polish, .....	Laborer, ...	37	M.	1	1	Babylon, .....	Fatally injured by fall of roof at face of chamber in New County vein.
	11	Joseph Vidcavitch, .....	Polish, .....	Miner, .....	40	M.	1	3	Babylon, .....	Fatally injured by fall of roof at face of chamber. Died same day.
	12	James Moran, .....	Irish, .....	Miner, .....	42	S.	.....	Archbald, .....	Luzerne, .....	Instantly killed by a blast while in the act of cleaning out hole with needle.
									Lackawanna,...	Killed by fall of roof at face of chamber in Diamond vein.

Note.—June 9, Tony Sikoski, Polish, a visitor was fatally injured in the Big vein of the Archbald mine by a fall of roof.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 13	Edward Lesinski, .....	Polish, .....	Laborer, .....	43	M.	Archbald, .....		Leg fractured and injured internally by fall of roof.
20	John Cotter, .....	Irish, .....	Miner, .....	46	M.	Greenwood No. 1, .....		Ankle broken by fall of coal.
Feb. 1	Cornelius McKenna, ....	American, .....	Driver, .....	16	S.	Jermyn No. 3, ...		Bone in foot fractured by being caught between car and rib.
2	John Nee, .....	Irish, .....	Driver, .....	18	S.	Greenwood No. 1, .....		Leg fractured by fall of roof.
6	David Lewis, .....	Welsh, .....	Statepicker, ...	15	S.	Fyne, .....		Left arm amputated below elbow by being caught in patent statepicker. Out-side.
9	George Royman, .....	Slavonian, .....	Laborer, .....	41	M.	Taylor, .....	Lackawanna.	Ribs fractured by fall of top coal.
11	David J. Jenkins, .....	American, .....	Driver, .....	16	S.	Meadow Brook, ..		Finger amputated by being caught between stretcher hook and side of mine car.
21	John Nowacsky, .....	Polish, .....	Miner, .....	37	M.	Austin tunnel, ..		Severely injured by miners' needle passing through his bowels.
24	Arthur Dent, .....	English, .....	Rope-rider, ...	23	S.	Sibley, .....		Leg fractured by cars.
27	David B. Davis, .....	Welsh, .....	Miner, .....	31	M.	Fyne, .....		Head and chest badly cut by fall of top coal at face of chamber.
March 1	Roy Egan, .....	Irish, .....	Doorboy, .....	16	S.	Babylon, .....	Luzerne, .....	Scalp badly cut by coming in contact with a low piece of roof on the gangway road.
9	Daniel Heffron, .....	Irish, .....	Miner, .....	26	M.	Hampton, .....		Leg cut and ankle dislocated by fall of roof.
11	Joseph Burke, .....	Polish, .....	Driver, .....	17	S.	Sibley, .....		Jaw bone fractured and face badly cut by being kicked by a mule.
15	Anthony Burke, .....	Irish, .....	Miner, .....	46	M.	Holden, .....		Ribs fractured by a fall of top coal at face of chamber.
20	Michael DeLacy, .....	Irish, .....	Trackman, ....	54	M.	National, .....	Lackawanna.	Arm fractured by being struck with lever of derrick.
24	John Szczyepanski, .....	Polish, .....	Laborer, .....	60	M.	Continental, .....		Leg badly crushed by being run over with culm car on dump. Outside.
24	Edward Williams, .....	Welsh, .....	Miner, .....	61	M.	Holden, .....		Arm fractured while in the act of pulling down some top coal.



Month	No.	Name	Nationality	Occupation	Age	Company	Location	Description of Injury
March	27	Tony Marol	Italian	Miner	39	Jermyn No. 3	...	Arm fractured and back injured by fall of roof at face of chamber.
April	13	Frank Condroski	Polish	Miner	29	Greenwood No. 2	...	Spine fractured by a fall of roof.
	22	Chester Reese	American	Company-man	21	M. Archbald	...	Leg fractured by being struck with end-less rope.
May	27	John Rist	Welsh	Miner	56	M. Archbald	...	Hands and face burned by explosion of gas.
	28	Edward Cuff	Irish	Miner	33	M. Sloan	...	Head and shoulder badly cut by flying coal from blast.
	10	Michael Murray	Irish	Runner	22	S. Archbald	...	Injured by being squeezed between cars and gob.
	11	George Shannon	American	Loader	21	M. Archbald	...	Wrist fractured by falling off loading platform under breaker.
	13	Matthew McCarthy	Irish	Slateplocker	15	S. Hampton	...	Ribs fractured by falling from washery, distance of 30 feet. Outside.
	16	William Canterbury	American	Helper	17	S. Continental	...	Leg fractured by falling under empty car.
	17	John Mertino	Polish	Miner	26	S. Jermyn No. 2	...	Face, arms and body injured by dynamite blast.
	20	Anthony Kerduski	Polish	Miner	40	S. Jermyn No. 1	...	Hand amputated by falling under mine car.
June	22	Morris Evans	American	Driver	17	S. Taylor	...	Leg fractured by fall of roof.
	27	Baldo Sebestain	Italian	Miner	68	M. William A.	...	Hand and face slightly burned by gas.
	29	Vincent Gubersky	Polish	Laborer	34	M. Jermyn No. 2	...	Compound fracture of left leg by fall of roof.
	31	Frank Tomashla	Hungarian	Laborer	22	S. Old Forge No. 2	...	Severely injured by premature blast.
	5	Victor Motrazzi	Italian	Miner	27	M. Spring Brook	...	Arm fractured and body bruised by being squeezed between car and face of chamber.
July	6	Alex Koupa	Polish	Laborer	21	S. Greenwood No. 1	...	Face badly burned by explosion of powder.
	13	George Nemmito	Polish	Miner	42	M. Greenwood No. 2	...	Leg amputated by being crushed between two mine cars.
	14	Hugh Ghidea	Irish	Helper	17	S. Jermyn No. 1	...	Both legs fractured by fall of roof at face of chamber.
	17	John Daley	American	Driver	18	S. Hampton	...	Leg fractured by being caught with strap in wheel of mine car.
	30	Steve Gontas	Polish	Laborer	20	S. Dodge	...	Head cut back and foot bruised by fall of roof on main road.
August	7	James Conway	American	Trackman	32	M. Hampton	...	These two men were working together robbing pillars when a piece of roof fell upon them. The miner received a compound fracture of the leg and the laborer received a severe crushing of the hand and arm.
	21	Martin Spellman	American	Contractor	42	M. Jermyn No. 2	...	Legs badly bruised by a trip of empty cars running away on slope.
	21	Andrew Durkin	Polish	Driver	18	S. Greenwood No. 1	...	Finger amputated while spragging a car. Severely injured by dynamite blast.
	26	Wako Balsavitch	Lithuanian	Laborer	20	S. Central	...	Leg amputated by fall of roof at face of chamber.

Lackawanna.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Sept. 1	Thomas Nazerin, .....	Italian, .....	Miner, .....	30	S.	William A. ....		Face and arms burned by powder.
6	Tony Kavish, .....	Hungarian, .....	Laborer, .....	20	S.	Taylor, .....		Leg and arm fractured by fall of roof.
7	Michael Gorman, .....	Irish, .....	Company-man, .....	20	S.	Pyne, .....		Squeezed about the hips by being caught between empty car and electric motor.
14	Michael Longsha, .....	Polish, .....	Miner, .....	40	S.	Spring Brook, ...		Contusion of the spine by fall of rock roof.
14	George Keepa, .....	Polish, .....	Laborer, .....	52	M.	Spring Brook, ...		Leg fractured by fall of roof.
18	George Hovitch, .....	Polish, .....	Loader, .....	31	M.	Dodge, .....		Injured internally by being squeezed between railroad car and breaker timber.
23	William Jones, .....	Welsh, .....	Driver, .....	17	S.	Dodge, .....		Head cut and teeth knocked out by being kicked with mule.
25	Martin Durkin, .....	American, .....	Loader, .....	18	S.	Continental, .....		Ankle dislocated by jumping off railroad car.
Oct. 9	John Maher, .....	American, .....	Slatepicker, ...	14	S.	National, .....		Leg fractured by falling from breaker timbers.
30	John Glockwalla, .....	Polish, .....	Driver, .....	16	S.	Jermyn No. 1, ...	Lackawanna,	Thigh fractured by falling from dump car on dump, Outside.
30	Alex Zalacowski, .....	Polish, .....	Laborer, .....	36	M.	Greenwood No. 1,		Leg fractured by a piece of rock rolling from dump, Outside.
Nov. 15	Henry Singeler, .....	American, .....	Helper, .....	16	S.	Jermyn No. 1, ...		Leg fractured by falling under mine car.
16	Adam Kenner, .....	German, .....	Miner, .....	42	M.	Archbald, .....		Head and face cut by flying coal from blast.
21	John Zudya, .....	Polish, .....	Driver, .....	16	S.	Sibley, .....		Leg fractured by being bumped between mine cars, Outside.
22	Stephen Santige, .....	Italian, .....	Laborer, .....	26	M.	Jermyn No. 2, ..		Spine injured by fall of roof.
22	Paul Perpoek, .....	Slavonian, .....	Footman, .....	24	M.	Jermyn No. 1, ...		Leg fractured by falling down shaft a distance of 45 feet.
27	Jacob Makuski, .....	Polish, .....	Miner, .....	42	M.	Dodge, .....		Ribs fractured and body bruised by fall of roof.
Dec. 20	John Smith, .....	Irish, .....	Driver, .....	17	S.	Greenwood No. 2,		Leg fractured by car jumping track and striking him on the leg.
20	Arthur Davis, .....	American, .....	Laborer, .....	17	S.	Pyne, .....		Wrist fractured by falling off platform at washery.

Dec. 22	James Legg, .....	American, .....	Driver, .....	17	S. Old Forge No. 1,	Lackawanna,	Leg fractured by being thrown under car while riding on bumper. Leg fractured by fall of roof. Leg fractured by fall of roof. Hands and face burned by powder while making a cartridge.
26	Ercole Barboni, .....	Italian, .....	Laborer, .....	35	S. National, .....		
26	Stanley Bowen, .....	Polish, .....	Laborer, .....	27	S. Archbold, .....		
27	John Kenner, .....	American, .....	Miner, .....	33	M. Continental, .....		

Note.—January 14, Mike Sildinsky, Polish, a visitor, had a leg fractured by a fall of roof in the Holden mine.

## FATAL ACCIDENTS

## By Falls of Coal, Slate and Roof

During the year fifty per cent. of the fatal accidents was caused by falls of roof and coal, the greatest number of them occurring through carelessness on the part of the victims.

Domonick Defatz, Italian, miner, was fatally injured January 16, at the Jermyn No. 1 Colliery by a fall of top coal. He had fired a blast in the bottom coal, and went to the face to mine out a stump of coal without first examining the top coal. He died January 18.

John Suchostowski, Austrian, laborer, was fatally injured January 23, at the Spring-Brook Colliery by a fall of roof. The miner fired a blast which discharged a prop. Both men returned to work without restanding the prop, and while the victim was in the act of preparing a car of coal the roof fell. He died a few hours later.

Mike Buckdonvitch, Polish, miner, and Peter Schute, Polish, laborer, were instantly killed February 8, at the Hampton Colliery by a fall of roof. They commenced work without examining the condition of the roof, when a stone measuring 5 feet wide, 13 feet long, and 15 inches thick, fell on them.

John Kroupa, Polish, laborer, was instantly killed February 8, at Greenwood No. 1 mine by a fall of bony at face of chamber in Dunmore No. 3 vein. The bony in this vein as a rule sticks to the main roof and has to be blasted down, but this piece had a smooth above which he could not detect.

Stanley Fiakoffski, Polish laborer, at Dodge mine was instantly killed at face of chamber in New County vein while working with his brother. He was sitting at face of chamber, when suddenly a large portion of the roof fell upon him.

John Krovitus, Polish, miner, at Holden Colliery had fired a blast in the bottom coal Clark vein, which also broke the bony, and instead of examining his place he went to mine out a stump of coal, when the bony fell on him killing him instantly.

Adam Popson, Polish, miner, at Taylor Colliery, was instantly killed at face of chamber in New County vein. He was in the act of restanding a prop when a portion of the roof fell on him.

August Fisher, German, miner, at Pyne Colliery, was fatally injured at face of chamber Clark vein. While talking with a miner from the adjoining chamber a piece of coal slid out from the face and fell on him. He died the same day.

Frank Govotsky, Polish, laborer at Lawrence drift, was working with his miner robbing pillars, and while attempting to stand a prop a piece of sand stone fell killing Govotsky instantly.

Richard Nicholas, Welsh, miner, at the Archbald Colliery, was working four handed in a chamber in the Rock vein. He fired a blast that discharged a prop, and went back to the face of the chamber to find the result of the blast without first examining the roof. A portion fell upon him inflicting injuries from which he died next day. He had been notified about the condition of the roof.

Andrew Andruchuck, Polish, company man, at Sibley mines, and two other men were engaged taking down a bad piece of roof on the main road in the third Dunmore vein, and thinking that all that

was dangerous had been pulled down, they started to clean up, when a piece from the side fell on Andruebuck inflicting injuries from which he died July 7.

Gusty Balvon, Polish, laborer, at Sibley mines, was in the act of cleaning a place for a prop when a piece of roof fell on him, killing him instantly.

John Miscavish, Polish, miner, at Greenwood No. 1 mines, was in the act of drilling a hole, when a piece of bony fell on him, inflicting injuries from which he died two hours later.

John Kolojeski, Polish, miner, at Dodge Colliery, had fired two holes and was in the act of cleaning his road when a piece of roof fell on him. He had been notified by the Fire Boss and the miner in the adjoining chamber to pull the roof down.

Martin Pazinski, Polish, miner, at Dodge Colliery, was working four-handed in a chamber in the New County vein and fired a blast that discharged four props. He and his laborer went back to the face to learn the result, when a portion of the roof fell on Pazinski, inflicting injuries from which he died next day.

Thomas Casper, Polish, laborer, at Babylon shaft, was in the act of loading a car when a piece of bony fell upon him, inflicting injuries from which he died in a few hours.

James Moran, Irish, miner, at Archbald mines, was driving a cross-cut on right side of chamber and was entering the cross-cut to fire a blast when a large piece of roof fell on him killing him instantly.

### By Explosions

Tomassio Rossi, Italian, miner, at the National mines, was ramming a cartridge into a hole with a scraper which was not perfectly straight, when the charge exploded burning him so severely that he died June 2.

George Meeshock, Polish, miner, at the Archbald mines, was about to fire a blast. He had partly placed the cartridge in the hole, and was in the act of making some tamping close by the powder that was only partly in the hole. He had a lighted lamp on his head and the lamp came in contact with the powder, severely burning him. He died July 9.

Joseph Cinpo, Italian, miner, at Jermyn No. 2 Colliery, was in the act of making a cartridge at his box, with his lighted lamp upon his head, when a spark fell into the powder igniting it with fatal results. He died the same day.

### By Blasts

Abraham Mashona, Italian, laborer at the Spring Brook Colliery, with his miner, had charged a hole which missed fire two or three times. It is supposed they were withdrawing the charge when it exploded inflicting injuries upon Mashona that resulted in his death June 6.

Joseph Videavich, Polish, miner, at Babylon Mines, was blasting down some roof for grade. He had drilled a hole in the top rock and charged it with three sticks of dynamite and six inches of black powder and a cap. The black powder exploded but failed to explode



the dynamite, and he took the needle to clean out the tamping, when he struck the cap which exploded the dynamite. The flying rock from the blast struck him on the head killing him instantly.

#### Miscellaneous, Inside

Edward Czykowski, Polish, miner, at the Continental mines, was repairing the manway in his chamber on the pitch. He cut some of the planks that were supporting the gob, and when the gob started to run it came on him and caught him against the corner of the cross cut. The weight of the gob probably suffocated him, as he had no marks upon his body.

#### By Cars, Inside

Joseph Stepnick, Polish, car oiler, at Taylor mines, was in the act of pushing a car on to the cage, when a trip of cars came behind him, and instead of getting out of the way on the side where there was sufficient room, he got on the narrow side and was squeezed between car and rib inflicting injuries from which he died May 8.

William Evans, American, rope rider, at Jermyn No. 2 colliery, was standing on front end of trip that was being hauled to the foot branch, and while unhooking the main rope from the trip, he slipped and fell under the car, receiving injuries from which he died the same day.

Louis Andries, Polish, driver, at Jermyn No. 3 mines, was taking a trip of empty cars to a passing branch when he was caught by a runaway car receiving injuries from which he died June 26.

Dennis O'Donald, Irish, doorboy, at the Sloan mines, was riding on front end of loaded trip of cars on main road. He was told by the runner to keep off the cars and to go to his door, but he walked out some distance on the gangway and waited for the trip and jumped on front end. When the trip jerked at the foot of a small run, he was thrown underneath receiving injuries from which he died same day.

David Joseph, Welsh, company-man, at the Sloan mines, was acting as a brakeman on the electric motor. They were switching a trip of empty cars on to a passing branch, and he was standing on the front end of the trip, when his head came in contact with the roof and he was thrown under the first car, the wheels passing over his body inflicting injuries from which he died October 25.

#### By Cars, Outside

Samuel I. Smith, American, outside laborer, at Taylor breaker, was standing on the track under the breaker unloading a car of condemned coal as the trainmen were pushing in some empty cars. They bumped a box car that was standing on the branch and it came down to where Smith was standing, and caught him between the breaker timbers, inflicting injuries from which he died the same day.

#### Machinery, Outside

James R. Stephens, American, outside laborer, at Archbald mines, was in the act of oiling and cleaning the fan engine when in some unexplainable manner his clothing was caught in the fan shaft with



the governor belt wound around him. The shaft was making 60 revolutions a minute, and with every revolution his head would come in contact with the concrete floor. When found he was dead. Coroner's jury rendered a verdict of accidental death.

Francis Hart, American, engineer, at Jermyn No. 2 breaker, was caught and drawn into the bony "rolls" receiving injuries from which he died same day. After repairing a break down on the engine and starting the machinery he went to start some coal into the "rolls" and in some manner must have raised the cover on the "rolls" and slipped in. He was caught by the left leg and drawn in above the hips. Coroner's jury rendered a verdict of accidental death.

#### Miscellaneous, Outside

Michael Henly, American, slate-picker, at Taylor breaker, was found dead on a platform in the breaker. I made a close examination of the surroundings, but found no machinery that the boy could get into. The nearest to him was a conveyor line about 9 feet above the platform, and it may be that the boy climbed up to this line and was struck or fell backwards and fractured his skull. Coroner's jury rendered a verdict of accidental death.

George Coochy, Hungarian, loader, at Taylor breaker, was in the act of taking out a sheet iron chute that he was using to convey the coal to the end of the box car, and while doing so, a car on the adjoining track which was being pushed into place for unloading T rails by a locomotive, struck the end of the projecting chute causing the other end to strike Coochy in the stomach inflicting injuries from which he died March 16.

John Bonnard, English, outside driver, at Lawrence breaker, got on a mule to ride to the barn, near the Babylon mines, about one half mile from the breaker, and when the mule reached the barn Bonnard was found by the barn-boss dragging on the ground dead with his foot fast in the trace chain. He had been clubbing the animal until it became uncontrollable, and in his effort to get off his foot was caught in the trace chain.

Michael Povish, Polish, headman, at Jermyn No. 1 breaker, was in the act of throwing back the door on the empty car after it was placed on the cage, when the signal was given to the engineer to hoist. He was drawn into the tower shaft and fell to the surface a distance of 98 feet. He was killed instantly.

#### CONDITION OF COLLIERIES

##### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Archibald Colliery.—The ventilation and drainage and general condition as to safety are good.

Sloan Colliery.—General condition as to safety good.

Central Colliery.—Ventilation and drainage good.

Continental Colliery.—Ventilation and drainage in fair condition.

Hampton Colliery.—Ventilation and drainage fair.

Pyne Colliery.—General condition as to safety good.

Dodge Colliery.—Ventilation and drainage fair.

Holden Colliery.—Ventilation fair; drainage good.

Taylor Colliery.—The ventilation has been greatly improved during the year but there is still room for improvement; drainage good.

National Shaft.—General condition fair.

#### LEHIGH VALLEY COAL COMPANY

William A. Colliery.—Ventilation and drainage fair.

Lawrence Colliery.—General condition fair. The principal work done at this mine is robbing pillars.

Babylon Colliery.—Condition good. The principal work is robbing pillars.

#### PENNSYLVANIA COAL COMPANY

Old Forge No. 1.—Ventilation fair, drainage good.

Old Forge Slope.—General condition good.

Old Forge No. 2.—General condition as to safety fair.

#### JERMYN AND COMPANY

Jermyn No. 1.—Ventilation fair, drainage good.

Jermyn No. 2.—Ventilation fair, drainage good.

Jermyn No. 3.—Ventilation and drainage fair.

#### DELAWARE AND HUDSON COMPANY.

Greenwood No. 1.—General condition fair.

Greenwood No. 2.—General condition fair.

Spring Brook Colliery.—Ventilation and drainage good.

#### ELLIOTT, McCLURE AND COMPANY

Sibley Colliery.—Ventilation and drainage fair.

#### AUSTIN COAL COMPANY

Austin Tunnel.—General condition fair.

#### GIBBONS COAL COMPANY

Gibbons Mine.—Ventilation fair; drainage good.

### IMPROVEMENTS

#### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Central Water Shaft.—800 horse power electric hoist; buckets 6 feet in diameter and 20 feet in depth; capacity of buckets 4000 gallons. This electric hoist was put in operation August 14, and the hoist regulated by hand. The next day the machinery was put to work automatically. The starting, stopping, dumping, reversing and over-hoist cut-off arrangements all worked successfully. Depth of shaft 518 feet. By this method of concentrating the drainage above the Clark vein level from Pyne, Archbald, Continental, Hyde Park, Hampton, Central and Sloan at this point, the steam pumps at these different collieries will be done away with. They are also making preparations to install at the foot of the shaft in the Clark vein, an 800 horse power 6 stage electric pump, capacity 5000 gallons per minute, as a substitute to the bucket water hoist in case of emergency.

Pyne Colliery.—A second opening rock tunnel was driven from the New County vein to the Big vein, size 7 feet x 12 feet, length 200 feet, pitch 18 degrees. Installed one 200 K. W. electric rotary converter for mine haulage purposes. Installed and working two 6½ ton motors without reels, and five 6½ ton motors with reels. Installed new water fire lines for protection outside to breaker and out-buildings. Installed 2½ batteries or 10 boilers of the Babcock and Wilcox water tube type, 1515 horse power. Brick building, boilers brick lined, iron trusses for roof, and equipped with Parson's steam blower. Cylinder boilers and old boiler house removed. Hoisting engines were remodeled and removed further away from breaker onto a new foundation and in a new brick building.

Archbald Colliery.—Installed two batteries or 8 boilers of the Babcock and Wilcox water tube type, 1212 horse power. Brick buildings, boilers brick lined, iron trusses for roof, and equipped with Parson's steam blower. Old cylinder boilers removed and old boiler house torn down and removed. Installed fire lines and plugs on the outside for fire protection. Rock tunnel driven from Rock to Diamond vein, size 7 feet x 12 feet, and 75 feet long. Rock plane tunnel from New County vein to Big vein, size 7 feet x 14 feet, length 220 feet.

Continental Colliery.—Second opening rock tunnel driven from Dunmore No. 2 vein to Clark vein, size 7 feet x 12 feet, length 125 feet.

Sloan and Central Collieries.—Second opening rock tunnel driven from Clark vein to New County vein, 7 feet x 12 feet, length 150 feet. Also to do away with hoisting coal at the Central main shaft to the surface, and hauling over with steam locomotive to Sloan breaker; the coal is now transported by electric motor from Central to Sloan under ground, in the Clark vein. Six additional reel motors were installed at this mine during the year.

Dodge Colliery.—A new brick hoisting engine house, size 36x36; and a new pair of direct acting engines, size 22 inches x 36 inches. A new washery annex, size 24 feet x 60 feet for small sizes, capacity 400 tons per day.

Taylor Colliery.—Installed 4 new tubular boilers, 150 horse power each, also brick boiler house for the same, size 53 feet x 41 feet. Installed pair of breaker engines 12x30 inches in a new brick building 36 feet away from breaker. Rock tunnel driven from New County vein to Clark vein, size 7x14x184 feet, also new air shaft for ventilation from New County vein to Clark vein to ventilate above tunnel, size 8x10x23 feet.

#### LEHIGH VALLEY COAL COMPANY

William A. Colliery.—A new boiler plant consisting of seven batteries, with 2100 horse power was completed. A steam line was extended from this plant to the Lawrence and Babylon mines, and the steam for the three collieries is now furnished from this plant. New cribbing was placed in the main shaft. One pair of 12x22 inch hoisting engines was placed in the Clark vein to replace the old pair which was too small for the work. One 1000 and one 600 gallon pump was placed in the Red Ash vein for silting.

Lawrence Colliery.—A William's crusher was installed to dispose of refuse from breaker, which is run in the mine.

Babylon Shaft.—The old column pipe in the shaft was replaced with new pipe.

PENNSYLVANIA COAL COMPANY

A new boiler house built of brick, 170 feet long and 51 feet wide, with steel roof trusses and corrugated roofing, has taken the place of the old wooden fire room. The new boiler house is equipped new throughout. Three batteries of Stirling boilers giving 1704 horse power has replaced three batteries of B. and W. boilers of 900 horse power. Two feed pumps 12x8x12 are used to furnish water to the boilers. Two twelve feet fans driven by 10x16 engines together with stacks 81 feet high, 48 inches diameter, furnish the draught. The feed water is heated by a 3000 horse power Cochrane water heater with exhaust steam, before being delivered to the boilers. The draught is conducted in an underground tunnel and can be regulated at each half battery to suit conditions. The grates used are the leaf shaking type, and the ashes are dropped directly into hoppers, are moistened, drawn directly into cars, and are hauled through a tunnel under the boilers. This is a very decided improvement over the old style, as no ashes at all are brought through the fire doors, enabling the fire room to be kept exceedingly clean. The fuel is conveyed by a conveyer line 600 feet long into bins which are directly in front of the boilers, and a week's supply can be kept on hand. The piping consists as far as possible of bends, making the connections very simple and few. An 18 inch extra heavy pipe is used as a header and all steam is drawn from it. In connection with the boiler house there has been built a brick wash-house 28x14 feet divided into three compartments, and fitted with baths and lockers. Two water tanks, holding each 50,000 gallons, have been erected as a reserve for the boilers in case the water should be shut off the mains. An inclined plane has been completed to haul supplies from the railroad tracks to the top of the hill, where they can be taken to the mines by the locomotives. A new locomotive house 40x36 feet to hold three locomotives, with a wood frame and covered with corrugated iron, has been erected at Old Forge No. 1 shaft to replace the old engine house which was at the foot of the breaker plane. A new locomotive weighing 20 tons has been added to the equipment. In the breaker a few things have been added. A rock crusher, running 1000 revolutions per minute, is installed. This will crush all the breaker rock, which when crushed will be slushed into the old workings to protect the pillars. A supply house divided into compartments for lime, hay, feed and general supplies is nearing completion. This building built of brick is 150 feet long by 25 feet wide. An oil house, a fire proof building 17 feet x 27 feet, fitted with Bowser self measuring tanks is about finished. Electric haulage is being installed at Old Forge. The power-house, a brick building 44 feet x 95 feet with steel roof trusses, is erected. The pole lines are erected on the outside. On the inside, the tracks are being bonded, the hangers placed in the roof, and the wire ready to string. Eleven 7 ton and one 13 ton motor will be put into service. Two new openings have been made on the West Mountains, one to the Marcy and one to the Clark veins. An air shaft is being sunk to these veins, all power to be used at these openings will be electricity. These new openings are connected with the breaker by a new tram road nearly a mile in length.



## JERMYN AND COMPANY

Jermyn No. 1 Colliery.—The main shaft was sunk from No. 2 Dunmore to No. 3 Dunmore, a distance of 55 feet. A "Tail Rope" engine was installed outside to haul coal up slope to outside from top vein and east middle vein. No. 3 or Nickle Plate shaft was reeribbed.

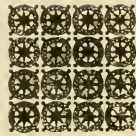
Jermyn No. 2 Colliery.—A slope was driven from Marcy vein to Clark vein, a distance of 300 feet on a 12 degree pitch. A rock plane tunnel was driven from Dunmore No. 2 vein to Clark vein, a distance of 328 feet on a pitch of 17 degrees.

## DELAWARE AND HUDSON COMPANY

Greenwood Colliery.—No. 2 slope in Checker vein extended 430 feet for development. New drift to New County vein opened, and surface railway constructed from mouth of same to head of No. 2 slope. Bore hole 256 feet deep put down for compressed air.

## ELLIOTT, McCLURE AND COMPANY

Sibley Mine.—The shaft has been sunk 115 feet from the Clark vein cutting No. 2 and No. 3 Dunmore veins and are now at work opening No. 3, the No. 2 being developed from an inside slope. Rope haulage has been installed in the bottom split of the Clark and in No. 2 Dunmore, and are at present installing a rope haulage in the New County vein. The mountain plane in the Clark vein has been extended 750 feet. A new stable has been built in the Clark vein. The breaker has been equipped with additional Emory slate pickers; a new 50 ton Barker track scale has been placed owing to the increased capacity of railroad cars.





# Fifth District

LUZERNE COUNTY

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Pittston, Pa., March 7, 1906.

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

Sir: I have the honor of herewith transmitting to you my annual report as Inspector of Mines for the Fifth Anthracite District for the year ending December 31, 1905.

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

Respectfully submitted,

H. McDONALD,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries.....	21
Number of mines.....	44
Number of mines in operation.....	43
Number of tons of coal shipped to market.....	4,823,425
Number of tons used at mines for steam and heat.....	353,787
Number of tons sold to local trade and used by employes.....	47,989
Number of tons produced.....	5,225,201
Number of persons employed inside of mines.....	9,616
Number of persons employed outside.....	3,435
Number of fatal accidents inside of mines.....	54
Number of fatal accidents outside.....	7
Number of non-fatal accidents inside of mines.....	83
Number of non-fatal accidents outside.....	10
Number of tons of coal produced per fatal accident inside.....	96,763
Number of persons employed per fatal accident inside.....	178
Number of persons employed per fatal accident outside.....	491
Number of persons employed per non-fatal accident inside.....	116
Number of persons employed per non-fatal accident outside.....	343
Number of wives made widows.....	35
Number of children orphaned.....	81
Number of steam locomotives used outside.....	30
Number of compressed air locomotives used inside.....	7
Number of electric motors used inside.....	12
Number of fans in use.....	54
Number of gaseous mines in operation.....	27
Number of non-gaseous mines in operation.....	16

TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Pennsylvania Coal Company, .....	1,603,996
Lehigh Valley Coal Company,.....	1,766,033
Hillside Coal and Iron Company,.....	695,400
Delaware and Hudson Company,.....	512,007
Hudson Coal Company, .....	341,100
Traders' Coal Company, .....	137,984
Avoca Coal Company, Limited, .....	94,859
Clarence Coal Company, .....	73,822
Total, .....	<u>5,225,201</u>

## Production by Counties

Luzerne, .....	5,225,201
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	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									
Pennsylvania Coal Co., .....	21	2	23	31	2	33	76,381	51,742	3,516	1,077	4,993	156	538	126	538
Lehigh Valley Coal Co., .....	18	2	20	32	1	33	98,112	55,189	2,162	878	2,641	120	489	68	878
Hillside Coal and Iron Co., .....	4	.....	4	9	4	13	173,850	77,267	1,063	507	1,570	266	.....	119	127
Delaware and Hudson Co., .....	3	.....	3	4	1	5	170,619	128,912	959	381	1,340	319	.....	240	181
Hudson Coal Co., .....	5	.....	5	6	2	8	68,220	56,850	843	326	1,169	169	163	141	163
Traders' Coal Co., .....	1	.....	1	.....	.....	1	137,984	.....	270	97	367	2.0	.....	.....	.....
Avoca Coal Co., Limited, .....	.....	1	1	.....	.....	.....	.....	.....	235	92	327	.....	92	.....	.....
Clarence Coal Co., .....	.....	.....	.....	1	.....	1	36,911	73,822	168	17	245	84	.....	168	.....
Totals and averages for district, ....	54	7	61	83	10	93	96,713	62,954	9 616	3,435	13,651	178	491	116	343

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Falls of coal, .....			1		2	1						1	5	9.25
Falls of roof, .....	3	2		1	1	4	1	1	5	3	2	4	29	53.79
Mine cars, .....				1								1	5	9.25
Explosions of gas and dust, .....						1	1	2		1			1	1.85
Explosions of powder and dynamite, .....	1		1		1			1				1	6	11.1
Premature blasts, .....									1			1	2	3.71
Falling into shafts, .....												1	1	1.85
By mules, .....										1			1	1.85
Totals, .....	4	2	2	3	4	6	4	6	7	5	3	8	54	100
Causes of Accidents Outside														
Cars, .....						1			1				2	28.57
Machinery, .....	1	1											3	42.86
Suffocation in chutes, etc., .....						1					1		1	14.29
Miscellaneous, .....	1												1	14.29
Totals, .....	2	1				2			1		1		7	100
Grand totals inside and outside	6	3	2	3	4	8	4	6	8	5	4	8	61	.....

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Falls of coal, .....			2						1				3	3.61
Falls of roof, .....	12	1	1	3	1	1	1	1	12	4		1	18	21.69
Mine cars, .....	3	3	5	3	3	4		3	1	1	1		29	34.94
Explosions of gas and dust, .....	12	1	12		1		2			5			13	15.66
Explosions of powder and dynamite, .....			1									1	2	2.41
Premature blasts, .....			2	1		2	1		1	1			8	9.64
By mules, .....			1	1									2	2.41
Miscellaneous, .....	1		1			1	1	1	2	1			8	9.64
Totals, .....	8	5	13	9	5	8	5	5	7	13	1	4	83	100
Causes of Accidents Outside														
Cars, .....		1		1	1		1		1				5	50.00
Machinery, .....									1			1	2	20.00
Miscellaneous, .....												3	3	30.00
Totals, .....		1		1	1		1		2			4	10	100
Grand totals inside and outside,	8	6	13	10	6	8	6	5	9	13	1	8	93	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants, .....						1							1
Miners, .....	2	2	2	1	3	3	2	3	3	1	2	3	27
Miners' laborers, .....				1	1	3	2	1	4	3			21
Drivers and runners, .....				1						1		4	3
Company men, .....								2					2
Totals, .....	4	2	2	3	4	6	4	6	7	5	3	8	54
Outside													
Blacksmiths and carpenters, .....									1				1
Engineers and firemen, .....	1												1
Slatepickers (boys), .....	1	1									1		3
All other employes, .....													2
Totals, .....	2	1				2			1		1		7
Grand totals inside and outside, .....	6	3	2	3	4	8	4	6	8	5	4	8	61

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, .....	3	2	5	2	1	2	4	2	2	1		2	32
Miners' laborers, .....	1	2	4	4	1	1			4			1	21
Drivers and runners, .....	2	1	4	2	2	2		2		2		1	18
Company men, .....	2				1		1	1	1	1	1		10
All other employes, .....				1		1							2
Totals, .....	8	5	13	9	5	8	5	5	7	13	1	4	83
Outside													
Foremen, .....												1	1
Blacksmiths and carpenters, .....							1						1
Engineers and firemen, .....									1				1
All other employes, .....		1		1	1							3	7
Totals, .....		1		1	1		1		2			4	10
Grand totals inside and outside, .....	8	6	13	10	6	8	6	5	9	13	1	8	93



TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	2	1	1	...	...	2	...	2	1	1	1	...	11
English, .....	...	...	...	1	...	1	1	...	...	1	...	1	4
Welsh, .....	...	...	...	...	...	...	...	...	...	...	...	...	4
Irish, .....	...	...	...	1	...	2	1	...	...	...	...	...	1
German, .....	4	1	...	...	...	...	...	1	...	...	...	1	19
Polish, .....	...	1	1	...	1	1	...	1	3	3	2	...	2
Hungarian, .....	...	1	1	...	...	2	...	...	1	...	...	...	9
Italian, .....	...	...	...	...	...	...	1	1	...	...	...	...	4
Slavonian, .....	...	...	...	...	...	...	...	1	1	...	...	...	3
Lithuanian, .....	...	...	...	...	1	...	...	...	1	...	1	1	3
Russian, .....	...	...	...	...	...	...	...	...	2	...	...	...	3
Totals, .....	6	3	2	3	4	8	4	6	8	5	4	8	61

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	1	2	...	1	2	2	3	2	2	1	2	15
English, .....	...	...	1	1	...	...	1	...	1	1	...	1	5
Welsh, .....	1	...	1	...	...	...	...	...	...	...	...	...	3
Scotch, .....	...	1	...	2	...	...	1	...	...	...	...	...	1
Irish, .....	...	1	...	...	...	...	...	...	2	2	...	1	8
German, .....	1	...	...	...	...	...	...	...	...	...	...	...	3
Polish, .....	2	1	5	2	1	1	1	2	2	2	...	2	19
Italian, .....	...	...	...	2	2	1	1	...	...	...	...	...	10
Slavonian, .....	2	1	...	...	...	2	...	...	1	1	...	1	8
Lithuanian, .....	1	1	1	1	1	...	...	...	1	...	...	1	7
Austrian, .....	...	1	2	2	1	1	...	...	...	1	...	...	2
Russian, .....	...	...	...	...	...	...	...	...	...	...	...	...	2
Totals, .....	8	6	13	10	6	8	6	5	9	13	1	8	93

TABLE I.—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 person

Names of Operators and Mines	Kind of opening	Gasous (r 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 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
Pennsylvania Coal Co.																
Number 1, .....	Shaft, ..	Gasous, ..	Fan,.....	20	6.6	5.3	45	.7	Gubbal, ....	Steam,	1	82,024	73,640	84,320	922	330
Number 2, .....	Shaft, ..	Gasous, ..	Fan,.....	20	6.6	5.3	48	.7								
Number 3, .....	Shaft, ..	Gasous, ..	Fan,.....	20	6.6	5.3	48	.7								
Number 4, .....	Shaft, ..	Gasous, ..	Fan,.....	20	6.6	5.3	48	.7								
Number 5, .....	Shaft, ..	Gasous, ..	Fan,.....	20	6.6	5.3	69	1.10								
Number 6, .....	Shaft, ..	Gasous, ..	Fan,.....	20	6.6	5.3	69	1.10								
Number 7, .....	Shaft, ..	Gasous, ..	Fan,.....	20	6.6	5.3	69	1.10								
Number 8, .....	Shaft, ..	Gasous, ..	Fan,.....	20	6.6	5.3	69	1.10								
Number 9, .....	Shaft, ..	Gasous, ..	Fan,.....	20	6.6	5.3	69	1.10								
Number 10, .....	Shaft, ..	Gasous, ..	Fan,.....	20	6.6	5.3	69	1.10								
Number 11, .....	Shaft, ..	Gasous, ..	Fan,.....	20	6.6	5.3	69	1.10								
Number 12, .....	Shaft, ..	Gasous, ..	Fan,.....	20	6.6	5.3	69	1.10								
Number 13, .....	Shaft, ..	Gasous, ..	Fan,.....	20	6.6	5.3	69	1.10								
Number 14, .....	Tunnel, ..	Gasous, ..	Fan,.....	17	5.4	4.0	60	.8								
Lehigh Valley Coal Co.																
Prospect, .....	Shaft, ..	Gasous, ..	2 fans,...	30	9	8	50	1.85	Gubbal, ....	Steam,	5	70,248	68,174	72,163	731	
Oakwood, .....	Shaft, ..	Gasous, ..	Fan,.....	30	9	8	50	1.7								
Midvale, .....	Slope, ..	Gasous, ..	Fan,.....	20	6.6	5.3	66	1.2								
Hillman, .....	Slope, ..	Gasous, ..	2 fans,...	15	4.6	3.8	50	.9								
Wyoming, .....	Shaft, ..	Gasous, ..	Fan,.....	25	7	6	50	.9								
Henry, .....	Shaft, ..	Gasous, ..	2 fans,...	10	8	50	1.3									
Henry Red Ash, .....	Shaft, ..	Gasous, ..	Fan,.....	28	6.6	7.6	37	.8								
Heidelberg Number 1, .....	Slope, ..	Gasous, ..	Fan,.....	16	4	3	80	.6								
Heidelberg Marcy, .....	Slope, ..	Non-gas, ..	Fan,.....	20	6	5.1	100	.4								
Heidelberg Number 2, .....	Shaft, ..	Non-gas, ..	Fan,.....	20	6	5.1	100	.5								
Mineral Spring, .....	Slope, ..	Gasous, ..	Fan,.....	32	4.2	3.5	40	.7								
Mineral Spring, .....	Shaft, ..	Gasous, ..	Fan,.....	30	6.6	5.4	45	.8								
Coal Brook, .....	Slope, ..	Non-gas, ..	Fan,.....	20	6	5.5	45	.8								

\*Idle all year.



TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine														
Pennsylvania Coal Co. No. 5, ..... Ewen, ..... No. 6, ..... No. 10, ..... No. 14, ..... No. 6 washery, ..... No. 8 washery, ..... Ewen washery, .....	Luzerne, .....	{ William A. May, Gen. Manager, W. V. Ingalls, General Supt. }	Scranton, .....	{ Wm. P. Jennings, Henry F. McMullan, Henry F. McMullan, Wm. P. Jennings, John F. Clarke, Henry F. McMullan, Wm. P. Jennings, Henry F. McMullan, }	Pittston, ..... West Pittston, .. West Pittston, .. Pittston, ..... Plainsville, ..... West Pittston, .. Pittston, ..... West Pittston, .. }	Erie														
							Lehigh Valley Coal Co. Prospect, .....	Luzerne, .....	S. D. Warriner, General Manager.	Wilkes-Barre, .....	{ F. E. Zerbey, ..... F. E. Zerbey, ..... W. D. Owens, ..... W. D. Owens, ..... F. E. Zerbey, ..... }	Wilkes-Barre, ..... Wilkes-Barre, ..... Pittston, ..... Pittston, ..... Wilkes-Barre, .....	Lehigh Valley							
														Hillside Coal and Iron Co. Butler, .....	Luzerne, .....	William A. May, General Manager.	Scranton, .....	{ V. L. Peterson, Superintendent, E. D. Caryl, As- sistant Supt., E. D. Caryl, As- sistant Supt., E. D. Caryl, As- sistant Supt. }	Scranton, ..... Pittston, ..... Pittston, ..... Pittston, .....	Erie
							Pine Ridge, .....	Luzerne, .....	C. C. Rose, .....	Scranton, .....	E. R. Pettibone, ..	Dorranconet, .....	Delaware and Hudson							
														Traders' Coal Co. Ridgewood, .....	Luzerne, .....	Theodore Hogan, ..	Avoca, .....	.....	.....	New York and Western
Avoca Coal Co., Limited Avoca, .....	Luzerne, .....	Wm. H. Hollister,	Avoca, .....	.....	A. B. Law, .....	Pittston, .....	Erie and Lehigh Valley													
								Clarence Coal Co. Clarence, .....	Luzerne, .....	C. B. Sturges, ....	Scranton, .....	.....	.....	Erie						

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked. (Totals are averages, 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.												
No. 8, .....	Luzerne, ...	187,445	2,184	.....	189,629	205	464	1	3	6,535	1,874	75
Ewen, .....		230,770	9,438	1,676	241,884	136	1,130	1	3	11,933	12,837	163
No. 6, .....		249,610	4,004	3,965	257,579	136	1,170	4	7	14,466	26,387	119
No. 10, .....		216,310	1,962	6,865	225,137	193	1,757	3	1	10,178	10,490	35
No. 14, .....		597,389	11,178	1,333	609,900	191	1,419	14	19	20,321	27,809	133
		1,481,524	28,766	13,839	1,524,129	176	4,920	22	33	63,133	79,391	488
No. 6 washery, .....	Luzerne, ...	50,390	5,811	.....	56,891	45	46	.....	.....	.....	.....	.....
No. 8 washery, .....		14,062	3,055	.....	17,517	35	33	.....	.....	.....	.....	.....
Ewen washery, .....		3,654	265	.....	9,319	5	.....	.....	.....	.....	.....	.....
Totals, .....		1,552,290	37,927	13,839	1,603,996	176	4,993	23	33	63,133	79,397	491
Lehigh Valley Coal Co.												
Prospect, .....	Luzerne, ...	826,953	69,500	3,843	900,296	252	1,558	15	23	28,203	349,132	276
Mineral Spring, .....		298,615	22,995	2,573	324,183	218	537	3	8	10,625	35,270	66
Heidelberg No. 1, .....		130,142	9,732	10	139,884	177	391	1	1	4,370	9,450	61
Heidelberg No. 2, .....		102,388	15,874	2,386	120,648	199	285	.....	.....	5,222	5,224	48
		1,268,098	118,101	8,812	1,395,011	212	2,981	19	33	48,520	599,666	431
Henry washery, .....	Luzerne, ...	371,022	.....	.....	371,022	101	59	1	.....	.....	.....	.....
Totals, .....		1,639,120	118,101	8,812	1,766,033	212	3,040	20	33	48,520	399,666	474

\*Employes included with Ewen breaker.

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked. (Totals are averages, 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.												
Butler, .....	Luzerne, ...	265,483	17,775	3,292	286,460	215	667	1	4	15,097	27,134	58
Fernwood, .....		199,599	9,969	251	119,819	156	373	1	5	6,091	25,511	47
Consolidated, .....		143,959	9,048	1,817	154,824	160	495	2	4	6,624	12,354	61
Boston washery, .....	Luzerne, .....	519,041	36,792	5,270	561,103	189	1,335	4	13	28,330	65,339	16
Totals, .....		130,127	4,170	.....	134,297	147	35	.....	.....	.....	.....	4
Delaware and Hudson Co.												
Baltimore No. 5, .....	Luzerne, ...	619,168	40,962	5,270	685,400	189	1,570	4	13	28,330	65,339	170
Totals, .....			109,476	25,552	3,155	138,163	159	415	.....	.....	.....	.....
Hudson Coal Co.												
Pine Ridge, .....	Luzerne, ...	318,116	55,728	.....	373,844	299	925	3	5	12,171	2,545	109
Lafin, .....			427,572	81,280	3,155	512,007	184	1,340	3	5	18,642	5,130
Totals, .....		292,614	38,417	3,628	341,659	178	776	2	5	11,256	16,795	101
Traders' Coal Co.												
Ridgewood, .....	Luzerne, .....	78,989	16,790	662	96,441	152	393	5	3	6,951	36,575	55
Totals, .....		281,693	55,207	4,290	341,109	165	1,169	7	8	21,277	33,360	155
		125,246	7,810	4,928	137,984	271	367	1	.....	10,440	3,340	31



Avoca, .....	81,178	6,500	7,181	94,859	141	327	1	.....	4,177	5,225	52
Luzerne, .....											
Clarence Coal Co. ....	67,308	6,000	514	73,822	224	245	2	1	4,935	9,400	24
Grand totals, .....	4,823,425	353,787	47,989	5,225,201	295	13,051	61	93	199,394	620,757	1,541

TABLE 2.—Recapitulation

Pennsylvania Coal Co. ....	1,552,230	37,927	13,889	1,603,996	176	4,993	23	33	63,133	79,297	491
Lehigh Valley Coal Co. ....	1,639,120	118,101	5,812	1,766,033	212	5,040	20	33	48,520	359,606	454
Hillside Coal and Iron Co., .....	649,168	40,962	5,270	695,400	189	1,570	4	13	28,330	65,399	170
Delaware and Hudson Co., .....	247,572	81,289	3,155	312,077	184	1,340	3	5	18,642	5,130	159
Hudson Coal Co., .....	221,063	55,207	4,280	241,100	165	1,169	7	8	21,207	53,300	155
Miscellaneous companies, .....	273,732	20,310	12,623	306,665	212	539	4	1	19,562	17,925	112
Totals, .....	4,823,425	353,787	47,989	5,225,201	195	13,051	61	93	199,394	620,757	1,541

TABLE 2.—Part 2.

Names of Operators	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	Steam	Air								Electric
Pennsylvania Coal Co.	Luzerne, ...	6	240	62	9,682	9,922	6	7	144	7,397	13	19,567	8,229	1	8	
Lehigh Valley Coal Co.		1	90	53	7,870	7,960	12	.....	104	8,147	22	10,607	8,910	4	7	
Hillside Coal and Iron Co.		1	290	33	2,870	3,090	.....	.....	43	2,300	1	706	550	1	1	
Delaware and Hudson Co.		60	1,800	18	3,700	4,900	3	.....	132	8,589	6	8,600	2,650	3	4	
Hudson Coal Co.		.....	.....	16	3,900	3,900	.....	.....	93	3,974	3	5,000	1,300	.....	2	
Traders' Coal Co.		.....	160	1	3,125	3,285	.....	.....	17	3,142	.....	400	400	.....	.....	
Avoca Coal Co., Limited.		.....	50	.....	5	700	750	.....	.....	46	.....	1,100	1,000	.....	.....	
Clarence Coal Co.		.....	.....	.....	3	250	250	.....	.....	7	250	.....	410	.....	.....	
Totals,		.....	88	2,530	158	27,427	30,157	30	7	514	30,939	50	46,404	23,180	10	22

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employes	Total outside
Pennsylvania Coal Co. Ewen,* No. 6, No. 10, No. 14,	Luzerne, ...	1	6	...	67	155	47	9	...	10	38	321	...	1	4	9	72	8	2	44	135	464
		3	5	...	248	324	91	27	3	180	131	949	...	1	16	14	11	36	20	103	1,110	
		3	2	...	328	286	117	16	1	170	43	947	...	1	11	21	45	20	3	119	223	1,170
		2	1	...	152	204	80	10	2	97	62	566	...	1	11	20	79	4	2	74	191	1,757
		2	4	...	409	434	132	14	2	97	62	1,162	...	1	17	21	27	89	1	151	257	1,419
No. 6 washery, No. 8 washery,	Luzerne, ...	11	1	...	1,206	1,331	467	76	8	467	325	3,916	...	5	61	85	262	87	13	491	1,004	4,920
		...	...	...	...	...	...	...	...	...	...	...	...	1	...	3	...	...	...	28	33	40
Totals,		13	18	...	1,206	1,331	467	76	8	467	325	3,916	...	7	61	82	262	87	14	554	1,077	4,953
Lehigh Valley Coal Co. Prospect, Mineral Spring, Heidelberg No. 1, Heidelberg No. 2,	Luzerne, ...	6	2	17	463	385	292	53	15	...	300	1,443	1	2	44	51	43	17	7	290	415	1,838
		2	...	4	150	85	73	13	6	...	54	387	...	1	12	20	14	12	4	87	150	537
		1	...	1	68	46	39	...	2	...	21	169	...	1	6	10	45	5	2	62	132	301
		1	...	1	60	49	23	3	4	...	12	163	...	1	7	14	31	20	2	47	122	285
		10	2	23	741	565	328	63	27	...	387	2,162	1	5	69	95	133	54	15	447	819	2,981

\*Including 30 employes working at Ewen washery.



Traders' Coal Co.	2	...	2	135	50	49	14	2	26	...	270	1	1	6	6	31	9	4	39	97	367
Ridgewood, .....	2	...	2	135	50	49	14	2	26	...	270	1	1	6	6	31	9	4	39	97	367
Avoca Coal Co., Limited	1	1	1	90	32	4	2	10	4	235	1	1	6	7	16	6	2	53	92	327	
Avoca, .....	1	1	1	90	32	4	2	10	4	235	1	1	6	7	16	6	2	53	92	327	
Clarence Coal Co.	1	1	...	70	65	14	5	3	9	...	168	1	1	3	4	20	13	...	35	77	245
Clarence, .....	1	1	...	70	65	14	5	3	9	...	168	1	1	3	4	20	13	...	35	77	245
Grand totals, .....	37	27	53	3,271	2,994	1,241	232	67	819	875	9,616	5	25	298	363	729	301	52	1,752	3,435	13,051

TABLE 3.—Recapitulation

Pennsylvania Coal Co., .....	11	18	7	1,204	1,323	467	76	8	467	225	3,916	...	7	61	92	262	87	14	554	1,077	4,993
Lehigh Valley Coal Co., .....	10	2	23	741	565	328	69	27	...	397	2,162	1	5	69	101	136	54	16	496	878	3,040
Hillside Coal and Iron Co., ..	5	...	1	423	312	148	22	9	114	29	1,063	1	4	30	39	120	40	8	265	707	1,570
Delaware and Hudson Co., ..	4	2	12	297	322	18	26	6	125	63	559	...	3	17	67	83	50	5	156	381	1,340
Hudson Coal Co., .....	3	3	7	321	257	105	16	7	67	57	841	...	3	16	47	61	42	3	154	326	1,169
Miscellaneous companies, .....	4	2	3	285	205	95	23	7	45	4	673	3	3	15	17	67	28	6	127	266	839
Totals, .....	37	27	53	3,271	2,994	1,211	232	67	819	875	9,616	5	25	298	363	729	301	52	1,752	3,435	13,051

TABLE 3.—Part 2.

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Pennsylvania Coal Co. No. 8, Ewen, No. 6, No. 10, No. 14,	Luzerne, ...	14	10	15	20	23	24	15	17	19	14	16	18	205
		13	10	16	17	20	21	13	15	9	13	17	17	193
		11	10	8	11	19	22	14	15	17	13	17	17	156
		13	9	14	17	20	21	13	15	18	15	17	17	193
Lehigh Valley Coal Co. Prospect, Mineral Spring, Heidelberg No. 1, Heidelberg No. 2,	Luzerne, ...	24	13	26	23	25	24	19	16	17	19	23	23	252
		21	12	20	20	17	22	13	13	17	17	21	18	218
		16	10	17	15	17	16	14	11	14	13	18	16	177
		17	10	20	17	19	18	15	15	17	17	17	17	191
Hillside Coal and Iron Co. Butler, Fernwood, Consolidated,	Luzerne, ...	15	10	19	22	23	24	15	17	20	13	17	20	215
		13	14	17	16	20	19	14	12	17	18	19	14	193
		14	12	22	15	21	22	14	16	16	8	.....	.....	169
		16	12	15	13	14	15	13	13	10	14	11	13	159
Delaware and Hudson Co. Baltimore No. 5,	Luzerne, ...	18	13	21	19	23	23	19	18	12	15	13	15	209
		15	12	19	15	19	16	11	16	13	15	11	16	178
		15	12	16	15	15	12	12	11	10	13	12	9	152
		20	21	26	22	25	24	21	23	21	20	23	22	271
Hudson Coal Co. Pine Ridge,* Lafin,	Luzerne, .....	14	9	12	11	11	12	11	10	11	12	14	141	
		14	9	12	11	11	12	11	10	11	12	14	141	
Traders' Coal Co. Ridgewood, Avoca, Clarence,	Luzerne, .....	18	16	22	20	21	16	16	18	20	21	18	224	
		18	16	22	20	21	16	16	18	20	21	18	224	

\*Laurel Run coal is prepared in Pine Ridge breaker.



TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 5	Adam Sander, .....	Polish, .....	Miner, .....	40	S	.....	.....	Wyoming shaft, ..	.....	Instantly killed by a fall of rock at face of his breast.
6	Tony Orlick, .....	Polish, .....	Laborer, .....	40	S	.....	.....	Lafin shaft, .....	.....	Killed by a fall of rock at face of breast.
6	John Slopka, .....	Polish, .....	Laborer, .....	28	S	.....	.....	Pine Ridge, .....	.....	Killed by a fall of top rock at face of breast.
13	Italph Solon, .....	American, ..	Slatepicker, ..	15	S	.....	.....	Henry washery, ..	.....	Killed by falling on revolving screen. Outside.
28	Anthony Karpinski, ..	Polish, .....	C o m p a n y miner, .....	33	M	1	5	Prospect shaft, ..	.....	Killed by a premature blast while drawing the charge.
30	James Ross, .....	American, ..	Engineer, .....	41	M	1	5	No. 14, .....	.....	Fatally scalded by steam. Died same day. Outside.
Feb. 18	Angelo Fetranka, .....	Italian, .....	Miner, .....	43	S	.....	.....	No. 14 shaft, .....	.....	Killed by a fall of top rock.
20	John Kozowski, .....	Polish, .....	Miner, .....	23	S	.....	.....	Consolidated shaft,	.....	Killed by fall of top rock which slid from the gob.
27	David Jetherles, .....	American, ..	Ball boy, .....	14	S	.....	.....	Avoca washery, ..	.....	Killed by sliding down coal chute in rollers. Outside.
March 1	James Bradigan, .....	American, ..	Miner, .....	50	M	1	.....	No. 14 tunnel, ..	.....	Fatally injured by fall of top coal. Died same day.
10	J. hn Murvghoni, .....	Italian, .....	Miner, .....	35	S	.....	.....	Lafin tunnel, .....	.....	Fatally burned by powder. Died same day.
April 3	Thomas McNulty, .....	Irish, .....	Laborer, .....	30	S	.....	.....	No. 11 shaft, .....	.....	Fatally injured by fall of rock. Died April 29.
10	Patrick Hughes, .....	English, .....	Miner, .....	28	M	1	1	No. 14 shaft, .....	.....	Killed by fall of top rock at face of breast.
19	Frank Supavitch, .....	Polish, .....	Driver, .....	17	S	.....	.....	Henry shaft, .....	.....	Killed by falling under loaded trip of cars.
May 5	Anthony Zeresewiwisk, ..	Polish, .....	Miner, .....	23	S	.....	.....	Consolidated shaft,	.....	Killed by a blast through cross-cut. Died same day.
15	William Spadis, .....	Russian, .....	Miner, .....	44	M	1	2	No. 10 shaft, .....	.....	Fatally injured by fall of top coal. Same day.
19	Stanley Mofski, .....	Polish, .....	Miner, .....	37	M	1	4	No. 4 shaft, .....	.....	Killed by a fall of rock after returning to face of breast after a blast.
23	Joseph Grilaoski, .....	Hungarian, ..	Laborer, .....	25	M	1	.....	No. 4 shaft, .....	.....	Killed by fall of rock after returning to face of breast after a blast.
June 5	Thomas F. Kerby, .....	Irish, .....	Fire boss, .....	30	M	1	3	No. 14 shaft, .....	.....	Fatally burned by gas he ignited. Died June 6, 1905.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
June 6	Jacob Chere, .....	English, .....	Miner, .....	48	M.	1	5	Henry Red Ash shaft.		Killed by a fall of top coal.
13	John Fris, .....	Polish, .....	Miner, .....	45	M.	1	1	Hiltman slope, ...		Killed by fall of rock at face of breast.
13	Scott Carkhuff, .....	American, ..	Laborer, ...	57	S.	.....	.....	Henry Red Ash shaft.		Fatally injured by rock falling off rib. Died June 15.
19	John Frank, .....	Italian, .....	Laborer, ...	23	S.	.....	.....	Butler slope, .....		Killed by a fall of top rock while loading at face of breast.
20	Michael Kenney, .....	American, ..	Laborer, ...	42	M.	1	3	Pine Ridge breaker.		Killed by being run over by railroad car. Outside.
21	William Vaull, .....	Italian, .....	Slate boss, ...	40	M.	1	.....	Latin breaker, ...		Killed by being caught by endless rope in breaker. Outside.
22	John E. Burke, .....	Irish, .....	Miner, .....	50	M.	1	8	No. 14 tunnel, ...		Killed by fall of rock at face of breast.
July 2	George Rowe, .....	English, .....	Miner, .....	45	M.	1	5	Baltimore No. 5 shaft.		Instantly killed by a water car becoming uncoupled on slope and striking them.
3	Steve B-dnar, .....	Slavonian, ..	Laborer, ...	26	M.	1	2	Baltimore No. 5 shaft.		
6	John Kelley, .....	Irish, .....	Rock miner, ...	43	M.	1	1	No. 11 shaft, .....	Luzerne, ...	Fatally burned by gas. Died July 10.
20	Daniel Giabbarrisi, .....	Italian, .....	Laborer, ...	28	M.	1	.....	No. 8 shaft, .....		Killed by fall of top rock at face of breast.
Aug. 1	Thomas Mitchell, .....	American, ..	Slope foot-man.	25	M.	1	3	Heidelberg shaft, ...		Killed by empty trip of cars coming on him.
2	Carlo Corsoro, .....	Italian, .....	Laborer, ...	27	S.	.....	.....	No. 14 shaft, ...		Killed by fall of rock on gangway road.
12	Stanley Zelensky, .....	Slavonian, ..	Bratticeman, ...	28	S.	.....	.....	Midvale slope, ...		Killed by an explosion of gas he ignited.
12	Anthony Barth, .....	German, .....	Miner, .....	31	S.	.....	.....	No. 9 shaft, .....		Fatally injured by premature blast. Died same day.
16	James Killew, .....	American, ..	Miner, .....	44	M.	1	7	No. 6 shaft, .....		Fatally burned by gas. Died August 27.
29	Lewis Vesoskile, .....	Polish, .....	Miner, .....	35	M.	1	5	No. 14 tunnel, ...		Killed by fall of rock while robbing pillars.
Sept. 2	John Timkovitch, .....	Russian, .....	Laborer, ...	30	M.	1	.....	Henry Red Ash, ...		Instantly killed by a fall of top rock while loading car.
6	John Tucano, .....	Russian, .....	Laborer, ...	25	S.	.....	.....	Henry Red Ash, ...		Killed by a fall of top rock at face of breast.
6	Anthony Chichonok, ...	Hungarian, ..	Miner, .....	41	M.	1	.....	Ridge-wood slope, ...		Fatally injured by a blast through pillar. Died September 9.
6	Andrew Popushak, ...	Polish, .....	Laborer, ...	27	M.	1	2	Latin shaft, .....		Fatally injured by a blast through pillar. Died September 9.
13	Louis Hoshila, .....	Polish, .....	Laborer, ...	24	S.	.....	.....	No. 14 shaft, .....		Killed by a fall of top rock.

Sept.	27	Frank Smith, .....	Polish, .....	Miner, .....	35	M.	1	1	No. 14 shaft, .....	Killed by falling down shaft.
	29	Charles Caruth, .....	American, ..	Carpenter, ..	32	M.	1	2	Henry outside, ..	Killed by falling under empty cars while in motion. Outside.
	30	Adam Telnaski, .....	Lithuanian, ..	Miner, .....	33	M.	1	2	No. 14 shaft, ....	Fatally injured by fall of rock. Died next day.
Oct.	4	Casper Sdaja, .....	Polish, .....	Laborer, ....	30	M.	1	2	Baltimore No. 5 shaft, .....	Killed by a fall of rock from the roof.
	5	George Usviok, .....	Polish, .....	Miner, .....	38	S.	.....	.....	.....	Fatally burned by an explosion of gas. Died October 11.
	12	James Shields, .....	American, ..	Driver, .....	20	S.	.....	.....	Clarence slope, ..	Fatally injured by kick from mul. Died November 6.
	17	William Reese, .....	Welsh, .....	Laborer, ....	28	M.	1	1	Mineral Spring, ..	Killed by a fall of top rock in shinking slope.
	23	John Shuta, .....	Polish, .....	Laborer, ....	20	S.	.....	.....	Hillman slope, ....	Fatally injured by fall of rock. Died November 7.
Nov.	15	Anthony McAndrew, ..	American, ..	Statepicket, ..	15	S.	.....	.....	No. 10 breaker, .....	Smothered in buckwheat coal chute. Out-sider.
	21	Joseph Buchak, .....	Polish, .....	Miner, .....	25	S.	.....	.....	Mineral Spring, .....	Instantly killed while working on night shift by fall of coal.
	21	Michael Zimeh, .....	Polish, .....	Laborer, ....	37	M.	1	2	Mineral Spring, .....	Fatally injured by premature blast. Died December 16.
	24	George Zelonis, .....	Lithuanian, ..	Miner, .....	27	S.	.....	.....	Fernwood slope, .....	Fatally injured by premature blast. Died December 16.
Dec.	5	Simon Stuka, .....	Lithuanian, ..	Miner, .....	38	S.	.....	.....	Prospect shaft, .....	Killed by a fall of top rock.
	5	John Trolley, .....	Italian, .....	Miner, .....	32	S.	.....	.....	Henry shaft, .....	Fatally injured by premature blast. Died December 10.
	6	Frank Starne, .....	Italian, .....	Laborer, ....	31	M.	1	3	No. 14 shaft, .....	Fatally injured by a fall of rock. Died December 21.
	6	Michael Pavolski, .....	P. ish, .....	Laborer, ....	25	M.	1	1	Lafin shaft, .....	Killed by falling down shaft.
	13	George Mergo, .....	Slavonian, ..	Laborer, ....	30	M.	1	2	Wyoming shaft, ..	Killed by a fall of top rock in breast.
	15	Carmani Antoine, .....	Italian, .....	Runner, .....	20	M.	1	.....	Clarence slope, ..	Killed by being caught between loaded cars on gangway.
	16	William Rutledge, .....	English, .....	Laborer, ....	50	M.	1	1	No. 14 tunnel, .....	Killed by a fall of bony coal.
	28	Andrew Parrilla, .....	Slavonian, ..	Miner, .....	42	M.	1	3	Wyoming shaft, .....	Killed by fall of rock at face of breast.

Luzerne, ..

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 6	Phillips Kraft, .....	Polish, .....	Miner, .....	41	M.	Ladin shaft, .....		Arm broken by fall of rock.
6	Albert Pickls, .....	German, .....	Miner, .....	37	M.	Pine Ridge shaft, .....		Leg broken by fall of top rock.
10	Mesback Reese, .....	Welsh, .....	Driver, .....	17	S.	Oakwood shaft, .....		Leg broken while standing on car bumper by door.
18	Mathew Dakens, .....	Lithuanian, .....	Laborer, .....	45	M.	No. 14 shaft, .....		Leg broken while lifting piece of coal. It fell on him.
21	William Savage, .....	Slavonian, .....	Runner, .....	19	S.	Butler slope, .....		Leg broken while uncoupling cars by car bumpers.
30	Charles Lawbaugh, .....	American, .....	Timberman, .....	35	M.	Baltimore No. 5, .....		Face and hands burned by gas.
30	David Kewsey, .....	Polish, .....	Miner, .....	34	M.	Wyoming shaft, .....		Face and hands burned by gas.
31	George Psoock, .....	Slavonian, .....	Footman, .....	22	M.	Prospect shaft, .....		Thigh broken by car. He put his foot against it to hold it.
Feb. 1	Andrew Klimchaw, .....	Russian, .....	Miner, .....	41	M.	Hoyle shaft, .....		Face and hands burned by gas. Ignited a feeder.
3	William Brennan, .....	Irish, .....	Laborer, .....	37	S.	Consolidated shaft, .....		Arm broken by cars on slope.
7	Anthony Kashnelack, .....	Polish, .....	Driver, .....	18	S.	Prospect, .....		Leg broken by car bumpers while standing between them.
10	John Hannon, .....	American, .....	Car oiler, .....	16	S.	Baltimore No. 5, .....	Luzerne, ...	Painfully squeezed between cars on chain hoist. Outside.
20	James Cudock, .....	Slavonian, .....	Laborer, .....	45	M.	No. 14 shaft, .....		Arm broken by blocking car. The blocking slipped.
27	Stemond Tomascus, .....	Lithuanian, .....	Miner, .....	37	M.	No. 14 shaft, .....		Leg broken by fall of rock.
March	Peter Leljeskus, .....	Lithuanian, .....	Miner, .....	39	M.	No. 14 shaft, .....		Seriously injured by a premature blast.
6	Michael Letzco, .....	Russian, .....	Laborer, .....	29	M.	Clarence slope, .....		Leg broken between car bumpers.
11	Joseph Girvan, .....	American, .....	Runner, .....	18	S.	No. 14 tunnel, .....		Leg broken by falling off car.
11	Michael Sabara, .....	Polish, .....	Laborer, .....	18	S.	Mineral Spring, .....		Leg broken by fall of top coal.
11	Joseph Bartosuner, .....	Polish, .....	Driver, .....	21	S.	No. 14 shaft, .....		Ribs and collar bone broken between car and roof.
15	Samuel Scavenski, .....	Polish, .....	Miner, .....	28	S.	Fernwood slope, .....		Skull fractured by fall of top coal.
17	George Faber, .....	Austrian, .....	Laborer, .....	33	M.	Prospect shaft, .....		Head cut. Struck by clevis on slope rope.
17	Andrew Donelick, .....	Russian, .....	Miner, .....	24	M.	Laurel Run, .....		Face and hands burned by gas in abandoned breast.
27	George Pluta, .....	Russian, .....	Laborer, .....	24	M.	Hoyle shaft, .....		Face and hands burned by gas.
27	William Gerrey, .....	American, .....	Runner, .....	19	S.	No. 4 shaft, .....		Leg broken by car striking head block and coming down on his leg.

March	28	Lawrence Yakia, .....	Polish, .....	Miner, .....	36	M. Heidelberg, .....	Back painfully bruised by fall of rock. Leg broken by chain on empty car striking him.
	29	Samuel Davis, .....	Welsh, .....	Driver, .....	19	S. Mineral Springs, .....	
	30	John Luchintack, .....	Polish, .....	Miner, .....	52	M. Henry shaft, .....	Leg badly cut by coal flying from a blast.
April	15	Louis Swiski, .....	Lithuanian, .....	Miner, .....	42	M. No. 14 shaft, .....	Leg broken by piece of rock falling on him.
	19	Ignatz Bielskie, .....	Russian, .....	Miner, .....	23	S. Prospect shaft, .....	Thigh broken by premature blast he was firing.
	19	John McCole, .....	Irish, .....	Engineer, .....	17	S. Henry shaft, .....	Arm broken. Thrown by a mule.
	19	Joseph Petreck, .....	Polish, .....	Laborer, .....	23	M. No. 9 shaft, .....	Leg and ribs broken by fall of rock.
	21	Walter Jeffries, .....	English, .....	Driver, .....	18	S. Consolidated shaft, .....	Hip broken by fall of rock.
	21	Frank Sabal, .....	Italian, .....	Laborer, .....	25	M. No. 5 shaft, .....	Hip dislocated. Fell under a moving car. Burned by powder at box. A spark from his lamp ignited it.
	21	Charles Mazhonis, .....	Russian, .....	Laborer, .....	23	S. Coal Brook, .....	Leg struck and broken by empty car. Collar bone broken. Struck by car.
	21	Timothy Ryder, .....	Irish, .....	Driver, .....	17	S. Mineral Spring, .....	Leg broken. Fell off car he was riding on. Outside.
	22	William Sabinski, .....	Polish, .....	Laborer, .....	22	S. Henry Red Ash, .....	Body squeezed by falling under cars.
	22	James Frodnick, .....	Italian, .....	Brakeman, .....	25	S. Butler, .....	Hips bruised between car and door. Arm cut off by railroad car. He fell under it. Outside.
May	6	Andrew Slevanski, .....	Russian, .....	Driver, .....	29	S. Prospect shaft, .....	Body painfully bruised by rock sliding on him.
	17	Stanley Stock, .....	Polish, .....	Driver, .....	18	S. Prospect shaft, .....	Face and hands burned by gas. Rock fell and broke brattice.
	20	Joseph Rome, .....	Italian, .....	Laborer, .....	17	S. Ladin breaker, .....	Ribs broken between car and rib. Seriously squeezed between car and pillar.
	21	Harry Stout, .....	American, .....	Driver boss, .....	28	M. Midvale slope, .....	Leg broken by car while spragging it. Collar bone broken by falling in front of car.
	27	Joseph Swinchlusk, .....	Lithuanian, .....	Miner, .....	38	S. Henry Red Ash shaft, .....	Body broken by car. Tried to jump on and fell.
	29	Fremino Boracco, .....	Italian, .....	Laborer, .....	27	M. Fernwood slope, .....	Thigh broken by air locomotive. Head and body cut by fall of top rock.
June	2	David Harris, .....	American, .....	Bratticeman, .....	21	M. Prospect shaft, .....	Leg broken. Struck by flying coal from a blast.
	7	Anthony Fautisky, .....	Austrian, .....	Runner, .....	20	S. No. 14 shaft, .....	Head cut and bruised by coal flying from blast.
	10	Jerry King, .....	American, .....	Headman, .....	21	S. Baltimore No. 5, .....	Face and hands burned by gas. Leg broken by rock falling on him. Leg broken by premature blast. Shoulder and leg bruised by empty car falling on him. Outside.
	12	Wm. Ford, .....	Italian, .....	Runner, .....	24	S. No. 14 shaft, .....	Arm broken by falling on rail.
	16	Wm. Surra, .....	Slavonian, .....	Brakeman, .....	17	S. No. 14 shaft, .....	Face and hands severely burned by gas. Hand crushed between car bumpers.
	26	Joseph Stupak, .....	Slavonian, .....	Miner, .....	30	M. Thomas shaft, .....	Hip bruised between car and door prop. Leg broken by fall of top rock.
	27	John Kootza, .....	Polish, .....	Miner, .....	38	M. Heidelberg shaft, .....	Leg broken by bumper of car. Three fingers cut off between pulley and chain.
	28	Bazel Zukofski, .....	Russian, .....	Laborer, .....	32	S. Prospect shaft, .....	Leg broken by fall of rider coal.
July	6	Thomas Luxon, .....	English, .....	Rock miner, .....	44	M. No. 11 shaft, .....	
	7	Owen Gardner, .....	American, .....	Miner, .....	45	M. No. 8 shaft, .....	
	24	Jam's Ladner, .....	Welsh, .....	Miner, .....	59	M. Laurel Run, .....	
	31	Peter Rose, .....	Italian, .....	Carpenter, .....	47	M. Fernwood, .....	
	31	Martin Kearney, .....	American, .....	Trackman, .....	27	S. No. 14 shaft, .....	
	31	John Boseck, .....	Polish, .....	Miner, .....	28	S. Hillman slope, .....	
	16	Joseph Savage, .....	American, .....	Trackman, .....	17	S. Prospect shaft, .....	
Aug.	22	Charles Mitchell, .....	Polish, .....	Driver, .....	23	S. Hillman slope, .....	
	23	John Zilusky, .....	Polish, .....	Miner, .....	28	M. Mineral Spring, .....	
	25	Dominic Carden, .....	American, .....	Driver, .....	16	S. Fernwood slope, .....	
	25	James McNulty, .....	American, .....	Miner, .....	34	M. No. 14 tunnel, .....	
Sept.	5	Martin Lavan, .....	Irish, .....	Laborer, .....	40	S. No. 8 shaft, .....	

Luzerne, ...



TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Sept. 6	Joseph Nastro, .....	Italian, .....	Miner, .....	43	M.	No. 5 shaft, .....		Both legs broken by flying coal from blast.
11	Martin Quinn, .....	Irish, .....	Company laborer, .....	50	M.	No. 14 tunnel, .....		Arm and back bruised by being struck by door.
14	Fred. Pyatt, .....	English, .....	Engineer, .....	53	M.	Laurel Run, .....		Ankle broken by fall on rail.
15	Frank Marston, .....	Italian, .....	Laborer, .....	28	M.	Butler Marey, .....		Leg broken by fall of top rock.
16	Andrew Bronia, .....	Slavonian, .....	Laborer, .....	20	S.	Mineral Spring shaft, .....		Hip dislocated by a piece of falling rock.
27	Charles Sacuski, .....	Lithuanian, .....	Miner, .....	41	M.	No. 5 shaft, .....		Arm broken by mine car. Outside.
28	John Mills, .....	American, .....	Company laborer, .....	22	M.	Consolidated, .....		Pelvis bone broken by falling timber mine cars.
29	William Bonner, .....	American, .....	Machinist, .....	45	M.	No. 14, .....		Foot crushed while unloading machine from car. Outside.
Oct. 2	John Verperla, .....	Polish, .....	Miner, .....	44	M.	Thomas shaft, .....		Hip cut and bruised by coal from a blast.
4	Andrew Haggerty, .....	Irish, .....	Miner, .....	46	S.	No. 13 shaft, .....		Pelvis bone broken by a fall of rock.
7	Peter Gerrity, .....	Irish, .....	Miner, .....	35	S.	No. 1 shaft, .....		Arm broken and hip bruised by fall of rock.
13	Frank Peroni, .....	Italian, .....	Miner, .....	42	M.	No. 5 shaft, .....	Luzerne, ...	Back and hands burned by gas. Ignited a feeder in his breast.
14	Charles Sucko, .....	German, .....	Miner, .....	42	M.	Midvale slope, .....		Leg broken by a rush of culm down.
19	Edward Campbell, .....	American, .....	Runner, .....	23	S.	Prospect shaft, .....		Kicked by a mule in the abdomen.
27	Patrick Fenerty, .....	American, .....	Runner, .....	29	S.	No. 6 shaft, .....		Fingers broken between car bumpers.
30	Rinaldo D. English, .....	Italian, .....	Laborer, .....	23	S.	No. 14 shaft, .....		Leg broken by fall of rock.
31	Anthony Perkaske, .....	Russian, .....	Laborer, .....	23	S.	Pine Ridge shaft, .....		Leg broken and back bruised by fall of rock.
31	John Chesby, .....	English, .....	Miner, .....	42	M.	Mineral Springs, .....		Burned about face and hands by an explosion of gas while cleaning up a fall of rock.
31	Malcom Kennedy, .....	Scotch, .....	Mason, .....	33	S.	Mineral Springs, .....		Burned by an explosion of gas while driving by an old abandoned breast.
31	Andrew Mansok, .....	Slavonian, .....	Miner, .....	38	M.	Wyoming shaft, .....		Hips bruised by car falling over on him.
Nov. 2	James Downey, .....	Polish, .....	Laborer, .....	34	S.	Wyoming shaft, .....		Both legs and arm broken by fall from tressling. Outside.
5	J. L. Randall, .....	American, .....	Trackman, .....	20	S.	No. 14 shaft, .....		
Dec. 5	J. L. Randall, .....	American, .....	Outside boss, .....	42	M.	Consolidated breaker, .....		



Dec.	7	Roy Clark, .....	American, .....	Machinist, ....	19	S.	No. 14, .....		Two fingers cut off by buzz saw in shop. Outside.
	12	Jerry Murray, .....	Irish, .....	Dumper, .....	18	S.	Henry, .....		Arm broken by falling through trestle at breaker. Outside.
	14	Frank Chenski, .....	Lithuanian, .....	Miner, .....	23	S.	No. 5 shaft, .....		Face and hands burned by powder.
	15	Robert Howe, .....	English, .....	Driver, .....	21	M.	Baltimore No. 5, .....		Leg broken between car and door.
	16	Joseph Polenskey, .....	Polish, .....	Laborer, .....	25	S.	No. 14 tunnel, .....		Painfully bruised by fall of rock.
	21	Stephen Verner, .....	Polish, .....	Miner, .....	34	S.	Ladin, .....		Body bruised by falling timber. Wind blew trestle down. Outside.
	26	Michael Zavacky, .....	Slavonian, .....	Miner, .....	45	M.	Baltimore No. 5, ..		Wrist broken by car.

## FATAL ACCIDENTS

## By Falls of Coal, Slate and Roof

Adam Seader, miner, in Wyoming shaft, Lehigh Valley Coal Company, was instantly killed by a fall of rock, January 5. After returning from firing a blast he commenced to work out the loose coal before he examined his roof, when a large piece of rock and rider coal fell on him.

John Slopka, laborer, in Pine Ridge shaft, Hudson Coal Company, was instantly killed January 6, by a fall of top rock in the gangway caused by slips running through the rock unseen until it fell.

Tony Orelick, miner's laborer, was instantly killed in the Laffin shaft, Hudson Coal Company, January 6, by a large piece of rock falling on him in the shape of a saddle.

Angelo Fetrania, miner, was fatally injured in No. 14 shaft, Pennsylvania Coal Company, February 18. He had returned to face of breast after firing a blast which knocked out two props. While examining in the place he was caught by a fall of roof. He died same day.

John Kozowski, miner, was instantly killed in the Consolidated shaft, Hillside Coal and Iron Company, February 20. While in the act of pulling down a piece of rock four inches in thickness at face of breast, the pitch being 30 degrees, it fell on him.

James Bradigan, miner, in No. 14 tunnel, Pennsylvania Coal Company, was fatally injured March 1, by a fall of rock from the rib, as he was walking up to the face of breast with his drilling machine. He died after being taken to his home.

Thomas McNulty, miner's laborer, in No. 11 shaft, Pennsylvania Coal Company, was fatally injured April 3. Died April 20, in Pittston Hospital. The miner had fired a blast that discharged two props, and the laborer went up to the face when the roof fell on him.

Patrick Hughes, miner, was instantly killed April 10, in No. 14 shaft, Pennsylvania Coal Company, by a fall of rock. While helping his laborer to load a car with coal, a large piece of rock cut off by slips fell on him.

William Spndis, miner, was fatally injured in No. 10 shaft, Pennsylvania Coal Company, May 15. He was working in a pitching breast and in returning from firing a blast a large piece of top coal fell and rolled down on him, fracturing his skull. He died same day.

Stanley Mofeski, miner, was fatally injured in No. 5 shaft, Pennsylvania Coal Company, May 19, by fall of rider coal, after returning to face of his breast from firing a blast. Died same day.

Joseph Grilaoski, miner's laborer, in No. 4 shaft, Pennsylvania Coal Company, was instantly killed May 29, by fall of rock at face of breast in Checker vein.

Jacob Chere, miner, in Henry Red Ash shaft, Lehigh Valley Coal Company, was instantly killed June 6. After returning to the face from firing two shots and preparing the third blast, a large piece of top coal fell on him, which had been undermined by the previous blasts.

John Fris, miner, in Hillman slope, Lehigh Valley Coal Company, was instantly killed June 13, at face of his breast by the middle

rock, which he had undermined five or six feet. He had been told by the fire-boss to take it down before he did any work.

Scot Carkhuff, company laborer, in No. 1 Red Ash shaft, Lehigh Valley Coal Company, was fatally injured June 13, by fall of top rock while engaged in loading up refuse along the gangway road. He died June 15.

John Frank, miner's laborer, in Butler Checker vein slope, Hill-side Coal and Iron Company, was instantly killed on June 19, at face of his breast by fall of rock caused by the rock running to a feather edge all around it.

John E. Burke, miner, in No. 14 tunnel, Pennsylvania Coal Company, was fatally injured June 23, by fall of top rock. He had fired a blast in this rock to bring it down, but it did not come, and he prepared to drill another hole when it fell and caught him. He died after being taken to his home same day.

Daniel Giabbarresi, miner's laborer, in No. 8 shaft, Pennsylvania Coal Company, was instantly killed July 20, at face of breast, by a fall of rock while standing on bottom bench of coal shoveling.

Carlo Corsorzo, miner's laborer, in No. 14 shaft Checker vein, Pennsylvania Coal Company, was instantly killed August 2, while walking along the gangway road to his work in the morning. The piece of rock was only about 150 pounds in weight and in shape of a bell.

Lewis Vesoskie, miner, in No. 14 tunnel, Pennsylvania Coal Company, was instantly killed August 30. While taking out the pillars in the top lift of the Baltimore vein, he told his laborer to listen as he thought he heard the roof working. He then went up along the pillar to investigate when a large piece of roof fell on him.

John Timkovitch and John Tutanto, miner's laborers, in Henry Red Ash shaft, Lehigh Valley Coal Company, were instantly killed September 2, while engaged in loading a car with coal at face of breast. The miner had just left the face to make up a charge of powder, when a slab of rock fell on both laborers.

Anthony Chichonok, miner, in Ridgewood slope, Traders Coal Company, was instantly killed September 6, by a fall of coal and rock at the face of his breast. He should have taken it down.

Louis Hoshila, miner's laborer, in No. 14 shaft, Pennsylvania Coal Company, was instantly killed September 13, by a fall of rock at the face of his breast. The miner told him to get back as the roof was working, which it appears he did, but he returned to the face for some cause not known and was caught by falling rock.

Adam Telinski, miner, in No. 14 shaft, Pennsylvania Coal Company, was fatally injured September 30. While throwing back rock in the gob at the face of his breast a slab of rider coal and rock fell on him. He died next day in the Hospital.

Casper Sdaja, miner's laborer, in Baltimore No. 5 shaft, Delaware and Hudson Company, was instantly killed October 4, by a fall of rock. Hearing the roof working, he started back from the face and was caught by the rock.

William Reese, miner's laborer, in Mineral Springs, Red Ash shaft, Lehigh Valley Coal Company, was instantly killed October 17. He was working on night-shift when a piece of rock fell on him.

John Shuta, miner's laborer, in Hillman slope, Lehigh Valley Coal Company, was fatally injured by a fall of rock and died November

7, in City Hospital. While helping his miner to drill a hole in face of his breast a large piece of fire clay rock fell on him.

Joseph Buchak, miner, and Michael Zinch, laborer, in Mineral Spring, Red Ash shaft, Lehigh Valley Coal Company, were instantly killed November 21, by a fall of rock. They were driving a gangway, and in the morning about 7.20 were in the act of tamping a hole when a large piece of rock fell from the roof on them.

Simon Struka, miner, in the Prospect shaft, Lehigh Valley Coal Company, was instantly killed December 5, at the face of his breast by a fall of roof rock. The rock was cut by slips or seams on three sides which caused it to fall.

Frank Starne, miner's laborer, in No. 14 shaft, Pennsylvania Coal Company, was fatally injured December 6, by a fall of rock at face of his breast. The fire-boss called the attention of the miner to this rock and told him to take it down, which it appears he neglected to do.

William Rutledge, miner's laborer, in No. 14 tunnel, Pennsylvania Coal Company, was instantly killed December 16, by fall of bony coal in the face of airway. This bony coal is kept up for roof, as the rock above is bad generally. In this instance the bony coal was very slippery, causing it to fall.

George Mergo, miner's laborer, in the Wyoming shaft, Lehigh Valley Coal Company, was instantly killed December 13, by fall of roof rock at face of breast. Andrew Barella, miner, was told by the fire-boss to take this rock down, but neglected to do so.

Andrew Barilla, miner, in Wyoming shaft, Lehigh Valley Coal Company, was instantly killed December 28, by fall of rock at face of his breast. The piece of rock that fell was cut off all around it by slips.

#### By Mine Cars

Frank Supavitch, driver, was killed April 19 in the Henry shaft, Lehigh Valley Coal Company, while driving a loaded trip of cars to a passing branch. He stooped to unhitch the stretcher and fell in front of cars.

Michael Kenny, company laborer, outside, at Pine Ridge, Hudson Coal Company, was instantly killed June 20, while unloading a railroad car of condemned coal above the breaker. The car loaders were running an empty car under the breaker to load it, when it ran away on account of bad brakes, and struck the car Kenney was in, knocking him through the door in the bottom of the car and killing him.

George Rowe, miner, and Steve Bednar, laborer, were instantly killed in the Baltimore No. 5 shaft, Delaware and Hudson Company, July 3, by a water car becoming uncoupled on slope and running to the face where the men were at work. The slope runner failed to put the head on the track after he came up with his trip.

Thomas Mitchell, slope footman, in Heidelberg No. 2 Marcy slope, Lehigh Valley Coal Company, was instantly killed August 1, by an empty trip of cars that jumped the track.

Charles Caruth, outside carpenter, at the Henry colliery, Lehigh Valley Coal Company, was instantly killed September 29, while uncoupling cars from the locomotive by falling on the track in front of a car.

Carmani Antone, car runner, inside, Clarence slope, Clarence Coal Company, was instantly killed December 15. While standing on the gangway at foot of back branch he called to the miners on the main road to draw the blocks and let the car come. The miners on the back branch thought he was calling to them and let their car go which caught him between two cars.

#### By Gas

Thomas F. Kerby, fire-boss, in No. 14 shaft, Pennsylvania Coal Company, was fatally burned by gas June 5, and died next day at his home. He went into a breast that had been idle to make an examination. He got on top of the bottom bench and when testing the gas his light went out. He struck a match to relight his lamp and ignited the gas.

John Kelley, rockman, in No. 11 shaft, Pennsylvania Coal Company, was fatally burned by gas July 6, and died July 10. After firing a cut in the rock tunnel where he was working, he returned to examine what the blast had done and ignited the gas the cut had liberated.

Stanley Zelensky, brattice man, in the Midvale slope, Lehigh Valley Coal Company, was instantly killed by an explosion of gas, August 3, in the bottom lift of the Hillman vein in the abandoned workings. He was sent to build a door, and to get the boards he entered the old workings where a long brattice was standing and came in contact with gas. Having an open light it ignited the gas. He was ordered by the fire-bosses in the morning to get his boards in the lift he was going to build the door in.

James Killew, miner, in No. 6 shaft, Pennsylvania Coal Company, was fatally burned by gas August 19, while engaged in driving a cross cut to airway. He was given a safety lamp to examine the place, but after firing a blast he sat down at his box for over a half hour and then returned to make an examination with his open light and ignited the gas. He died August 27.

George Usvick, miner, in No. 14 shaft, Pennsylvania Coal Company, was fatally burned October 5, and died in City Hospital, October 11. This miner's breast was idle for a few days on account of lines being put up and fire-boss told him not to go in again until he was notified. He did, however, and ignited the gas with his open light.

#### By Powder and Dynamite

John Moroghoni, miner, in Laffin shaft, Hudson Coal Company, was fatally burned by powder March 10, and died same day. While making up a charge of powder with his lamp on his head a spark fell into the powder keg and exploded it.

#### By Blasts, Etc.

Anthony Karpinski, miner, in Prospect shaft, Lehigh Valley Coal Company, was killed January 28, while trying to fire a blast which had missed five times. He charged the hole, in which he had a cap, with black powder and dynamite.



Anthony Zereewewisk, miner, in Consolidated slope, Hillside Coal and Iron Company, was instantly killed May 5, while driving a cross-cut through to the adjoining breast. The miner in the adjoining breast fired a blast that blew through and caught Zereewewisk.

Anthony Barth, miner, in No. 9 shaft, Pennsylvania Coal Company, was fatally injured August 19, and died same day. He thought the fuse had not ignited and attempted to light it. The blast exploded and fatally injured him.

Andrew Popushak, miner's laborer, in Lattin shaft, Hudson Coal Company, was fatally injured September 6, and died September 9. His miner was going to fire a blast on the pillar and sent him to give warning to the men in the adjoining breast. He did so, but stood in front of the hole and was struck by the flying coal.

George Zelonis, miner, in Fernwood slope, Hillside Coal and Iron Company, was fatally injured November 24, and died December 16. While tamping a hole in coal at face of breast the charge exploded on him.

John Trolley, miner, in Henry shaft, Lehigh Valley Coal Company, was fatally injured December 5, and died December 10. When about to fire a blast charged with sticks of dynamite and twelve inches of black powder, he retired to a safe place until the powder exploded, but returned before the dynamite exploded and was caught in the blast.

#### By Falling Down Shafts, Etc.

Frank Smith, miner, in No. 14 shaft, Pennsylvania Coal Company, was instantly killed September 27, by stepping from the cage at the surface landing and falling into the shaft. He evidently thought he was at the bottom and stepped off.

Michael Pavolski, miner's laborer, Lattin shaft, Hudson Coal Company, was instantly killed December 6 by falling from the cage while coming up the shaft with eight other men. He had a pick on his shoulder that caught under a buntou in the shaft dragging him from the cage.

#### By Machinery

Ralph Sodon, slate picker, Henry washery, Lehigh Valley Coal Company, was instantly killed January 13, by falling on revolving screen in breaker. This boy left his place of employment and took a short cut to go to the dump and in doing so climbed over the fence around the screens and in some manner fell on the screen.

David Jefferies, bell boy, Avoca washery, Avoca Coal Company, Limited, was instantly killed February 27, by falling into a pair of pony rolls. He got into the chute where the slate and culm were conducted into the rolls and in some manner slipped into them. The rolls were covered and why he went near them is not known.

William Vaull, slate boss, in Lattin breaker, Hudson Coal Company, was instantly killed June 21. The rope that operated the patent slate pickers in the picking room of the breaker came off the pulley, and when the slate boss picked it up to fasten it to a beam overhead his foot caught in it and he was drawn around the pulley shaft.



### By Suffocation

Anthony McAndrew, slate picker, No. 10 breaker, Pennsylvania Coal Company, was suffocated November 15, by being drawn down through the buckwheat coal chute. About noon he left his place of occupation and opened a door leading to where the coal goes into the pocket. The loaders under the breaker were drawing coal out of the pocket at the time and he was drawn down.

### By Mules

James Shields, team driver, in Clarence slope, Clarence Coal Company, was fatally injured October 12, by a kick from one of the mules he was driving. He died November 6.

### Miscellaneous Causes, Outside

James Ross, engineer, at No. 14 shaft, Pennsylvania Coal Company, was fatally burned by steam January 30, and died same day at his home. He was on the night shift, and about 3.12 A. M. the fire-bosses came to him and told him they were ready to go down the shaft. He opened the throttle valve and when the steam entered the cylinders the heads of both cylinders blew off, wrecking the engine room and enveloping him in steam. The cylinders were evidently filled with water.

Frank Youckavige, driver, on the rock dump, Delaware colliery, outside, Delaware and Hudson Company, Was killed October 3, by falling from the back of a mule as he went through the street in Hudson after working hours. I did not consider this a mining accident and did not charge it as such in my report.

## CONDITION OF COLLIERIES

### PENNSYLVANIA COAL COMPANY

Nos. 1, 8, 9, 10, 4, 7 and Hoyte.—Condition good as to safety, drainage and ventilation.

Nos. 11, 5 and 6.—Condition safe, drainage good, ventilation fair.

No. 14 shaft and No. 14 tunnel.—Condition good as to safety, drainage and ventilation.

### LEHIGH VALLEY COAL COMPANY

Prospect and Oakwood.—Condition good as to safety, drainage and ventilation.

Midvale, Hillman and Henry.—Condition as to safety good; drainage and ventilation fair.

Wyoming and Five Foot slope.—Condition good as to safety, drainage and ventilation.

Heidelberg slopes.—Condition as to safety good, drainage fair, ventilation good.

Heidelberg shaft.—Condition as to safety good, drainage fair, ventilation fair.

Mineral Spring Colliery.—Condition as to safety good, drainage fair, ventilation fair.

## HILLSIDE COAL AND IRON COMPANY

Consolidated slope.—Condition as to safety good, drainage fair, ventilation fair.

Consolidated shaft.—Condition good as to safety, drainage and ventilation.

Butler, Checker and Marcy slopes and Thomas shaft.—Condition good as to safety, drainage and ventilation.

Fernwood Slope and Tunnel.—Condition as to safety good; drainage and ventilation fair.

## DELAWARE AND HUDSON COMPANY

Baltimore tunnel.—Condition good, ventilation and drainage good.

Baltimore No. 2 shaft.—Condition, drainage and ventilation good.

Baltimore No. 5.—Condition, drainage and ventilation good.

## HUDSON COAL COMPANY

Pine Ridge shaft.—Condition fair as to safety, drainage and ventilation.

Laurel Run.—Condition as to safety good, drainage and ventilation fair.

Latlin shaft and tunnel.—Condition as to safety good, drainage and ventilation fair.

## TRADERS' COAL COMPANY

Ridgewood slope.—Condition as to safety good, drainage and ventilation fair.

## AVOCA COAL COMPANY, LIMITED

Avoca shaft.—Condition as to safety good, drainage fair, ventilation bad.

## CLARENCE COAL COMPANY

Clarence slopes.—Condition as to safety good, drainage and ventilation fair.

## IMPROVEMENTS

## PENNSYLVANIA COAL COMPANY

Pennsylvania.—At No. 10 Colliery a power plant for electric haulage and lighting has been installed; a McEwen 20x18 inches centre crank engine directly connected to 215 K. W. compound generator of the general electric type; four  $7\frac{1}{2}$  ton electric mine locomotives to be used in the Marcy and Red Ash veins.

A tunnel was driven from No. 10 Marcy to the Pittston vein in No. 9 shaft to transport the coal from No. 9 to No. 10 shaft; a tunnel was also driven from No. 9 Red Ash to No. 10 Red Ash vein for transportation.

## LEHIGH VALLEY COAL COMPANY

Mineral Spring Colliery.—Surface Coal road 4000 feet long from Coal Brook slope to tunnel No. 34.

Tunnel No. 34 driven 200 feet from surface to Red Ash vein.

Nos. 29, 36 and 37 tunnels driven from inside slope Coal Brook through fault or overturn to main south dip in Red Ash vein.

Tunnel No. 35 being driven through same fault on upper lift.

No. 33 Tunnel driven through over turn basin in Mineral Spring shaft district, Red Ash vein.

Inside slope extended in Red Ash 600 feet.

Rope hole completed to Red Ash vein.

300 H. P. return tubular boiler installed at Coal Brook.

Breaker has been equipped with mechanical pickers.

William Crusher, new bore holes and pipe lines extended, taking care of all the silt and refuse from breaker.

New 20 foot double intake Guibal fan driven by Corliss engine.

Brick house.

Henry Colliery.—300 H. P. B. and W. water tube boiler installed.

New 25 foot double intake fan driven by Corliss engine.

Concrete air shaft completed in Five Foot vein.

New 25 foot double intake fan driven by Corliss engine, brick house, completed in Red Ash shaft.

New 16x24 hoist engine and brick house completed and Five Foot slope reopened.

New second outlet completed in Borroughs tract, Five Foot vein.

Two tunnels with second outlet completed in Red Ash shaft district.

New inside barn completed in Red Ash.

New brick overcast, empty car foot turnout, column and steam lines installed in Red Ash shaft.

Rock slope completed in Wyoming shaft district, from lower Baltimore to Skidmore vein.

Rock slope from Baltimore to Skidmore vein completed in Henry shaft district.

Nos. 21, 22 and 23 subslopes started in Red Ash district.

Prospect Colliery.—300 H. P. B. and W. water tube boiler added to the plant, brick house.

New inside barn Red Ash.

New electric transportation outfit has been installed consisting of one 175 K. W. 250 volts generator, directly connected to 20x18 McEwen engine, 225 R. P. M.

Two electric locomotives installed in Red Ash and Baltimore.

William crusher and extension of silt lines.

Additional mechanical pickers in breaker.

Additional fire emergency pump 16x10x16.

Laflin.—No. 4 plane, bottom split Red Ash, extended 900 feet in rock and coal.

No. 3. plane, bottom split Red Ash, extended 230 feet.

Pine Ridge.—No. 31 tunnel driven from Rock to Hillman 240 feet.

No. 12 slope Rock vein extended 650 feet and pair of 12x16 inch engines installed.

Pair of 8x12 inch engines installed for sinking No. 13 slope in Hillman vein.

Pair of 8x12 inch engines installed for sinking No. 14 Kidney slope.

Laurel Run.—No. 11 tunnel extended 750 feet toward Red Ash vein. Haulage road toward Pine Ridge driven 950 feet in Checker vein. New 28 foot Guibal fan installed, but as yet not in commission. The laurel Run breaker was abandoned August 1, and all coal from this colliery prepared at Pine Ridge breaker.

Baltimore No. 2.—No. 7 slope extended 950 feet Red Ash vein.

No. 8 slope extended 650 feet Red Ash vein to limit. The haulage road for transportation of No. 2 coal to Baltimore No. 5 shaft has been completed and equipped with electric motor. The haulage is 3,400 feet long. 10x12 inch engines installed on No. 4 slope Baltimore vein.

#### DELAWARE AND HUDSON COMPANY

Baltimore Tunnel.—No. 6 slope Red Ash vein extended 250 feet. New breaker at Baltimore tunnel equipped with machinery using electricity as power. Began operation December 1.

Baltimore No. 5.—No. 1 slope extended 1,600 feet. No. 2 tunnel driven 175 feet to bore hole for culm flushing. New electric power plant installed to furnish power for the Baltimore tunnel breaker and other uses as required.

#### HILLSIDE COAL AND IRON COMPANY

Butler Colliery, Outside.—New office was built 30x30x21 and new barn for stock, 32x110x21—6.

Thomas Shaft, Butler Colliery.—Rock plane 250 feet long area 7x12 feet from bottom Red Ash to top split of Red Ash. This plane will be continued in the top split as a steam plane, and will also work the coal in the bottom split as a slope below the shaft level.

The fan at Chapman shaft has been replaced with another and larger fan, 4x16 feet, which is being driven with an electrical motor.

Marcy or Butler Slope, Butler Colliery.—The main slope has been extended a distance of 750 feet further toward the basin in the Marcy vein.

Checker Slope in what is known as the Checker vein, Butler colliery. At a point 950 feet from head of slope, a rock fault was encountered, and after proving ground by bore holes, it was decided to drive through the fault, a distance of 550 feet to strike the coal on the other side. This has been completed and the total depth of the slope is now about 1,800 feet.

Fernwood Colliery, Outside.—Blacksmith, carpenter and machine shop erected, 24x68x20. New supply house, 18x18x16, with fire-proof oil house addition, tanks and pumps for handling the oil. A new barn for stock, 32x112x19-6, has been erected. The fan and fan engine house at No. 1 slope was torn down and rebuilt, and the fan engine changed, and is now in first class condition.

Consolidated Slope.—An additional gravity plane, 7x12x300 long has been driven in Stark vein. A duplex plunger pump, 20x10x36 has been installed for the purpose of furnishing water to the washery.

Consolidated Colliery, Outside.—Boiler house at breaker enlarged and two 150 H. P. return tubular boilers installed.

What is known as the annex to the breaker has been changed and converted into a washery for the purpose of preparing the small sizes from the breaker and also washing out what is known as the "Consolidated culm dump."

#### Mine Foremen's Examinations

The examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held on the 8th and 9th of May, at Pittston.

The board of examiners was Hugh McDonald, Mine Inspector; James J. McCarty, Superintendent; John J. Morahan and Evan R. Morgan, miners.

The following applicants were recommended for certificates:

#### Mine Foremen

John J. McNulty, John H. Williams, William F. Golden, Edward J. Keating, Francis J. Dohrer and David P. Williams, of Pittston; Daniel Halpin, Cornelius G. Bumbee and Thomas Hooper, of Wyoming; Frank Doran, William B. Mitchell, George F. Carey, Daniel Thomas, Joseph Llewellyn, Martin McGowan and James J. Merrick, of Avoca; James W. Page, Scranton, John J. Cawley, David McDonald, Luzerne; James Gobin, Inkerman; William White, Kingston; Frank Kettle, Plymouth; John H. Farrell, Duryea.

#### Assistant Mine Foremen.

William C. Fairclough, Daniel C. Thomas, Joseph P. Gates, William Fowler, Dennis Rabbitt, Thomas Walsh, John Kelley, Pittston; John M. Thomas, Dupont; Lewis S. Smith, Plainsville; Thomas H. Thomas, Plymouth; Richard W. Lavelle, Miners Mills; Patrick MeBonnell, Forty Fort; Anthony J. Lokushek, Hudson; John S. Williams, Luzerne.





## Sixth District

LUZERNE AND SULLIVAN COUNTIES

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Kingston, Pa., March 1, 1906.

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

Sir: I have the honor of herewith transmitting to you my annual report as Inspector of Mines for the Sixth Anthracite District for the year ending December 31, 1905.

The quantity of coal produced during the year was 4,630,053 tons. The number of fatal accidents was 43 inside and 2 outside. The report contains the statistical information as required by law and a tabulated description of the fatal and non-fatal accidents that occurred during the year, with other useful information.

Respectfully submitted,

P. M. BOYLE,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	24
Number of mines, .....	40
Number of mines in operation, .....	40
Number of tons of coal shipped to market, .....	4,125,912
Number of tons used at mines for steam and heat, .....	409,906
Number of tons sold to local trade and used by employees, .....	94,235
Number of tons produced, .....	4,630,053
Number of tons produced by electrical machines (Undercutting), .....	156,890
Number of persons employed inside of mines, .....	8,285
Number of persons employed outside, .....	3,151
Number of fatal accidents inside of mines, .....	43
Number of fatal accidents outside, .....	2
Number of non-fatal accidents inside of mines, .....	99
Number of non-fatal accidents outside, .....	13
Number of tons of coal produced per fatal accident inside, .....	107,676
Number of persons employed per fatal accident inside, ..	193
Number of persons employed per fatal accident outside, ..	1,576
Number of persons employed per non-fatal accident inside, .....	84
Number of persons employed per non-fatal accident outside, .....	242
Number of wives made widows, .....	22
Number of children orphaned, .....	36
Number of steam locomotives used inside of mines, ....	2
Number of steam locomotives used outside, .....	16
Number of compressed air locomotives used inside, ...	3
Number of electric motors used inside, .....	17
Number of fans in use, .....	38
Number of gaseous mines in operation, .....	23
Number of non-gaseous mines in operation, .....	17
Number of new mines opened, .....	1
Number of old mines abandoned, .....	2

TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Lehigh Valley Coal Company, .....	1,116,775
Temple Iron Company, .....	830,031
Pennsylvania Coal Company, .....	626,737
Kingston Coal Company, .....	516,247
Clear Spring Coal Company, .....	344,260
Delaware, Lackawanna and Western Railroad Company,	167,784
Stevens Coal Company, .....	167,546
Connell Anthracite Coal Company, .....	156,890
Raub Coal Company, .....	136,955
People's Bank of Wilkes-Barre, Receiver (Black Diamond)	133,170
Delaware and Hudson Company, .....	114,481
Northern Anthracite Coal Company, .....	109,421
W. G. Payne Coal Company, .....	103,931
Robertson and Law Coal Company, .....	61,995
Reliance Coal Company, .....	25,289
Troy Coal Company, .....	7,623
W. B. Gunton Coal Company, .....	6,900
Randall and Shaad Coal Company, .....	4,018
Total, .....	<u><u>4,630,053</u></u>

## Production by Counties

Luzerne, .....	4,352,824
Sullivan, .....	277,229
Total, .....	<u><u>4,630,053</u></u>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	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.,	7	2	9	26	5	31	159,539	42,953	1,617	673	2,290	231	336	62	135
Temple Iron Coal Co.,	12	1	13	33	1	34	69,169	25,152	1,735	529	2,264	175	175	73	135
Pennsylvania Coal Co.,	2	1	3	6	3	9	313,369	313,369	1,197	357	1,554	599	599	599	119
Kingsston Coal Co.,	4	1	5	7	2	9	129,062	73,749	841	335	1,176	210	210	121	168
Clear Spring Coal Co.,	9	1	10	3	1	4	38,251	114,753	630	181	811	70	70	210	168
Delaware, Lackawanna and Western R. R. Co.,	1	1	2	5	1	6	167,784	33,557	358	130	488	358	358	72	165
Stevens' Coal Co.,	1	1	2	3	1	4	167,546	55,849	216	105	321	26	26	72	165
Connell Anthracite Coal Co.,	2	1	3	3	1	4	78,445	52,297	176	129	305	88	88	59	135
Raub Coal Co.,	1	1	2	3	1	4	136,955	68,477	310	156	466	310	310	155	156
Black Diamond, People's Bank, Receiver,	2	1	3	2	1	3	66,885	44,390	224	121	345	172	172	75	121
Delaware and Hudson Co.,	1	1	2	5	1	6	114,481	22,896	289	114	403	289	289	58	121
W. C. Rhyne Anthracite Coal Co.,	1	1	2	1	1	2	108,421	29,896	127	62	189	127	127	127	62
W. C. Rhyne Coal Co.,	1	1	2	5	1	6	29,786	264	264	101	365	115	115	53	127
Robertson and Law Coal Co.,	1	1	2	1	1	2	61,995	7,623	93	57	150	115	115	57	172
Troy Coal Co.,	1	1	2	1	1	2	7,623	93	93	56	149	93	93	53	149
Miscellaneous Companies,	1	1	2	1	1	2	107,676	46,768	8,285	3,151	11,436	193	1,576	81	242
Totals and averages for district,	43	2	45	99	13	112	107,676	46,768	8,285	3,151	11,436	193	1,576	81	242

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Total
Falls of coal, .....						1							1	2.33
Falls of roof, .....	3		2	1	1		1			3	1	4	15	34.88
Mine cars, .....	1	1	1	1	1			1	1				5	11.63
Explosions of gas and dust, .....			1		1	1					1	2	6	13.95
Explosions of powder and dynamite, .....	1												1	2.33
Premature blasts, .....	2			1	1								4	9.30
Falling into shafts, .....		1	7	1									9	20.93
Miscellaneous, .....						1			1				2	4.65
Totals, .....	6	1	11	3	4	3	1	1	2	3	2	6	43	100
Causes of Accidents Outside														
Machinery, .....		1	1										2	100
Totals, .....		1	1										2	100
Grand totals inside and outside, .....	6	2	12	3	4	3	1	1	2	3	2	6	45	100

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Total
Falls of coal, .....	2	3	2		1	2							12	12.12
Falls of slate, .....						1	1						1	1.01
Falls of roof, .....		1	2	1	1	3	3	2	1	2	1	3	19	19.19
Mine cars, .....	1	1	1	1	3	1	2	2	4	2	3	3	23	23.22
Explosions of gas and dust, .....	3	1	2						2		3	4	17	17.17
Explosions of powder and dynamite, .....			3		3	1					3		7	7.07
Premature blasts, .....		1			1		1	1			1		5	5.06
By mules, .....								1					3	3.03
Machinery, .....		1									1		2	2.02
Miscellaneous, .....			1	2	4		2		1	1			11	11.11
Totals, .....	6	8	10	4	15	14	8	4	8	5	9	8	89	100
Causes of Accidents Outside														
Cars, .....							2	2		1			5	38.50
Machinery, .....	1				1		1	2					5	38.50
Miscellaneous, .....			1	1	1	1							3	23.00
Totals, .....	1		1		2	1	3	2	2	1			13	100
Grand totals inside and outside, .....	7	8	11	4	17	15	11	6	10	6	9	8	112	100

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Total
	January	February	March	April	May	June	July	August	September	October	November	December	
<b>Inside</b>													
Miners, .....	5	1	9	1	3	2	1	1	1	1	1	4	28
Miners' laborers, .....	1	1	12	1	1	1	1	1	1	1	1	1	9
Drivers and runners, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Doorboys and helpers, .....	1	1	1	1	1	1	1	1	1	1	1	1	1
Company men, .....	1	1	1	1	1	1	1	1	1	1	1	1	2
Totals, .....	6	1	11	3	4	3	1	1	2	3	2	6	43
<b>Outside</b>													
Blacksmiths and carpenters, .....	1	1	1	1	1	1	1	1	1	1	1	1	1
Slatepickers (boys), .....	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....	1	1	1	1	1	1	1	1	1	1	1	1	2
Grand totals inside and outside, .....	6	2	12	3	4	3	1	1	2	3	2	6	45

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Total
	January	February	March	April	May	June	July	August	September	October	November	December	
<b>Inside</b>													
Fire bosses and assistants, .....	1	1	1	1	1	1	1	1	1	1	1	1	1
Miners, .....	4	5	4	1	1	6	3	5	3	3	2	3	41
Miners' laborers, .....	1	1	1	1	1	4	1	1	1	1	1	1	21
Drivers and runners, .....	1	1	1	1	1	2	1	1	1	1	1	1	18
Doorboys and helpers, .....	1	1	1	1	1	1	1	1	1	1	1	1	1
Company men, .....	1	1	1	1	1	1	1	1	1	1	1	1	9
All other employes, .....	1	1	1	1	1	1	1	1	1	1	1	1	12
Totals, .....	6	8	10	4	15	14	8	4	8	5	9	8	99
<b>Outside</b>													
Blacksmiths and carpenters, .....	1	1	1	1	1	1	1	1	1	1	1	1	1
Engineers and firemen, .....	1	1	1	1	1	1	1	1	1	1	1	1	1
Slatepickers (men), .....	1	1	1	1	1	1	1	1	1	1	1	1	1
All other employes, .....	1	1	1	1	1	1	1	1	1	1	1	1	9
Totals, .....	1	1	1	1	2	1	3	2	2	1	1	1	13
Grand totals inside and outside, .....	7	8	11	4	17	15	11	6	10	6	9	8	112



TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Total
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1			1	2	2						1	7
English, .....	1											1	2
Welsh, .....								1					2
Irish, .....		1							1				2
German, .....			1										1
Polish, .....	2	1	9	2	1				1	3	1		20
Hungarian, .....	1												1
Italian, .....			1			1					1	1	4
Lithuanian, .....			1		1							1	3
Austrian, .....							1						1
Russian, .....	1												1
Tyrolean, .....												1	1
Totals, .....	6	2	12	3	4	3	1	1	2	3	2	6	45

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Total
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	1	3	1	3	1	2	1	2	3	2	2	22
English, .....		1					1	1			1		3
Welsh, .....									1				2
Scotch, .....						1							1
Irish, .....	1		1		1	1			2			1	7
German, .....													5
Polish, .....	3	4	4		7	5	3		1	1	3	3	35
Hungarian, .....		1			1								2
Italian, .....			1	1	1			3					6
Slavonian, .....			1	1	2	3	4		1		1	1	14
Lithuanian, .....	1					1	1	1			2	1	10
Austrian, .....					1								1
Russian, .....	1					1		1					3
Hebrew, .....				1									1
Totals, .....	7	8	11	4	17	15	11	6	10	6	9	8	112

TABLE I.—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 person 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 Valley Coal Co.</b>																
Exeter Colliery—																
Big Cash, .....	Shaft, .....	Gasous, .....	2 fans, .....	20	6.8	5.10	76	2	Guibal, .....	Steam, .....	6	121,835	163,541	132,610	4.5	249
Pittston and Marcy, .....	Shaft, .....	Gasous, .....	Fan, .....	20	5.11	5.11	60	1.3	Guibal, .....	Steam, .....	2	84,400	96,300	153	574	
Knight and Checker, .....	Shaft, .....	Gasous, .....	Fan, .....	20	6.11	6.7	60	0.9	Guibal, .....	Steam, .....	3	93,900	108,800	132	575	
<b>Maltby Colliery—</b>																
Maltby, .....	Shaft, .....	Gasous, .....	2 fans, .....	25	8.11	8.10	73	3	Guibal, .....	Steam, .....	10	132,342	143,685	284	384	
Mountain tunnel, .....	Tunnel, .....	Non-gas, .....	Fan, .....	20	5.11	5.8	180	5	Guibal, .....	Steam, .....	3	41,785	454,490	56	570	
Four Foot, .....	Slope, .....	Non-gas, .....	Fan, .....	12	4.0	.....	82	2.5	Guibal, .....	Steam, .....	2	62,595	77,725	71	443	
<b>Seneca Colliery—</b>																
Twin, .....	Shaft, .....	Gasous, .....	Fan, .....	20	5.6	5.6	60	1.5	Guibal, .....	Steam, .....	2	31,220	34,840	70	381	
Coxey, .....	Shaft, .....	Gasous, .....	Fan, .....	20	6	6	60	1	Guibal, .....	Steam, .....	3	49,600	51,300	113	285	
Pittston, .....	Shaft, .....	Gasous, .....	Fan, .....	20	5	5.6	60	1	Guibal, .....	Steam, .....	1	32,000	32,940	25	716	
<b>Westmoreland Colliery—</b>																
Westmoreland, .....	Tunnel, .....	Non-gas, .....	Fan, .....	16	5	4.7	80	1.4	Guibal, .....	Steam, .....	4	115,000	138,000	128	468	
<b>Temple Iron Co.</b>																
Mt. Lookout, .....	Shaft, .....	Gasous, .....	2 fans, .....	20	6.5	5.0	86	2.5	Guibal, .....	Steam, .....	7	144,581	156,695	446	314	
Forty-Fort, .....	Shaft, .....	Gasous, .....	Fan, .....	20	5.0	4.5	70	1.8	Guibal, .....	Steam, .....	7	93,200	94,900	410	204	
				17	6.5	5.0	85	.....								
				17	4.5	3	90	.....								
Harry E., .....	Shaft, .....	Gasous, .....	2 fans, .....	20	6.5	5	90	.2	Guibal, .....	Steam, .....	7	143,000	144,150	398	332	
<b>Pennsylvania Coal Co.</b>																
Barnum Colliery—																
Barnum No. 2, .....	Shaft, .....	Gasous, .....	Fan, .....	20	6.6	5.0	60	.1	Guibal, .....	Steam, .....	4	85,420	92,400	193	464	
Barnum No. 3, .....	Shaft, .....	Gasous, .....	Fan, .....	15	4.9	3.9	67	.5	Guibal, .....	Steam, .....	5	93,700	94,100	254	332	

Central Colliery— No. 13, Laws, .....	Shaft,.....	Gaseous, Gaseous,	Fan,..... Fan,.....	20 20	6.6 6.6	5.0 5.0	60 60	.6 .1	Guibal,..... Guibal,.....	Steam,..... Steam,.....	3 5	78,000 85,100	64,800 76,640	89,040 112,140	105 234	664 325
	Kingsion Coal Co. No. 1, No. 4, .....	Shaft,..... Shaft,.....	Gaseous, Gaseous,	2 fans,..... 2 fans,.....	{ 12.4 26	3.7 5.0	3.7 5.0	140 86	1.3 2.1	Guibal,..... Guibal,.....	Steam,..... Steam,.....	7 7	130,450 93,969	113,930 84,677	14,556 112,445	34 277
Clear Spring Ccal Co. Clear Spring, .....		Shaft,.....	Gaseous,	2 fans,.....	{ 24 20	8 6	6 6	63 66	2.5 .8	Guibal,.....	Steam,.....	5	193,000	175,000	205,000	462
	Delaware, Lackawanna and Western Railroad Co. Petebone No. 1, .....	Shaft,..... Shaft,.....	Gaseous, Gaseous,	Fan,..... Fan,.....	22 33	6.2 10.1	6 9.1	120 52	1.7 1.9	Dickson,..... Dickson,.....	Steam,..... Steam,.....	10	236,820	198,250	264,220	211
Stevens Colliery— No. 1, No. 2, .....		Slope,..... Shaft,.....	Gaseous, Gaseous,	Fan,..... Fan,.....	20 20	5 5	6 7	65 70	1.1 1.1	Guibal,..... Guibal,.....	Steam,..... Steam,.....	4 3	92,383 83,383	53,325 76,387	92,285 83,383	173 96
	Connell Anthracite Coal Co. Bernice Colliery, No. 2, .....	Drift,.....	Non-gas.	Fan,.....	16	4	4	60	.2	Guibal,.....	Steam,.....	2	43,200	37,500	50,900	140
Louise Colliery— Mount Thomas, .....		Tunnel,..... Tunnel,.....	Non-gas, Non-gas,	Fan,..... Natural, Natural, Natural, Natural,	12	3.10	3.10	120	.5	Guibal,.....	Steam,.....	2	24,000	14,000	30,500	83
	People's Bank, Receiver Black Diamond, .....	Shaft,.....	Gaseous,	Fan,.....	20	6.6	6	90	1.7	Guibal,.....	Steam,.....	4	89,600	38,400	102,600	184
Delaware and Hudson Co. Langcliff colliery, .....		Shaft,..... Drift,.....	Non-gas, Non-gas,	Fan,..... Natural, Natural,	17	5	6	60	.2	Guibal,.....	Steam,.....	5	102,800 14,600	48,600 14,800	64,800 16,000	150 30
	Northern Anthracite Coal Co. Murray, .....	Shaft,.....	Non-gas.	Fan,.....	16	5	6	65	1.3	Wandell,.....	Steam,.....	2	44,000	43,000	44,000	106
W. G. Payne Coal Co. East Boston, .....		Shaft,.....	Gaseous,	Fan,.....	25	8	7 3/4	76	2.5	Guibal,.....	Steam,.....	6	122,000	80,900	126,600	141
	Robertson and Law Coal Co. Katy-kid Nos. 1 and 2, .....	Slope,.....	Non-gas.	Fan,.....	12	3.6	3	.70	.4	Guibal,.....	Steam,.....	2	{ 18,000 16,000	10,000 9,600	18,600 16,500	57
Reliance Coal Co. Reliance, .....		Slope,.....	Non-gas.	Natural,	1						1	11,900	10,340	19,150	70	147



TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh Valley Coal Co. Maitly, ..... Exeter, ..... Westmoreland, ..... Seneca, .....	Luzerne, .....	S. D. Warriner, ..	Wilkes-Barre, .....	[ F. E. Zerhey, ..... W. D. Owens, .....	Wilkes-Barre, ..... Pittston, .....	Wilkes-Barre, ..... Pittston, .....	Wilkes-Barre, ..... Pittston, .....	Lehigh Valley
Temple Iron Co. Harry E., ..... Forty Fort, ..... Mt. Lookout, .....	Luzerne, .....	F. H. Hemelright, ..	Scranton, .....	George Steele, .....	Scranton, .....	Scranton, .....	Scranton, .....	Lehigh Valley
Pennsylvania Coal Co. Barnum, ..... Central, .....	Luzerne, .....	W. W. Ingalls, .....	Scranton, .....	W. P. Jennings, ..	Scranton, .....	Scranton, .....	Pittston, .....	Erie
Kingston Coal Co. Kingston No. 4, .....	Luzerne, .....	R. S. Mercier, .....	Kingston, .....	Gwillym Edwards, ..	Kingston, .....	Kingston, .....	Edwardsville, .....	D., L. and W.
Clear Spring Coal Co. Clear Spring, ..... Clear Spring washery, .....	Luzerne, .....	J. L. Cake, .....	Pittston, .....	J. Paul Cake, .....	Pittston, .....	Pittston, .....	Pittston, .....	D., L. and W.
Delaware, Lackawanna and Western Railroad Co. Pettebone, ..... Pettebone washery, .....	Luzerne, .....	R. A. Phillips, .....	Scranton, .....	[ H. G. Davis, ..... Fred Smith, .....	Scranton, .....	[ H. G. Davis, ..... Fred Smith, .....	Kingston, ..... Scranton, .....	D., L. and W.
Stevens Coal Co.	Luzerne, .....	H. W. Kingsbury, ..	Scranton, .....	D. W. Evans, .....	Scranton, .....	Scranton, .....	Pittston, .....	Lehigh Valley
Connell Anthracite Coal Co. Bernice, .....	Sullivan, .....	W. L. Connell, .....	Scranton, .....	W. L. Connell, .....	Scranton, .....	Scranton, .....	Scranton, .....	Lehigh Valley
Raub Coal Co.	Luzerne, .....	S. J. Tonkins, .....	Luzerne, .....	S. J. Tonkins, .....	Luzerne, .....	Luzerne, .....	Wilkes-Barre, .....	Lehigh Valley
People's Bank, Receiver Black Diamond, .....	Luzerne, .....	J. B. Davis, .....	Luzerne, .....	J. B. Davis, .....	Luzerne, .....	Luzerne, .....	Plymouth, .....	D., L. and W.
Delaware and Hudson Co. Langcliff, .....	Luzerne, .....	C. C. Rose, .....	Scranton, .....	E. R. Pettebone, .....	Scranton, .....	Scranton, .....	Dorranceeton, .....	Delaware and Hudson

TABLE 1.—Continued.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Northern Anthracite Coal Co. Murray, .....	Sullivan, .....	P. J. Murray, .....	Lopez, .....	.....	.....	Lehigh Valley
W. G. Payne Coal Co. East Boston, .....	Luzerne, .....	W. T. Payne, .....	Kingston, .....	Geo. Montgomery, .....	Kingston, .....	D., L. and W.
Robertson and Law Coal Co. Katydid, .....	Luzerne, .....	J. M. Robertson, .....	Mocsic, .....	.....	.....	Erie
Reliance Coal Co. Troy, .....	Luzerne, .....	Theodore Hogan, .....	Avoca, .....	.....	.....	Lehigh Valley
W. B. Gunton Coal Co. Lykens, .....	Sullivan, .....	Edwin Davies, .....	Wyoming, .....	.....	.....	Lehigh Valley
Randall and Shaad Coal Co. Randall and Shaad, .....	Sullivan, .....	W. B. Gunton, .....	Towanda, .....	.....	.....	Lehigh Valley
		W. J. Shaad, .....	Mildred, .....	.....	.....	Lehigh Valley







W. G. Payne Coal Co.	Luzerne,.....	72,792	1,500	6,139	80,431	148	360	5	2,476	1,575	46	
East Boston, .....		23,590	23,590		23,590	50	5					
East Boston washery, .....												
Totals, .....		72,792	25,090	6,139	104,931	148	365	5	2,476	1,575	46	
Robertson and Law Coal Co.	Luzerne,.....	57,653	3,500	840	61,995	185	172	1	1,826	10,375	23	
Bellance Coal Co.	Luzerne,.....	16,895	3,500	4,894	25,289	276	96		667	2,100	15	
Troy, .....	Luzerne,.....	6,915	528	180	7,623	71	149		200	2,576	9	
W. B. Gunton Coal Co.	Sullivan,.....	6,000	400	500	6,900	36	22		139		2	
Randall and Sbaad, .....	Sullivan,.....	3,410	190	418	4,018	176	20		150			
Grand totals, .....		4,125,912	409,906	94,235	4,630,053	184	11,436	45	112	159,449	667,041	1,317

TABLE 2.—Recapitulation

Lehigh Valley Coal, .....		1,015,185	86,907	14,683	1,116,775	229	2,290	9	31	38,422	310,344	321
Temple Iron Co., .....		707,372	112,745	9,914	830,031	232	2,264	12	33	34,536	174,029	214
Pennsylvania Coal Co., .....		611,506	10,735	4,496	626,737	204	1,554	2	5	22,069	12,264	118
Delaware, Lackawanna and Western Railroad Co., .....		156,742	3,634	7,408	167,784	159	488	1	5	4,969	13,025	50
Delaware and Hudson Co., .....		109,405	12,785	1,291	114,481	151	403	1	5	6,395	4,020	76
Miscellaneous companies, .....		1,534,702	183,100	56,443	1,774,245	175	4,467	20	33	52,867	153,359	489
Totals, .....		4,125,912	409,906	94,235	4,630,053	184	11,466	45	112	159,449	667,041	1,317

TABLE 2.—PART 2.

Names of Operators	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	Steam							
Lehigh Valley Coal Co., v.....	Luzerne.....	.....	.....	.....	6,000	6,000	4	4,816	13	12,701	11,798	2	2	
Temple Iron Co., .....	Luzerne.....	9	450	20	5,330	5,780	3	4,381	10	12,900	5,600	3	5	
Pennsylvania Coal Co., .....	Luzerne.....	.....	.....	16	2,400	2,400	5	1,888	9	10,823	4,010	.....	.....	
Kingston Coal Co., .....	Luzerne.....	24	850	10	2,100	2,950	.....	2,800	4	7,200	900	2	2	
Clear Spring Coal Co., .....	Luzerne.....	4	120	7	1,000	1,120	.....	1,890	.....	1,200	600	.....	.....	
D., L. and W. R. Co., .....	Luzerne.....	.....	.....	10	1,350	1,350	.....	1,717	.....	2,700	1,900	.....	.....	
Stevens Coal Co., .....	Luzerne.....	9	300	9	1,400	1,700	1	1,220	5	4,301	2,750	.....	.....	
Cornell Anthracite Coal Co., .....	Sullivan.....	5	1,050	5	1,050	1,050	.....	825	1	175	100	.....	.....	
Raub Coal Company, .....	Luzerne.....	13	405	5	630	1,035	3	1,962	1	500	300	.....	.....	
People's Bank, Receiver, .....	Luzerne.....	.....	.....	18	2,518	2,518	.....	1,574	3	3,800	2,900	.....	.....	
Delaware and Hudson Co., .....	Luzerne.....	9	270	2	280	550	1	1,992	.....	1,300	400	.....	.....	
Northern Anthracite Coal Co., .....	Sullivan.....	.....	.....	4	400	400	.....	400	2	283	185	.....	.....	
W. G. Payne Coal Co., .....	Luzerne.....	7	1,262	7	1,262	1,262	.....	1,183	3	4,000	2,840	.....	.....	
Robertson and Law Coal Co., .....	Luzerne.....	.....	.....	6	460	460	1	213	.....	270	160	.....	.....	
Reliance Coal Co., .....	Luzerne.....	1	125	.....	.....	.....	.....	125	1	176	150	.....	.....	
Troy Coal Co., .....	Luzerne.....	.....	.....	2	250	250	.....	120	.....	.....	.....	.....	.....	
W. B. Gunton Coal Co., .....	Sullivan.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Randall and Shaad Coal Co., .....	Sullivan.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Totals, .....	.....	79	2,520	160	26,430	28,950	18	24,914	56	57,289	34,093	12	15	

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)		State pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lehigh Valley Coal Co.	Luzerne.....	2	1	2	258	188	82	3	1	.....	96	642	1	1	20	18	26	10	4	128	208	859	
		1	4	5	233	117	54	3	2	.....	62	474	.....	1	16	15	40	12	4	132	210	684	
		1	4	150	101	44	14	11	62	9	400	.....	1	17	29	37	29	3	3	90	188	588	
		1	.....	1	40	27	13	2	.....	15	101	.....	1	5	6	16	7	.....	2	30	67	168	
		5	6	16	676	433	193	22	22	62	182	1,617	1	4	58	59	119	49	13	370	673	2,290	
Temple Iron Co.	Luzerne.....	2	.....	3	341	112	44	14	10	72	14	612	.....	1	13	24	36	23	3	68	168	780	
		1	1	2	261	97	53	19	7	60	16	517	.....	1	11	11	69	13	53	151	668		
		1	1	4	215	198	82	29	6	16	4	666	.....	1	12	18	73	16	2	88	210	816	
		4	2	9	817	407	179	72	23	188	34	1,735	.....	3	36	53	189	52	7	209	529	2,264	
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.	Luzerne.....	2	2	1	133	372	116	19	1	24	51	721	.....	2	11	11	51	5	4	79	173	884	
		2	1	1	174	174	62	13	3	58	18	476	.....	1	10	29	61	17	4	71	184	669	
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		4	3	2	307	546	178	32	4	62	69	1,197	.....	3	21	31	112	22	8	160	357	1,554	
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston Coal Co.	Luzern.....	3	.....	5	400	156	99	23	8	81	66	841	.....	1	14	38	100	.....	3	179	335	1,176	









Langcliff, Delaware and Hudson Co.	15	12	16	12	15	15	11	12	9	12	10	12	151
Murray, Northern Anthracite Coal Co.	14	13	19	10	9	7	6	6	11	16	18	17	139
East Boston, W. G. Payne Coal Co.	14	13	11	12	13	13	11	13	11	12	12	12	143
Katydid, Robertson and Law Coal Co.	17	15	19	14	19	18	4	16	14	15	15	19	185
Reliance, Reliance Coal Co.	22	24	27	23	26	19	24	21	22	18	25	25	276
Troy, Troy Coal Co.													
Lykens, W. B. Gunton Coal Co.	6	6	5				11	17	12	12	8	11	71
Randall and Shaad, Randall and Shaad Coal Co.							4	6	9				36
	15	21	8				10	25	23	26	23	25	176

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief.
Jan. 6	Charles Lyons, .....	Polish, .....	Miner, .....	30	M	1	1	Clear Spring, ....		Killed by a fall of top rock in chamber. Killed by a fall of top rock in chamber. Fatally injured by premature blast. Fatally injured by premature blast. Fatally injured between cars. Fatally injured by an explosion of dynamite.
9	Joseph Sheetz, .....	Hungarian, .....	Miner, .....	41	M	1	4	Malby, .....		
10	Louis Ferbersky, .....	Polish, .....	Miner, .....	34	F	.....	.....	Harry E., .....		
19	Frank Rustick, .....	Russian, .....	Miner, .....	35	S	.....	.....	Harrum No. 2, .....		
21	Robert Smith, .....	American, .....	Laborer, .....	27	S	.....	.....	Kingston No. 4, .....		
24	John Davis, .....	English, .....	Miner, .....	41	M	1	2	Katydid, .....	Luzerne, .....	
Feb. 1	William Swozage, .....	Polish, .....	Laborer, .....	28	M	1	2	Harry E., .....		Killed by falling down shaft. Fatally injured by falling into rollers in breaker. Outside.
14	Frank Helers, .....	Irish, .....	Hoppertendel, .....	13	S	.....	.....	Matby, .....		
March 4	Marelso Rosistelle, .....	Italian, .....	Laborer, .....	46	M	1	6	Westmoreland, .....		
9	George Hass, .....	German, .....	Miner, .....	50	M	1	3	.....		
9	Dominick Janosky, .....	Polish, .....	Miner, .....	30	M	1	1	.....		
9	Adam Gastomas, .....	Polish, .....	Miner, .....	35	M	1	1	.....		
9	Mike Janosky, .....	Polish, .....	Miner, .....	45	S	.....	.....	Clear Spring, .....	Luzerne, .....	Killed by breaking of rope on cage in shaft.
9	Stanley Biadols, .....	Polish, .....	Miner, .....	24	M	1	.....	.....		
9	Adam Kamanofsky, .....	Polish, .....	Miner, .....	45	M	1	5	.....		
11	Anthony Cherpoolls, .....	Polish, .....	Carpenter, .....	29	M	1	1	Malby, .....	Luzerne, .....	Fatally injured by conveyor. Outside. Killed by being caught between cars.
13	Wadish Zylinsky, .....	Polish, .....	Miner, .....	32	S	.....	.....	Bernice, .....	Sullivan, .....	
13	Joseph Rascavage, .....	Polish, .....	Laborer, .....	30	S	.....	.....	Kingston, .....		
20	John Cheneckl, .....	Lithuanian, .....	Miner, .....	22	S	.....	.....	Louise, .....		
20	George Patski, .....	American, .....	Footman, .....	24	M	1	.....	Mt. Lookout, .....		Killed by a fall of top rock. Killed by a fall of top rock.
21	John Gorkoskie, .....	Polish, .....	Miner, .....	27	S	.....	.....	Forty Fort, .....		
21	George Weaver, .....	Polish, .....	Laborer, .....	17	S	.....	.....	Columbia, .....		Killed by a fall of top rock. Fatally injured by being squeezed by cars.
27	Joseph Dembeck, .....	Polish, .....	Miner, .....	35	M	1	2	Forty Fort, .....		
May 3	Adam Willois, .....	American, .....	Miner, .....	24	M	1	3	Seneca, Twib, .....	Luzerne, .....	Killed by an explosion of gas. Killed by a fall of top rock.
8	Harry Collier, .....	American, .....	Miner, .....	25	M	1	.....	Exeter, .....		
11	Christopher Swartz, .....	American, .....	Runner, .....	21	S	.....	.....	Mt. Lookout, .....		Killed by an electric wire. Fatally injured by an explosion of gas.
30	Peter Dudeton, .....	Lithuanian, .....	Miner, .....	42	M	1	2	Mt. Lookout, .....		
22	John Mezzomo, .....	Italian, .....	Miner, .....	38	M	1	.....	Harry E., .....		Killed by a fall of top coal. Fatally injured by a fall of top rock.
25	George Kile, .....	American, .....	Door tender, .....	16	F	.....	.....	Pettebone, .....		
25	Robert Fortus, .....	American, .....	Miner, .....	31	M	1	.....	Lampkill, .....		Killed by an electric wire. Killed by an electric wire.
16	Thomas J. Williams, .....	Welsh, .....	Timberman, .....	31	M	1	.....	Exeter, .....		
Sept. 9	Simon Stamples, .....	Polish, .....	Miner, .....	40	M	1	.....	Mt. Lookout, .....		

Sept.	23	John Toner	Irish	Driver	21	M	1	Clear Spring	Fatally injured by cars.
Oct.	4	Frank Copeck	Polish	Laborer	22	M	1	Kingsport	Killed by a fall of rock.
	4	Frank Kavar	Polish	Miner	22	M	1	Black Diamond	Fatally injured by a fall of top rock.
Nov.	22	Walter Stroskie	Polish	Laborer	27	M	1	Black Diamond	Fatally injured by a fall of top rock.
	23	Joseph Kulas	Polish	Laborer	19	M	1	Seneca Twin	Fatally injured by a fall of top rock.
	24	Dominico Caporilli	Italian	Miner	24	M	1	Stevens	Fatally injured by an explosion of gas.
Dec.	14	Morris James	Welsh	Miner	45	M	1	Kingston No. 1	Killed by a fall of top rock.
	15	Peter Cornel	Tyrolean	Miner	22	M	1	Harry E.	Fatally injured by an explosion of gas.
	27	Patrick Freeman	American	Runner	23	M	1	Forty Fort	Killed by a fall of top rock.
	28	William Fronter	Italian	Miner	70	M	1	Barnum No. 3	Killed by a fall of top rock.
	30	Frank Rishem	Italian	Laborer	20	M	1	Bernice	Killed by a fall of top rock.
	21	Andrew Cusick	Lithuanian	Miner	22	M	1	M. Lookout	Burned about face and hands with gas.

Luzerne,.....  
 Luzerne,.....  
 Sullivan,.....  
 Luzerne,.....

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Name of Mine		County	Nature and Cause of Accident in Brief.	
					Married or single				
Jan.	5 John Barlskie, .....	Russian, .....	Miner, .....	35	M.	Black Diamond, ...	Luzerne, .....	Leg broken by fall of coal. Burned by an explosion of gas. Burned by an explosion of gas. Leg and arm broken by fall of coal. Bruised about legs and body by being caught in belt in breaker. Burned by an explosion of gas. Hands injured by being caught between cars. Burned by an explosion of gas. Ankle dislocated by a fall of coal. Hands injured by a fall of coal. Head squeezed between cars. Bruised about head and abdomen by fall of coal. Foot squeezed by being caught under car- riage. Head and body cut by premature blast. Leg broken by fall of rock. Bruised about head and body by an ex- plosion of gas. Burned about head and body by an explo- sion of gas. Burned by powder while making a charge. Leg broken by fall of coal. Leg broken by timber falling on him, outside. Burned by powder while making a charge. Bruised about head and back by fall of coal. Leg injured by rock falling on it from car. Cut on legs and arms by fall of rock. Cut on head and arms by fall of rock.	
	7 Joseph Kresarge, .....	Polish, .....	Miner, .....	30	S.	Clear Spring, .....			
	7 Peter Kasounis, .....	Polish, .....	Laborer, .....	30	S.	Clear Spring, .....			
	12 Martin Curry, .....	Irish, .....	Miner, .....	52	M.	Barnum No. 3, .....			
	18 Martin Miller, .....	Lithuanian, .....	Laborer, .....	37	M.	Kingston No. 4, ...			
	18 Joseph Latonice, .....	Polish, .....	Miner, .....	43	M.	Seneca, Coxe, .....			
	19 Harry Decker, .....	American, .....	Laborer, .....	25	S.	East Boston, ...			
	Feb.	6 Stanley Eusheck, .....	Polish, .....	Miner, .....	42	M.			Harry E., .....
		9 John Aston, .....	Welsh, .....	Miner, .....	42	M.			Pettebone, .....
		10 Vito Pean, .....	Polish, .....	Miner, .....	39	S.			Black Diamond, ...
		15 Michael Sholawack, .....	Polish, .....	Breaker, .....	17	S.			Kingston No. 4, ...
		20 Patrick Houston, .....	American, .....	Laborer, .....	36	M.			Langell, .....
		21 Harry Gonza, .....	Polish, .....	Driver, .....	17	S.			Kingston No. 4, ...
	March	23 Robert Belegl, .....	Italian, .....	Miner, .....	26	S.			Forty Fort, .....
		24 Constantine Wawavich, .....	Polish, .....	Miner, .....	29	S.			Forty Fort, .....
		6 Richard Parsons, .....	American, .....	Runner, .....	24	M.			Mt. Lookout, ...
		6 Arthur Calvey, .....	American, .....	Runner, .....	20	S.			Mt. Lookout, ...
		13 Anthony Bendactus, .....	Polish, .....	Miner, .....	38	M.			Seneca, Twin, ...
13 William Gekoske, .....		Polish, .....	Laborer, .....	22	S.	Seneca, Twin, ...			
14 Joseph Washaelfskie, .....	Polish, .....	Miner, .....	34	S.	Mt. Lookout, ...				
17 Michael Yarrowman, .....	Polish, .....	Loader, .....	38	M.	Seneca, .....				
21 Patrick Higgins, .....	Irish, .....	Miner, .....	24	S.	Harry E., .....				
21 George Gotulus, .....	Lithuanian, .....	Miner, .....	32	M.	Exeter, .....				
24 George Nicholas, .....	American, .....	Driver, .....	17	S.	Exeter, .....				
27 Paul Cemmout, .....	Slavonian, .....	Laborer, .....	30	S.	Mt. Lookout, ...				
28 William Shias, .....	Lithuanian, .....	Laborer, .....	20	S.	Mt. Lookout, ...				



April	4	Joseph Reno, .....	Italian, .....	Miner, .....	32	S. Harry E., .....	Leg broken by falling in chamber.
	8	Louis Salsberger, .....	Hibrew, .....	Tracklayer, .....	31	M. Louise, .....	Arm fractured by lever breaking while re-tracking cars.
	11	Wm. Sullivan, .....	American, .....	Laborer, .....	26	S. Forty Fort, .....	Bruised about hips by a fall of rock.
	22	Joseph Soback, .....	Slavonian, .....	Trackman, .....	37	M. East Boston, .....	Injured about face by the bursting of flush pipe.
May	1	Pisaueski Raffelo, .....	Italian, .....	Miner, .....	40	M. Forty Fort, .....	Cut on arm and legs by flying coal from blast.
	1	Andrew Sparlow, .....	Polish, .....	Driver, .....	18	S. Forty Fort, .....	Cut on face by being kicked by mule.
	4	Barney Blazes, .....	Slavonian, .....	Miner, .....	45	M. Forty Fort, .....	Injured by being squeezed by cars and rib.
	8	John Bartskie, .....	Slavonian, .....	Laborer, .....	41	M. Black Diamond, .....	Arm and leg broken by culm conveyors.
	10	Adam Vinsky, .....	Polish, .....	Laborer, .....	37	M. M. Lookout, .....	Outside.
	11	John Noonan, .....	American, .....	Bratticeman, .....	24	S. Exeter, .....	Ribs broken and cut on arm; squeezed by motor.
	15	Louis Zolus, .....	Lithuanian, .....	Miner, .....	35	M. Exeter, .....	Finger cut off by being caught by wheel.
	16	Joseph Donches, .....	Polish, .....	Miner, .....	28	S. Forty Fort, .....	Cut on knee by an axe while making wedge.
	18	Peter Piorokowski, .....	Polish, .....	Miner, .....	28	M. M. Lookout, .....	Burned about face and hands by powder.
	20	James Drane, .....	American, .....	Driver, .....	16	S. M. Lookout, .....	Injured by falling timber in chamber.
	22	James Costello, .....	Irish, .....	Laborer, .....	34	S. Harry E., .....	Leg broken by being caught under loaded cart on head by fall of coal.
	23	Frank Vocin, .....	Hungarian, .....	Laborer, .....	20	S. East Boston, .....	Leg broken by fall of top rock.
	25	Thomas Huthagher, .....	American, .....	Machinist, .....	33	S. Seneca, .....	Ribs and shoulder broken by falling off ladder outside.
	27	George Sunay, .....	Austrian, .....	Miner, .....	30	M. Exeter, .....	Injured by pick while prying piece of coal.
	27	Joseph Yodish, .....	Polish, .....	Laborer, .....	29	S. Maltby, .....	Burned about face and body by explosion of powder.
	27	Frank Jeseavage, .....	Polish, .....	Miner, .....	35	M. Maltby, .....	Burned about face and body by explosion of powder.
June	31	Frank Pairiston, .....	Polish, .....	Driver, .....	17	S. Exeter, .....	Injured by being kicked by mule.
	1	George Makusa, .....	Lithuanian, .....	Miner, .....	30	S. Stevens, .....	Burned about hands and face by explosion of powder.
	3	William Colebauch, .....	Polish, .....	Miner, .....	39	M. Bernice (Connell), .....	Injured by cars.
	6	August Erdman, .....	German, .....	Miner, .....	27	S. Forty Fort, .....	Left leg broken by fall of rock.
	8	John Abormovich, .....	Russian, .....	Miner, .....	29	M. Exeter, .....	Injured about back and head by fall of top coal.
	9	Charles Brown, .....	American, .....	Slate picker, .....	14	S. Barnum, .....	Broke leg while wrestling with another boy.
	10	John Lunie, .....	Scotch, .....	Miner, .....	32	M. Bernice (Connell), .....	Outside.
	12	Christie Uirjeh, .....	German, .....	Head-man, .....	22	S. Clear Spring, .....	Injured by cars at head of slope.
	13	John Czechubinsky, .....	Polish, .....	Laborer, .....	35	M. Kingston No. 1, .....	Leg broken by fall of coal.
	14	John Bolch, .....	Polish, .....	Laborer, .....	38	M. Exeter, .....	Leg broken by cars.
	17	Michael Cikmer, .....	Slovanian, .....	Laborer, .....	22	M. Exeter, .....	Injured by fall of top rock.
	19	Peter Visky, .....	Polish, .....	Driver, .....	17	M. Pathebone, .....	Cut the head by fall of top rock.
	20	Wm. X. Lee, .....	Irish, .....	Company man, .....	15	M. Exeter, .....	Cut the head by fall of top rock.
	24	Frank Yarnolski, .....	Polish, .....	Miner, .....	32	M. Langdijf, .....	Dislocated knee by being squeezed by cars.
	26	John Upshutus, .....	Slavonian, .....	Runner, .....	22	M. Harry E., .....	Burned by an explosion of gas.
	26	John Barausky, .....	Slavonian, .....	Runner, .....	20	S. Harry E., .....	Burned by an explosion of gas.
	26	Edward Evans, .....	American, .....	Runner, .....	22	S. Pathebone, .....	Squeezed by cars about the hips.
	10	William Foster, .....	American, .....	Runner, .....	21	M. Pathebone, .....	Leg broken by being hit by plane rope.
July	13	Joseph Annan, .....	Polish, .....	Laborer, .....	20	S. Law shaft, .....	Leg injured by fall of coal.
	13	Joseph Ashler, .....	Slavonian, .....	Loader, .....	21	M. Maltby, .....	Hip dislocated by cars.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief.
July 18	Edward Kadluski, .....	Polish,.....	Miner, .....	33	S.	Mt. Lookout, .....		Leg injured by flying piece of coal from blast.
19	Robert Taylor, .....	English,.....	Driver, .....	22	S.	Exeter, .....		Finger amputated by rail falling on it.
30	Peter Adoniseck, .....	Slavonian,.....	Foot tender,.....	18	S.	Maltby, .....		Arms broken by falling conveyor line. Outside.
31	Louis Yanavage, .....	Polish,.....	Miner, .....	40	M.	Seneca, Coxey, ...		Bruised about body and legs by fall of top rock.
31	Stephen Gruva, .....	Slavonian,.....	Driver, .....	17	S.	Troy, .....		Injured about hips by being squeezed between cars.
31	Michael Shucka, .....	Slavonian,.....	Laborer, .....	28	M.	Maltby, .....		Arm broken by car on culm dump. Outside.
31	Andrew Doviek, .....	Lithuanian,.....	Miner, .....	37	M.	Exeter, .....		Leg broken and back bruised by fall of top rock.
Aug. 1	Stephen Evary, .....	American,.....	Slate picker, .....	15	S.	Kingston No. 4, ...		Foot injured by machinery in breaker.
4	Peter Poline, .....	Italian,.....	Miner, .....	31	M.	Mt. Lookout, .....		Face and body injured by premature blast.
5	Adolph Rankow, .....	English,.....	Engineer, .....	23	M.	Stephens, .....		Leg broken by being bumped by engine.
24	John Bowelowiez, .....	Russian,.....	Miner, .....	27	S.	Exeter, .....		Foot amputated by fall of top rock.
29	Frank Lauch, .....	Italian,.....	Driver, .....	17	S.	Harry E, .....	Laizerne.....	Skull fractured by being kicked by mule.
29	Bateca Evamies, .....	Italian,.....	Miner, .....	25	S.	Black Diamond, ..		Leg broken by a piece of gob falling on him.
Sept. 2	John Walko, .....	American,.....	Driver, .....	19	S.	Forty Fort, .....		Squeezed about body by falling under cars.
6	Anthony Morvick, .....	German,.....	Foot tender,.....	34	S.	East Boston, .....		Leg broken by timber falling on it.
9	James Cunard, .....	Irish,.....	Foot tender,.....	47	M.	Exeter, .....		Hand smashed by being run over by cars.
11	Fred Kramer, .....	German,.....	Runner, .....	23	M.	Langcliff, .....		Wrist fractured by being caught between cars.
12	William Kupster, .....	Polish,.....	Miner, .....	30	M.	Louise, .....		Burned about head and hands by an explosion of gas.
13	Eugene Ward, .....	Irish,.....	Runner, .....	30	S.	Louise, .....		Knee crushed by cars. Outside.
13	Simon Zember, .....	Slavonian,.....	Miner, .....	50	M.	Maltby, .....		Burned by an explosion of gas.
23	Michael Oxanus, .....	Lithuanian,.....	Miner, .....	34	M.	Stevens, .....		Leg broken by fall of top rock.
23	William Dougherty, .....	American,.....	Foot tender,.....	21	S.	Central, .....		Hand smashed by being run over by cars. Outside.
28	Samuel Humphreys, .....	Welsh,.....	Door tender,.....	18	S.	Exeter, .....		Arm and foot bruised by cars.
Oct. 2	Lewis B. Wallace, .....	American,.....	Miner, .....	33	S.	Maltby, .....		Hip and back bruised by fall of rock.

Oct.	7	Mathew Arch, .....	German,.....	Tracklayer, ....	59	M.	Langcliff, .....	Fractured several ribs by being bumped by cars.
	13	John Gannon, .....	American,.....	Miner, .....	40	M.	Maltby, .....	Toe cut off by a piece of rock falling on it.
	18	Frank Dougherty, .....	American,.....	Laborer, .....	24	S.	Central, .....	Right hand crushed by being run over by cars. Outside.
	19	Mike Borkwich, .....	Polish,.....	Driver, .....	18	S.	Pettebone, .....	Squeezed by cars.
	25	Block Sumsky, .....	Polish,.....	Miner, .....	22	M.	Langcliff, .....	Finger cut off with axe while making wedge.
Nov.	6	Frank Tomastick, .....	Slavonian,.....	Driver, .....	18	S.	Maltby, .....	Burned about face and hands by explosion of gas.
	8	James F. Patton, .....	American,.....	Machinist, .....	28	M.	Bernice, .....	Cut on face and bruised by cars.
	11	John Galack, .....	Polish,.....	Laborer, .....	35	M.	Mt. Lookout, .....	Foot broken and otherwise injured by runaway car.
	15	Clement Lotton, .....	Polish,.....	Foot tender, ...	35	M.	Kingston No. 4, ...	Leg broken by being bumped by cage.
	17	Joseph Kane, .....	Lithuanian,.....	Miner, .....	40	M.	Forty Fort, .....	Burned about face, hands, and back by an explosion of gas.
	17	John Perlovitz, .....	Lithuanian,.....	Laborer, .....	30	S.	Forty Fort, .....	Burned about face, hands, and back by explosion of gas.
	18	James Devlin, .....	American,.....	Laborer, .....	43	M.	Murray, .....	Foot badly crushed by piece of rock falling on it.
	28	Marlin Ducket, .....	English,.....	Miner, .....	46	M.	Kingston No. 1, ...	Ribs fractured by flying pieces from premature blast.
Dec.	29	Michael Jacobs, .....	Polish,.....	Laborer, .....	33	S.	Harry E., .....	Leg broken by being caught by car.
	8	Jacob Lucksick, .....	Slavonian,.....	Laborer, .....	22	S.	East Boston, .....	Head and shoulder injured by a fall of rock.
	12	Michael Dunn, .....	Irish,.....	Fire-boss, .....	35	M.	Stevens, .....	Face and hands burned by gas.
	21	Anthony Gober, .....	Lithuanian,.....	Laborer, .....	22	S.	Forty Fort, .....	Bruised about head, back and legs by fall of rock.
	22	Andrew Urban, .....	Polish,.....	Laborer, .....	30	M.	Kingston No. 1, ...	Broken leg and scalp wound by fall of rock.
	23	Andrew Pastula, .....	Polish,.....	Miner, .....	42	M.	Harry E., .....	Face and hands burned by explosion of gas.
	23	Anthony Agness, .....	Polish,.....	Miner, .....	40	S.	Harry E., .....	Face and hands burned by explosion of gas.
	23	Edward Corcoran, .....	American,.....	Laborer, .....	44	M.	Harry E., .....	Leg broken from force of explosion of gas.
	23	J. B. Evans, .....	American,.....	Miner, .....	49	M.	Seneca, Twin, ...	Leg broken by fall of top coal.

## FATAL ACCIDENTS

## By Falls of Coal, Slate and Roof

Charles Lyons, Polish, miner, age 30 years, was killed at the Clear Spring Colliery, Clear Spring Coal Company, January 6, in the Marcey Vein, west side. He had fired a hole in the top rock the day previous. The foreman warned him that day to take down the loose material and properly secure his place. He evidently failed to do as he was ordered, and the first thing in the morning when going into his place a piece of rock fell on him, fatally injuring him. He died about three hours after the accident occurred.

Joseph Sheetz, Hungarian, miner, age 41 years, was instantly killed at the Maltby Colliery, Lehigh Valley Coal Company, January 9, in the Ross Vein on the Mountain Tunnel. He was about to fire a shot and ignited a squib, then went into an adjoining chamber for safety. The shot went off and shook down a piece of rock over his head, which fell on him, killing him instantly.

Mareiso Rosistelle, Italian, laborer, age 46 years, was killed at the Westmoreland Colliery, Lehigh Valley Coal Company, March 4. He was engaged in loading a car of coal with his miner about 12:45 P. M., when a piece of rock fell on him, killing him almost instantly. The foreman and the fire-boss were in there together about 10 o'clock in the morning and the place looked perfectly safe. The piece that fell was in the shape of a slip, or bell shape, and it was very difficult to detect any crevice around it.

George Petski, Lithuanian, miner, age 22 years, was instantly killed at the Louise Colliery, Raub Coal Company, March 30. The victim had fired a blast and had just gone back into his breast when he was caught by a fall of roof rock. The accident occurred in the Red Ash Vein, Klondike Tunnel, about 12:30 P. M. If the victim had been more cautious on entering his place after firing the blast, the accident might have been avoided.

Joseph Dembeck, Polish, laborer, age 17 years, was instantly killed at the Columbia Colliery, Lehigh Valley Coal Company, April 27, by a fall of rock near the face of the chamber where he was engaged in loading a car of coal. The accident was probably unavoidable.

Christopher Swartz, American, runner, age 21 years, was fatally injured at the Exeter Colliery, Lehigh Valley Coal Company, May 11, by a piece of coal falling off the rib of the gangway as he was crossing between Station 480 and Station 468, in the Red Ash Vein. He lived but a short time after the accident occurred.

Robert Loftus, American, age 31 years, was fatally injured in the Pettebone Colliery D., L. and W. Coal Company, June 27. He had put up two sets of timber and fired a blast in the top coal. He went back to get on the fall of coal and was barring down some of the loose material. He told the laborer to push over one of the legs, which he did. This caused the coal to slide and a large piece which slid from near the top, caused a piece of rock to fall, catching Loftus between it and another piece, injuring him internally. The accident occurred in the 6th Chamber, New Gangway, Red Ash vein, about 10 A. M. It was unavoidable.



Michael Vorrett, Austrian, miner, 31 years of age, was fatally injured July 5, in No. 2 slope, Checker vein, Langeliff colliery, Delaware and Hudson Company, by a fall of coal. He died from the effects of his injuries on the 7th at the Pittston Hospital. Nature of his injuries was a fractured right thigh, lacerations of the scalp and internal injuries.

John Copeck, Polish, laborer, age 25 years, was killed at Kingston No. 4 shaft, Kingston Coal Company, October 1, at about 5:30 P. M., in the Ross vein. He was working on the night shift. The miner John Coosvack, and the driver John Doud, were with him at the time. If they had taken down the rock as the mine foreman directed and taken out a set of timber that he had stood, the accident would not have occurred.

Frank Kaver, Polish, miner, age 26 years, and Walter Sicoskie, Polish, age 24 years, his laborer, were killed at Black Diamond colliery October 4. They were working near the face of the chamber, when a large piece of roof rock fell, killing Sicoskie instantly, and fatally injuring Kaver, who died at the Mercey Hospital about 3 P. M. on the following day.

Joseph Kulas, Polish, laborer, age 19 years, was instantly killed at about 10 A. M. November 22, in the Twin shaft, Lehigh Valley Coal Company, by a fall of roof rock. He and the miner were preparing to put up a prop to support the roof. While Kulas was engaged in shoveling coal away for that purpose a stone fell on him. The accident would seem to have been unavoidable.

Morris James, Welsh, miner, age 45 years, was instantly killed in No. 1 shaft Kingston Coal Company, December 14, at 9:45 P. M. The victim was in the act of mining out some loose coal, when a large piece of rock fell on him, killing him instantly.

Patrick Freeman, American, runner, age 33 years, was killed at the Forty-Fort colliery, Temple Coal and Iron Company, December 27. He was going up to the breast to run a car when a piece of rock known as "hog back" fell on him, killing him instantly. The accident happened in the 6 foot vein, Road 5 B, Breast 26, at about 1 P. M.

William Fronter, English, miner, age 70 years, was instantly killed at the Barnum No. 3 Colliery, Pennsylvania Coal Company, December 28. The victim worked in the Checker vein, No. 3 shaft. At about 10:30 A. M. he was completely covered by a fall of rider rock and top coal. It took two hours to get the fall removed and get the victim out from under it. He was considered a very careful and experienced miner and the accident was probably unavoidable.

Frank Rishtem, Italian, laborer, age 20 years, was killed at the Bernice colliery, Connell Anthracite Mining Company, December 30. He had his skull fractured by a fall of top rock at about 8:30 A. M. He was in the act of loading a car of coal when without warning the rock fell. He lived about one hour after the accident.

#### By Cars

Robert Smith, American, laborer, age 27 years, was killed in No. 4 shaft, Kingston Coal Company, January 21. He was engaged in cleaning out the barn and had loaded a car of debris from one of the stalls. He then went to run the car out with the assistance of the

runner and driver, who were in the barn at the time. He had put a sprag in one wheel and pushed the car out a little way when it stuck. They took out the sprag and Smith went to the front end and was pulling on the car, the other two were pushing. In some manner Smith stumbled and the car passed over him up to the axles, causing his death about three hours later.

Joseph Rascavage, Polish, miner, age 32 years, was killed in the Bernice colliery, Connell Anthracite Mining Company, March 13, by being squeezed between the car and face of his chamber. The runner forgot to set the switch and the car was allowed to run back into the victim's place.

Adam Witlonis, Polish, miner, age 35 years, was killed on May 3, at the Forty-Fort colliery, Temple Coal and Iron Company. He was going into his work in the morning and got on a trip of cars to go to his place. His laborer lost his cap and lamp. The victim jumped off the trip to get them and was caught between the rib and the car. Accident happened on haulage road near foot of 11 foot slope at about 7 A. M.

Thomas J. Williams, Welsh, timberman, age 30 years, was killed at the Exeter colliery, Lehigh Valley Coal Company, August 16. The victim was driving on this day on Road 43. About 11.30 his mule ran away and went to Road 34. He was dragged with the loaded trip and found by the mine foreman, D. J. Thomas, under the fourth car of the trip. He was sent to the Pittston Hospital, where he died on September 13.

John Toner, Irish, driver, age 21 years, was injured September 23, at the Clear Spring colliery, Clear Spring Coal Company. He worked in No. 2 lift West Marcey vein. He had a sprag in the front wheel of the loaded trip when the team started off, before he had time to pull the block. The wheel passed over his hand, badly lacerating the flesh. He went to the hospital, but would not allow the injured member to be amputated. Blood poisoning set in and he died in 15 days from the time of the accident.

### Premature Blasts

Louis Ferbersky, Polish, miner, was fatally injured at the Harry E colliery, Temple Coal and Iron Company, January 10, by flying pieces of coal from a premature blast in the Red Ash Vein. He died shortly after being admitted to the hospital.

Frank Rustick, Russian, miner, age 25 years, was seriously injured in the Barnum No. 2 colliery, Pennsylvania Coal Company. The victim had prepared a hole to fire and thought it had missed. He went back to the face of the chamber when the charge went off, seriously injuring him. He died about three hours after the accident occurred.

John Davis, English, miner, age 41 years, was killed at Katydid colliery, Robertson and Law Coal Company, January 24. The victim was in the act of pushing dynamite back under the rock and had evidently given the same a hard blow, causing a premature blast. The rock flew striking him on the abdomen, seriously injuring him. He died while being taken to the hospital in the ambulance.

John Gorkoskie, Polish, miner, age 27 years, was killed at the Forty-Fort colliery, Temple Coal and Iron Company, April 21st. The



victim and his laborer had tamped a hole in readiness to fire. The laborer went back to a place of safety while the miner remained at the face of chamber. The laborer says he did not hear the miner call "fire," but shortly after he heard the shot go off. He went into the face and found the victim about 15 feet away with a cut over the right temple, which caused his death.

Peter Didgion, Lithuanian, miner, age 42 years, was almost instantly killed in Mt. Lookout colliery, Temple Coal and Iron Company, May 20. The victim's death was caused by a premature blast in the bottom rock. After waiting about 10 minutes for a shot to go off, he thought the squib had missed and went back to light it again, when the charge went off.

### Explosions of gas

John Cheneski, Polish, laborer, age 30 years, was fatally injured March 20, at No. 4 colliery, Kingston Coal Company. He was badly burned on the head, hands and back by an explosion of gas. The accident happened about 9 A. M. on 2 east gangway, Ross slope. The victim went into an abandoned chamber where there was a danger mark across to prevent persons from entering. There had been no gas seen in this place for some time previous, nor was there any detected there the day after the accident. The victim died from the effects of his injuries at the Wilkes-Barre City Hospital, March 29.

Harry Collier, American, rockman, age 24 years, was fatally injured May 8, at the Twin shaft, Lehigh Valley Coal Company. Accompanied by other workmen he went down the shaft at about 4:30 P. M. to work on the night shift. The day shift men had finished their work and had left the place, leaving an air valve open. The night shift men, for some unknown reason closed this valve causing an explosion of gas, which burnt Collier so badly that he died at the Pittston Hospital about 6 P. M. the same evening.

George Kile, American, age 16 years, door boy, was fatally injured June 26, at the Harry E. colliery, Temple Coal and Iron Company, in lift No. 38, Red Ash vein. The door was allowed to stand open for a few minutes and when closed caused a volume of air to go into the airway. There being some high spots there the gas had accumulated and the runner and driver walking under one of these spots, ignited the gas, burning Kile and two laborers. Kile died from the effects of his injuries after being taken to the City Hospital.

Domitsio Caporolli, Italian, miner, age 24 years, was fatally injured by an explosion of gas at the Stevens Colliery, Stevens Coal Company, November 23. He had entered his place to commence work. Gas had accumulated in the place between the time the fire-boss had made his examination and the time Caporolli had arrived at his work. He ignited the gas and was burned so seriously on the face, hands and shoulders, that he died shortly after being taken outside.

This is quite a remarkable case. No gas was ever found in this section before and the places are working towards the outcrop. The fire-boss examined this place about two hours before the miner went in and found no gas. The ventilating current was checked by a canvas door and unless this door had been standing open for some time

and closed without the knowledge of the miner by some unknown person, I can see no reason for gas accumulating in this chamber.

Peter Conel, Tyrolean, rockman, age 22 years, was fatally injured at the Harry E. Colliery Dec. 15. He with other rockmen was driving a tunnel and after firing a round of holes went back to the face with open light, igniting some gas which had accumulated, burning the victim and another laborer quite seriously. Conel died at the Mercy Hospital December 23.

Andrew Cusick, Lithuanian, miner, age 22 years, was burnt on face and hands, also on back by an explosion of gas at the Mt. Look-out colliery, Temple Coal and Iron Company, December 21. The victim was driving a cross-cut through a pillar and after firing a hole entered with a naked light, causing an explosion. He should have examined the place with a safety lamp. He died from the effects of his injuries at the Pittston Hospital.

### Falling Down Shafts

William Swoage, Polish, laborer, age 28 years, was fatally injured at the Harry E colliery, Temple Coal and Iron Company, Feb. 1. This man was discovered by P. T. Casey, foot-tender, on top of west side carriage. From the position he was found in, it seems he got off at Ross vein on the wrong side. Seeing his mistake he must have jumped for the carriage and was caught by the bonnet. The victim was taken to the hospital where he died a few hours after being admitted.

#### Clear Spring Colliery, March 9:

George Hass, German, miner, age 50 years.  
 Dominick Janosky, Polish, miner, age 30 years.  
 Adam Gustonas, Polish, miner, age 35 years.  
 Mike Janosky, Polish, miner, age 45 years.  
 Stanley Bladdis, Polish, miner, age 24 years.  
 Adam Kamanofsky, Polish, miner, age 40 years.  
 Anthony Cherpoois, Polish, miner age 45 years.

These seven men were going home after their day's work. They came to the foot of the airshaft and got on the cage and gave the signal to the engineer to hoist. When the carriage was about 250 feet from the bottom the rope broke, the cage with the seven men going back to the bottom, killing them instantly.

I ordered an inquest in this case and a copy of the proceedings has been sent to the Department of Mines.

The inquest was held in the Town Hall, in the borough of West Pittston, March 13, at 7:30 P. M.

Jurors.—Frank Savage, Alfred Gingell, Andrew Law, Thomas Thomas, James I. Ehret, James MacMillan.

A motion was made to adjourn and the jury to meet the next night, March 14, at the office of James I. Ehret, justice of the peace, to consider the testimony and render a verdict. The jury rendered the following verdict:

We, the jury, do find that George Hass, and the other six men, came to their death by the breaking of a rope in the air shaft at the Clear Spring colliery, the carriage falling to the bottom of the shaft

while they were ascending said shaft. From the testimony adduced we are of the opinion that some undue strain was put on the rope which caused it to break, cause of said strain being to the jury unknown.

George Weaver, American, foot-tender, age 24 years, was killed at the Mt. Lookout colliery, Temple Iron Company, April 21. This man was taking down wooden rails. He had sent a load of men up the shaft and when the carriage came down the other side, Walter Decker saw him walking in the sump directly under the carriage. Weaver did not warn the engineer that he was going into the sump, nor the other footman.

#### By Machinery

Frank Heffers, Irish, hopper tender, age 15 years, was fatally injured at the Maltby colliery, Lehigh Valley Coal Company, February 14. It was his duty to clean down the chutes and hoppers. He was in the act of pushing culm down the chute which is located close to No. 2 boney rolls, when he fell over onto the roller pinions which were uncovered. The wheel caught his leg and he was pulled into the machinery, crushing his leg and abdomen very badly. He died the same afternoon.

Wadish Zylinsky, Polish, carpenter, age 29 years, was almost instantly killed at the Maltby colliery, Lehigh Valley Coal Company, March 11. He was employed as a carpenter in breaker and was helping with several other men to replace an elevator chain. While in the act of placing the chain sling around the elevator so as to hook the pulley and rope blocks for the purpose of lifting it to its proper place, the chain was prevented from falling by one of the elevator buckets. To release the bucket he placed his head under the chain when the bolt that held the bucket to the chain broke, allowing the chain to drop on his head, crushing his skull, from the effects of which he died almost instantly.

#### Miscellaneous

John Mezzomo, Italian, miner, age 38 years, was killed at the Mt. Lookout colliery, Temple Iron Company, June 22. It appears that this man went back from the face of his chamber to help two other men push an empty car to his place. In some manner he came in contact with the electric wire and received a shock which caused his death.

Simon Stammes, Polish, miner, age 45 years, was killed at Mt. Lookout colliery, Temple Iron Company, September 9. This man worked on Road 4, C gangway, and was found dead on gangway road. He fired two holes and it is believed he was hit by flying coal, throwing him against the wire that runs along on the opposite side of the gangway. The reason given for this is that when found his clothing was on fire and he was burned about the face and shoulders. The accident occurred about 10.30 A. M.

## CONDITION OF COLLIERIES

## LEHIGH VALLEY COAL COMPANY

Exeter Colliery.—Ventilation, roads and drainage good. Condition all through satisfactory.

Maltby Colliery.—Ventilation good. Roads and drainage fair. Sanitary condition fair all through.

Seneca Colliery.—Ventilation fair. Drainage and roads in some places very bad.

Westmoreland Colliery.—The ventilation is very much improved. Roads and drainage good. Condition as to safety is also good.

## TEMPLE IRON COMPANY

Mt. Lookout Colliery.—Ventilation fair. Roads and drainage fair. Condition as to safety, in general, is good.

Forty Fort Colliery.—Ventilation fair. Roads and drainage fair. Condition as to safety good.

Harry E Colliery.—Ventilation good. Roads and drainage good. The general condition of the mine is excellent.

## PENNSYLVANIA COAL COMPANY

No. 13 Shaft.—Ventilation fair. Roads and drainage very much improved. The sanitary condition in general is good.

Laws Shaft.—Ventilation fair. Roads and drainage good. Condition as to safety good.

Barnum No. 3.—Ventilation good. Roads and drainage good and the general condition as to safety is good.

Barnum No. 2.—Ventilation very much improved. Roads and drainage good. Sanitary condition of the mine is good.

## KINGSTON COAL COMPANY

No. 1 Shaft.—This colliery is in excellent condition. Ventilation is good. Roads and drainage good and the general condition of the mine is very satisfactory.

No. 4 Shaft.—Ventilation good. Roads and drainage good. Condition as to safety good.

## DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone Colliery.—This colliery is in very good condition in regard to ventilation. Drainage could be a little better. The condition of the mine as to safety is very good.

On October 26 a squeeze occurred in the Red Ash vein at this colliery. The damage was comparatively small and the squeeze was arrested without any accidents.

## RAUB COAL COMPANY

Louise Colliery.—In fair sanitary condition. Ventilation could be improved upon in a number of places. Roads and drainage fairly good.

## PEOPLE'S BANK, RECEIVER (PLYMOUTH COAL COMPANY)

Black Diamond Colliery.—Ventilation fair. General condition as to roads and drainage fair. Sanitary condition in general is fairly good.

## W. G. PAYNE COAL COMPANY

East Boston.—Ventilation fair. General conditions as to roads and drainage fair. Condition as to safety good.

## CLEAR SPRING COAL COMPANY

Clear Spring Colliery.—Ventilation good. Roads and drainage fair. Condition as to safety good.

## STEVENS COAL COMPANY

Stevens Colliery.—The condition of this colliery has been very much improved upon during the year. Ventilation is good. Roads and drainage good. Condition as to safety good.

## DELAWARE AND HUDSON COMPANY

Langeliff Colliery.—Ventilation good. Roads and drainage good. General condition as to safety good.

## ROBERTSON AND LAW COAL COMPANY

Katydid Colliery.—Ventilation fair. Roads and drainage fair. Condition as to safety good.

## RELIANCE COAL COMPANY

Reliance Colliery.—Ventilation good. Roads and drainage in some places poor. General condition as to safety good.

## TROY COAL COMPANY

Troy Colliery.—Ventilation fair. Roads and drainage bad. Condition as to safety good.

## CONNELL ANTHRACITE COAL COMPANY

Bernice Colliery.—Ventilation good. Roads and drainage good. Condition as to safety good.

## NORTHERN ANTHRACITE COAL COMPANY

Murray Colliery.—Ventilation good. Roads and drainage fair. General condition as to safety good.

## W. B. GUNTON COAL COMPANY

Lykens Colliery.—This colliery has been abandoned.



## RANDALL AND SHAAD COAL COMPANY

Colliery.—Ventilation bad. Roads and drainage good. Condition as to safety good.

O'Boyle and Foy Mining Company have erected a new breaker and sunk and opened up two shafts, one for a hoisting shaft and the other for an air-shaft, or second opening. They have not shipped any coal so far but intend to operate early in the spring of 1906. This breaker will have a capacity of from 800 to 1,000 tons per day when in full operation.

## IMPROVEMENTS

## LEHIGH VALLEY COAL COMPANY

Exeter Colliery.—Completed installation of 20 foot Guibal, double intake fan driven by 18x20 inch Corliss engine. Brick house for same.

New wash house equipped with 100 lockers.

Three hundred H. P. B. and W. water tube boiler and brick house.

New inside barn in Marcey vein.

A series of surface test holes to determine safe rock cover working limit over Checker vein.

Bore holes and extension of silt lines in Checker vein.

The breaker has been equipped with new mechanical pickers.

New cage on second opening Red Ash.

Maltby Colliery.—No. 9 Rock slope, 600 feet long completed.

Surface road 1,200 feet long completed between shaft and No. 9 tunnel.

New brick stable for 60 mules, concrete harness house and mule hospital.

Three permanent concrete over casts are being constructed in Marcey vein.

New Duplex 30x10x36 pump placed at foot of shaft and 10 inch column pipe up shaft to surface.

A centrifugal pumping plant is under construction, including 175 K. W. 500 volt generator with engine for same.

One 12 inch bore hole for pump discharge.

Five thousand feet length of wiring from generator to pump.

New pump house at foot of Marcey vein haulage way.

Extensive repairs continued to breaker.

New shakers installed, also additional pickers.

Bore hole and pipe line for silting in Six Foot and Marcey veins.

Westmoreland Colliery.—This colliery was purchased from the Wyoming Coal and Land Company and came into possession of the Lehigh Valley Coal Company March 1. Immediately after its purchase an exchange was entered into between the Lehigh Valley Coal Company and the Pennsylvania Coal Company for the Monument farm tract, and slopes are being sunk through the barrier pillars in the Marcey and Pittston Veins.

A series of test holes has been and will be continued to prove the safe working rock cover over the Pittston vein.

A rock slope 300 feet long has been sunk from the Marcey to the Ross vein.

Two tunnels have been driven in water level from Ross to top split of Red Ash.



Two tunnels from top to bottom Ross.

New brick boiler house has been constructed.

One 250 H. P. Root boiler installed, and 300 H. P. Stirling boilers now under construction.

A system of fire protection, water lines, fire hydrants, etc., has been installed.

The fan has been entirely rebuilt.

A new second opening is under construction from the Pittston vein to the surface.

A new central pumping station is being pushed to completion in the Marcey vein.

Steam lines have been taken out of slopes and are now run down new 10 inch bore hole.

A 14 inch column pipe is being constructed.

Six inch silt hole completed from surface to the Marcey vein.

Williams crusher being installed.

A new Duplex pump has been placed in the Marcey vein.

The old flue boilers and cylinder boilers have been dispensed with.

New warehouse built.

New brick boiler fan, feed and fire pump house completed.

Pittston vein is being regraded and enlarged.

Drainage bore hole completed from Pittston to Marcey vein.

Seneca Colliery.—Six new jigs were installed in breaker.

The new shaft to the Pittston vein was completed, and a second opening was also driven.

The Phoenix is now ventilated from the Twin and Coxe, as the fan for that purpose has been removed to the Pittston vein shaft.

#### TEMPLE IRON COMPANY

Mt. Lookout Colliery.—The main shaft has been sunk from the Marcey vein to the Red Ash vein, a distance of 180 feet. A connection has been driven between the main and supply shafts in the Red Ash vein, and the gangways continued in a southerly course from the main shaft, a distance of 600 feet.

A rock slope was driven from the Marcey vein to the Red Ash vein on 19 degree dip, 560 feet in length. This slope cut the Red Ash vein about 1,000 feet southerly from main shaft. Gangways were turned on course to meet gangways driven from main shaft, and have 200 feet of drive to make connection. Two new  $7\frac{1}{2}$  ton electric locomotives have been installed in Marcey vein and are giving good satisfaction.

The main fan house, containing two 8x20 foot fans, was burned on June 5. The fire is supposed to have started from a hot journal. One fan was repaired sufficiently to enable men to resume work after two days idleness; the other fan was repaired and enclosed by a concrete building. The engine house, fan casing, division wall, air ducts and spiral are entirely made of concrete, making an absolutely fire-proof building. On account of the effect of cold weather on concrete during construction they have decided to defer the erection of the other fan house until spring.

A pair of 20x38 inch hoisting engines were erected on the supply shaft in place of a pair of 14x16 inch engines, which were inadequate

to do the work required. The engines are enclosed in a fire proof building, size 22x33 feet.

A 10x18 foot frame building was erected to enclose fire pump.

Forty Fort Colliery.—A 10x14 inch locomotive has been installed to haul mine rock from the shaft to the dump, and a 16x24 foot locomotive house erected for same.

A 14x42 foot addition to the carpenter shop has been built; also a 12x16 foot addition to the oil house.

A water pipe consisting of 212 feet of four-inch pipe, and 288 feet of three inch pipe, has been laid from the water main to outside barn, for fire protection.

The 3-inch steam pipe which supplied the Ross slope engines was too small to carry the amount of steam required and they found it necessary to lay 1,000 feet of 4-inch pipe to those engines; also 600 feet of 6-inch pipe to carry exhaust steam to the return airway. This was done at our suggestion.

A slope is being sunk from Road 8 A in the 4 foot vein to reach the basin in the southeast corner of this property.

The Ross slope struck a roll which they are driving through on a 6 degree grade. This slope was driven in the rock a distance of 227 feet, and has about 150 feet more to go before reaching the coal.

The development of the Ross and 11 foot veins is progressing satisfactorily.

Five bore holes were put down from the surface to the 4 foot vein to test the rock cover of the same, along the D., L. and W., Bloomsburg R. R. Division.

A 7x12 foot rock tunnel was driven from Road 13 in the bottom split of the 11 foot vein to the top split, and a 7x8 foot air shaft, fifteen feet deep, was sunk from top to bottom split. This work was done to develop the top split of the 11 foot vein in this locality.

Harry E Colliery.—A new breaker has been erected on the easterly side of the old structure and is now practically completed. All the machinery is in place except the breaker and conveyor engines, which cannot be placed until the old breaker is abandoned, on account of obstructing the present loading tracks. The shaft head frame is framed and ready for erection. New self dumping cages have been made and delivered, ready for installation.

New cylinders, 26x48 inch, have been purchased to replace the present cylinders on the hoisting engines, which are 22x48 inches, and of sufficient power to operate the new cages, which are much heavier than the old ones.

A 20x22 foot fire proof brick building, with concrete floor and iron roof, has been erected over the Ross Slope engines which are located at the head of the air shaft and in close proximity to the supply and fan house, and replaces an old dilapidated frame building.

A 12x16 foot frame building used as a harness repair shop has been erected at safe distance from the barn, to replace a 10x20 foot frame building which stood so close to the barn as to be a menace in case of fire.

A 16x22 foot addition to the blacksmith shop has been erected owing to insufficient room in the original shop.

A new 16x10x18 inch duplex pump, built by the Scranton Steam Pump Company, was installed at No. 25 lift, Red Ash vein, and 2,300 feet of cast pipe laid from this pump to the foot of the shaft.

A new 26x12x36 inch duplex Coyne pump was installed at the foot of shaft, and 410 feet of 14 inch cast pipe erected in the shaft to carry water from this pump to the surface.

A 6x7 foot manway, 56 feet in length, was driven from the Red Ash to the Ross vein, on 35 degrees pitch.

A new mule stable with 14 stalls has been built in the 11 foot vein.

#### PENNSYLVANIA COAL COMPANY

Central Colliery.—Car shop 63x33 feet, built of brick.

Wood shed 75x17 feet, built of wood.

Slope engine house, 36x26 feet, built of brick. Clark slope Laws shaft.

Engine house 45x21 feet 7 inches. Built of brick. Laws shaft.

Wash house, 30 feet 3 inches x 18 feet 4 inches. Built of brick. Divided into three compartments.

Boiler house 114x59 feet, wooden frame, covered with corrugated iron and consists of 8 Keeler boilers of 150 H. P. each.

New shaft tower on Laws shaft.

Mine car haulage for empty mine cars at breaker.

Rearrangement of the outside mine car tracks.

Barnum Colliery.—Brick locomotive house at No. 2 shaft.

Brick wash house at No. 2 shaft, divided into apartments for the miners, outside men and foremen.

New barn at No. 2 shaft outside.

Brick oil house at Barnum breaker furnished with oil pumps complete for lubricants.

Added one battery 300 H. P. B. and W. boilers to the boiler plant.

#### KINGSTON COAL COMPANY

No. 4 Colliery.—Completed the new boiler plant of 1,200 H. P. Babcock and Wilcox boilers. This is only one-half of the final boiler plant planned.

Built conveyor lines for fuel from breaker to boiler house.

Built a conveyor line to carry refuse from breaker to Williams' patent crusher. This rock is then crushed and flushed with the culm into the mine workings.

They have built new warehouse and office.

They have drilled about 12 bore holes to prove rock cover over Orchard vein.

They are driving a rock plane from Bennett vein on 15 degrees pitch to cut upper vein.

The plane has reached during the year the Orchard vein.

#### STEVENS COAL COMPANY

Stevens Colliery.—Installed 20 foot fan at new plant; put in a division partition shaft for upcast airway to fan.

Completed hoisting arrangements at new shaft, by installing cage on south side, fans, etc.

Installed 90 H. P. electric engine and generator for electric haulage in mines.

Installed fire-pump in our new shaft buildings.

Completed bridge for our railroad track over Carpenter's Creek.

Built sand drying house 10 feet x 16 feet.

Built engine house 15 feet x 24 feet x 10 feet high for locomotives.

Put in concrete retaining walls  $2\frac{1}{2}$ x8 feet x 99 feet long, at mouth of main slope, in place of the wooden cribbing that has heretofore been in use.

Drove 1,100 feet of new road, to connect new shaft to west gangway road.

Drove 240 feet of rock tunnel 8 feet x 12 feet for new road in Red Ash to face of 5th vein workings.

A slope 360 feet long at the inside end of new road was driven to the coal left in dip south of new road, and a 60 H. P. engine installed to operate this slope.

Installed electric haulage 300 feet long, with  $8\frac{1}{2}$  ton motor. This road is lighted with electric lamps.

Made second opening to Ross vein, same being the rock tunnel, crossing measures to the Marcey vein, size 8x12 feet.

#### CLEAR SPRING COAL COMPANY

Clear Spring Colliery.—They installed a 115 K. W. electric machine and engine, and are at present using the current for drilling inside. They intend installing two electric locomotives at an early date to be used in their small vein, viz: Marcey vein.

#### W. G. PAYNE COAL COMPANY

A new 16x24x15 $\frac{1}{4}$ x18 inch Ingersoll-Sergeant air compressor, complete, has been installed alongside of the one already in use in a new engine house 16x44 built on concrete walls and foundation.

A new outside hospital for the mine stock, furnished with water and heat, was built during the year.

Air compressor pipe line running from the compressor down the shaft was increased in size from 8 to 10 inches.

There was a tunnel driven in the Eleven Foot vein through a roll 60 feet over all so as to get at the vein beyond.

Owing to the high percentage of acid in the mine water they changed all the Bennett pumps during the past year from cast iron to bronze. They also installed a new No. 10 Knowles pump in the Red Ash slope; also a new No. 9 Knowles pump installed at the same station.

There has been a new plane built 260 feet long used for conveying culm from the culm bank into the washery, in connection with a 90 foot swinging conveyor.

#### RAUB COAL COMPANY

Louise Colliery.—A tunnel, 106 feet long was driven from top Ross to bottom split of same vein in the Mt. Thomas drift, cutting the vein in good shape on the other side of fault.

A new air shaft, 6x6 feet, was sunk from surface on mountain

side a depth of 57 feet, commencing with chamber in top Ross on opposite side of fault, thus furnishing good ventilation for both splits, and a means of escape if necessary.

A slope, 200 feet deep, was sunk in Mt. Thomas, Ross bottom split, below level of tunnel.

A new steam pipe line 3,600 feet long was run from Klondyke boilers to Mt. Thomas, to drive fan, slope and pump engine.

A 10 ton mine locomotive was put to draw the coal from same colliery, viz: Mt. Thomas, in place of mules.

A new steam plane is under construction from a point on Red Ash, west gangway, Mt. Thomas, to a distance of 1,000 feet, up the pitch to a point at or near outcrop of vein, cutting off, several gangways from Klondyke east workings, enabling them to handle the coal much cheaper than the present system of haulage.

#### DELAWARE AND HUDSON COMPANY

Langeliff Colliery.—No. 2 slope, Red Ash vein, was extended 700 feet.

Two bore holes, 180 feet deep, each, put down for flushing culm into the mines.

#### ROBERTSON AND LAW COAL COMPANY

Katydid Colliery.—The only improvement made at this colliery during the year was a washery annex to the breaker and they have commenced washing the dump and mixing it with fresh mined coal.

#### NORTHERN ANTHRACITE COAL COMPANY

Murray Colliery.—They have extended the tracks for the large empty cars about 1,000 feet.

Installed a new breaker engine which is about 140 horse power, replacing the one that was formerly in use which was about 90 horse power.

#### TROY COAL COMPANY

Troy Colliery.—This company has made many extensive improvements.

They erected a new breaker, with a capacity of 500 tons.

Installed a new boiler plant, return tubulars of the Fox pattern, with a total horse power of 250.

They have replaced the old trestling leading from foot of plane to the breaker by a new one.

They installed a haulage system over half a mile long both inside and outside.

They are driving a new tunnel from bottom split of the Ross vein to the top split of the same vein, a distance of about 100 feet.

They are sinking two slopes, one in the Ross vein and one in the Red Ash vein. This will open up a large area and increase their output.



## RELIANCE COAL COMPANY

They have sunk a new shaft, size 12x18 feet, which when completed will do away with the slope.

They have also erected a tower over this shaft and put in place a pair of first class hoisting engines.

This colliery is in fair condition except the roads which are wet in spots here and there.



# Seventh District

LUZERNE COUNTY

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Wilkes-Barre, Pa., February 28, 1906.

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

Sir: I have the honor to transmit herewith my annual report for the year 1905.

The production of coal shows an increase over the year 1904 of 237,413 tons.

Respectfully submitted,

JAMES MARTIN,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	20
Number of mines, .....	52
Number of mines in operation, .....	52
Number of tons of coal shipped to market, .....	4,689,325
Number of tons used at mines for steam and heat, .....	516,951
Number of tons sold to local trade and used by employes, ..	239,716
Number of tons produced, .....	5,445,992
Number of persons employed inside of mines, .....	9,049
Number of persons employed outside, .....	3,919
Number of fatal accidents inside of mines, .....	53
Number of fatal accidents outside, .....	8
Number of non-fatal accidents inside of mines, .....	182
Number of non-fatal accidents outside, .....	27
Number of tons of coal produced per fatal accident inside, ..	102,755
Number of persons employed per fatal accident inside, ..	171
Number of persons employed per fatal accident outside, ..	490
Number of persons employed per non-fatal accident inside, ..	50
Number of persons employed per non-fatal accident outside, ..	145
Number of wives made widows, .....	40
Number of children orphaned, .....	119
Number of steam locomotives used inside of mines, .....	3
Number of steam locomotives used outside, .....	26
Number of compressed air locomotives used inside, .....	5
Number of electric motors used inside, .....	9
Number of fans in use, .....	57
Number of gaseous mines in operation, .....	41
Number of non-gaseous mines in operation, .....	8
Number of new mines opened, .....	2

TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Lehigh and Wilkes-Barre Coal Company, .....	1,994,439
Susquehanna Coal Company, .....	1,234,491
Lehigh Valley Coal Company, .....	788,029
Delaware, Lackawanna and Western Railroad Company, ..	665,606
Alden Coal Company, .....	267,738
Red Ash Coal Company, .....	235,056
Delaware and Hudson Company, .....	150,726
Pittston Coal Mining Company, .....	95,917
Wilkes-Barre and Scranton Coal and Iron Company, .....	13,990
	<hr/>
Total, .....	5,445,992
	<hr/> <hr/>

## Production by Counties

Luzerne, .....	5,445,992
	<hr/> <hr/>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Name-s of Operators	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			
	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
	Inside	Outside	Inside	Outside															
Lehigh and Wilkes-Barre Coal Co., .....	16	3	19	78	11	89	134,652	25,570	2,998	1,004	4,002	187	335	38	91				
Susquehanna Coal Co., .....	5	2	7	40	7	47	246,848	31,862	2,464	1,187	3,591	481	594	60	170				
Lehigh Valley Coal Co., .....	5	1	6	19	1	20	157,606	41,475	1,201	412	1,613	240	397	63	412				
D., L. and W. R. R. Co., .....	8	2	10	25	2	27	83,201	26,624	1,237	614	1,851	155	397	49	397				
Aben Coal Co., .....	5	1	6	4	4	10	53,548	66,955	477	209	686	55	265	119	686				
Red Ash Coal Co., .....	3	1	4	9	3	12	78,352	26,117	299	245	564	100	265	33	88				
Delaware and Hudson Co., .....	11	1	12	6	6	18	13,762	25,121	258	118	376	118	23	43	33				
Pittston Coal Mining Co., .....	.....	.....	.....	.....	3	3	.....	.....	144	78	222	.....	.....	.....	.....				
Wilkes-Barre and Scranton Coal and Iron Co., .....	.....	.....	.....	1	3	4	.....	13,910	31	32	63	.....	.....	31	56				
Totals and averages for district, .....	53	8	61	182	27	209	102,755	29,323	9,049	3,919	12,968	171	470	50	145				

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
<b>Causes of Accidents Inside</b>															
Falls of coal, .....	1		1			2		5		1		2	12	22.64	
Falls of slate, .....	1												1	1.89	
Falls of roof, .....	1		1			1		6	1	1			13	24.52	
Mine cars, .....		1			2		1				1		7	13.21	
Explosions of gas and dust, .....											1		1	1.89	
Suffocation by gas, etc., .....						1							1	1.89	
Premature blasts, .....	2			2				1					5	9.43	
Falling into slopes, etc., .....										1			1	1.89	
Miscellaneous, .....				10				1			1		12	22.64	
Totals, .....	5	1	2	12	2	4	1	13	1	3	2	7	53	100	
<b>Causes of Accidents Outside</b>															
Cars, .....			1	1				1		1			4	50.00	
Machinery, .....				1									1	12.50	
Suffocation in chutes, etc., .....			2										2	25.00	
Miscellaneous, .....									1				1	12.50	
Totals, .....			3	2				1	1	1			8	100	
Grand totals inside and outside, .....	5	1	5	14	2	4	1	14	2	4	2	7	61	.....	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
<b>Causes of Accidents Inside</b>															
Falls of coal, .....	4		1	3	2	4	4	4	1	1	3	3	33	16.48	
Falls of slate, .....					2								2	1.10	
Falls of roof, .....	5	1	1	1	1	1	5	4	1	3	1	3	27	14.83	
Mine cars, .....	6	2	4	5	5	5	2	5	3	3	3	4	47	25.82	
Explosions of gas and dust, .....	6		1	1	4	3	5	1	1	1	3	3	19	10.44	
Explosions of powder and dynamite, .....	1		1	1				1		1	2	2	9	4.95	
Premature blasts, .....	1	1		5	1	3	2	2					17	9.34	
Falling into slopes, etc., .....			1	1		3							5	2.75	
By mules, .....			1	2				1			1		5	2.75	
Machinery, .....					2							1	1	.55	
Miscellaneous, .....	1	2	2	3	2	1	2		1		6		20	10.99	
Totals, .....	24	6	12	21	17	18	15	17	11	8	17	16	182	100	
<b>Causes of Accidents Outside</b>															
Cars, .....			1			1	1				1		6	22.22	
Machinery, .....	2		2	1				1					6	22.22	
Miscellaneous, .....	1	2	1	1	1	2	2	3	1			1	15	55.56	
Totals, .....	3	3	4	2	2	3	3	3	2		1	1	27	100	
Grand totals inside and outside, .....	27	9	16	23	19	21	18	20	13	8	18	17	209	.....	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
<b>Inside</b>													
Miners, .....	5	1	10	1	3	1	7	1	2	1	1	31	
Miners' laborers, .....	1	1	2	1	1	1	4	1	1	1	5	15	
Drivers and runners, .....	1	1	1	1	1	1	2	1	1	1	1	13	
Doorboys and helpers, .....	1	1	1	1	1	1	2	1	1	1	1	13	
Company men, .....	1	1	1	1	1	1	2	1	1	1	1	13	
<b>Totals, .....</b>	<b>5</b>	<b>1</b>	<b>2</b>	<b>12</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>13</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>7</b>	<b>53</b>
<b>Outside</b>													
Statepickers (boys), .....	1	1	1	1	1	1	1	1	1	1	1	1	
All other employes, .....	1	1	1	1	1	1	1	1	1	1	1	1	
<b>Totals, .....</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>8</b>
<b>Grand totals inside and outside, .....</b>	<b>5</b>	<b>1</b>	<b>5</b>	<b>14</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>14</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>7</b>	<b>61</b>

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
<b>Inside</b>													
Fire bosses and assistants, .....	1	1	1	1	1	1	1	1	1	1	1	1	
Miners, .....	1	1	1	1	1	1	1	1	1	1	1	1	
Miners' laborers, .....	1	1	1	1	1	1	1	1	1	1	1	1	
Drivers and runners, .....	1	1	1	1	1	1	1	1	1	1	1	1	
Doorboys and helpers, .....	1	1	1	1	1	1	1	1	1	1	1	1	
Pumpmen, .....	1	1	1	1	1	1	1	1	1	1	1	1	
Company men, .....	1	1	1	1	1	1	1	1	1	1	1	1	
All other employes, .....	1	1	1	1	1	1	1	1	1	1	1	1	
<b>Totals, .....</b>	<b>12</b>	<b>6</b>	<b>12</b>	<b>21</b>	<b>17</b>	<b>18</b>	<b>15</b>	<b>17</b>	<b>11</b>	<b>8</b>	<b>17</b>	<b>16</b>	<b>182</b>
<b>Outside</b>													
Blacksmiths and carpenters, .....	1	1	1	1	1	1	1	1	1	1	1	1	
Statepickers (boys), .....	1	1	1	1	1	1	1	1	1	1	1	1	
Bookkeepers and clerks, .....	1	1	1	1	1	1	1	1	1	1	1	1	
All other employes, .....	1	1	1	1	1	1	1	1	1	1	1	1	
<b>Totals, .....</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>27</b>
<b>Grand totals inside and outside, .....</b>	<b>27</b>	<b>9</b>	<b>16</b>	<b>23</b>	<b>19</b>	<b>21</b>	<b>18</b>	<b>20</b>	<b>13</b>	<b>8</b>	<b>18</b>	<b>17</b>	<b>209</b>



TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, .....	1	1	2	1	1	1	1	1	1	1	1	1	4
English, .....	1	1	1	1	1	1	1	1	1	1	1	1	4
Welsh, .....	1	1	1	1	1	1	1	1	1	1	1	1	6
Irish, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
German, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Polish, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Hungarian, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Slavonian, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Lithuanian, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Austrian, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Russian, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Finnish, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Totals, .....	5	1	5	14	2	4	1	14	2	4	2	7	61

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, .....	5	2	8	5	2	4	1	4	4	1	2	2	40
English, .....	1	1	1	3	3	4	2	2	1	1	1	1	4
Welsh, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Irish, .....	1	1	1	1	1	1	1	1	1	1	1	1	11
German, .....	1	1	1	1	1	1	1	1	1	1	1	1	10
Polish, .....	1	1	1	1	1	1	1	1	1	1	1	1	11
Italian, .....	1	1	1	1	1	1	1	1	1	1	1	1	7
Slavonian, .....	1	1	1	1	1	1	1	1	1	1	1	1	7
Lithuanian, .....	1	1	1	1	1	1	1	1	1	1	1	1	13
Austrian, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Russian, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Swedish, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Totals, .....	27	9	16	23	19	21	18	20	13	8	18	17	209

TABLE I.—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 person 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 minute provided for each person
<b>Lehigh and Wilkes-Barre Coal Co.</b>																
<b>Hollenback Colliery—</b>																
Hollenback No. 2.....	Shaft.....	Gaseous.	{ 2 fans.	35	11.6	8.9	48	1.25	Gulbal.....	Steam.....	.....	270,660	223,820	275,190	432	518
Hollenback No. 3.....	Slope.....	Gaseous.	{ 2 fans.	35	11.9	8.9	45	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hollenback No. 2.....	Shaft.....	Gaseous.	{ 2 fans.	35	11.9	8.9*	45	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hollenback No. 3.....	Slope.....	Gaseous.	{ 2 fans.	24	7.11	6.0*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>South Wilkes-Barre Colliery—</b>																
No. 1.....	Shaft.....	Gaseous.	{ 2 fans.	35	11.9	8.9	45	2	Gulbal.....	Steam.....	18	349,330	256,710	401,540	439	675
No. 3†.....	Shaft.....	Gaseous.	{ 2 fans.	35	11.9	8.9	45	2	.....	.....	.....	.....	.....	.....	.....	.....
No. 4.....	Shaft.....	Gaseous.	{ 2 fans.	35	11.9	8.3	45	2	Gulbal.....	Steam.....	14	173,150	144,120	189,156	313	460
No. 5†.....	Shaft.....	Gaseous.	{ 2 fans.	35	11.9	8.3	45	2	.....	.....	.....	.....	.....	.....	.....	.....
<b>Stanton Colliery—</b>																
Stanton No. 7.....	Shaft.....	Gaseous.	{ 2 fans.	35	11.7	8.9	45	2	Gulbal.....	Steam.....	11	215,850	182,240	240,605	403	452
Abbott†.....	Slope.....	Gaseous.	{ 2 fans.	34.6	8.44	8.44	45	2	.....	.....	.....	.....	.....	.....	.....	.....
Empire.....	Shaft.....	Gaseous.	{ 2 fans.	34	8.0	6.0	65	2	Gulbal.....	Steam.....	9	199,650	98,990	127,500	130	755
Sugar Notch No. 3.....	Shaft.....	Gaseous.	{ 2 fans.	20	6.8	5.0	72	1.2	Gulbal.....	Steam.....	11	386,100	304,770	423,570	287	1,031
.....	.....	.....	{ 2 fans.	24	8.0	6.0	60	1.2	.....	.....	.....	.....	.....	.....	.....	.....
<b>Maxwell Colliery—</b>																
Baltimore.....	Shaft.....	Gaseous.	{ 2 fans.	35	11.9	8.9	40	1.5	Gulbal.....	Steam.....	18	399,780	378,570	420,730	531	727
Red Ash.....	Shaft.....	Gaseous.	{ 2 fans.	35	11.9	8.9	40	1.5	.....	.....	.....	.....	.....	.....	.....	.....
Hillman.....	Slope.....	Gaseous.	{ 2 fans.	25	8.2	6.3	80	1.5	Gulbal.....	Steam.....	.....	.....	.....	.....	.....	.....
Baltimore.....	Shaft.....	Gaseous.	{ 2 fans.	25	8.2	6.3	80	1.5	Gulbal.....	Steam.....	.....	.....	.....	.....	.....	.....
Red Ash.....	Shaft.....	Gaseous.	{ 2 fans.	24	8	6	80	1.5	Gulbal.....	Steam.....	.....	.....	.....	.....	.....	.....
Hillman.....	Slope.....	Gaseous.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\*Reserve fan.

†Emergency fan.

Susquehanna Coal Co.														
No. 5 Colliery—														
No. 2,	Shaft,....	2 fans,	8	8	60	1.6	Guibal,.....	Steam,...	6	113,425	83,390	87,150	270	3.9
No. 2,	Shaft,....	2 fans,	6	6	65	1.5	Guibal,.....	Steam,...	6	120,000	80,000	124,000	170	470
No. 4,	Shaft,....	2 fans,	2	3	39	1.1	Sturdevant,	Steam,...						
No. 5,	Slope,....	3 fans,	8	8	75	1.0	Guibal,.....	Steam,...	8	169,250	116,240	161,300	233	499
No. 4,	Slope,....	3 fans,	6	6	103	2.3	Guibal,.....	Steam,...						
No. 4,	Tunnel,...	Natural,			88	2.0	Guibal,.....	Steam,...						
No. 4,	Tunnel,...	Non-gas,					Guibal,.....	Steam,...						
No. 4 1/2,	Tunnel,...	Natural,					Guibal,.....	Steam,...						
No. 4 1/2,	Drift,....	Natural,					Guibal,.....	Steam,...						
No. 6 Colliery—														
No. 6,	Tunnel,...	2 fans,	6	6	60	1.0	Guibal,.....	Steam,...	4	64,590	48,840	64,850	211	231
No. 6,	Slope,....	2 fans,	20	8	62	1.1	Guibal,.....	Steam,...	5	87,100	80,700	87,100	268	301
No. 6,	Shaft,....	Fan,....	25	8	60	1.0	Guibal,.....	Steam,...	1	21,448	18,966	23,912	69	262
No. 6 South,	Shaft,....	2 fans,	25	8	62	1.0	Guibal,.....	Steam,...	1	21,448	18,966	23,912	69	262
No. 6 North,	Shaft,....	2 fans,	20	6	60	1.5	Guibal,.....	Steam,...						
No. 7,	Shaft,....	2 fans,	20	6	60	1.5	Guibal,.....	Steam,...						
No. 7 Colliery—														
No. No. 1 South,	Shaft,....	2 fans,	8	8	60	1.6	Guibal,.....	Steam,...	8	139,820	74,680	146,110	301	248
No. 1 North,	Shaft,....	2 fans,	25	8	60	1.6	Guibal,.....	Steam,...	10	176,950	138,540	211,900	359	386
George vein No. 1 North,	Shaft,....	2 fans,	25	8	60	1.2	Guibal,.....	Steam,...	2	37,700	30,600	45,900	50	612
Lehigh Valley Coal Co.														
Dorrance Colliery—														
Baltimore,	Shaft,....	Fan,....	35	12	40.2	1.9	Guibal,.....	Steam,...	10	158,055	125,576	202,563	258	487
Hillman,	Shaft,....	Fan,....	30	10	59	1.9	Guibal,.....	Steam,...	9	188,615	102,030	202,040	248	411
Franklin Colliery—														
Rock,	Slope,....	2 fans,	20	6	5.9	.8	Guibal,.....	Steam,...	10	142,800	73,650	169,750	260	294
Rock,	Slope,....	2 fans,	14	4.6	40	.8	Guibal,.....	Steam,...	5	53,415	30,575	63,800	93	328
Long,	Slope,....	2 fans,	15	4.6	46	.8	Guibal,.....	Steam,...	2	34,950	19,675	40,150	105	187
Long,	Slope,....	2 fans,	15	4.6	46	.8	Guibal,.....	Steam,...	2	34,950	19,675	40,150	105	187
Sump,	Slope,....	Fan,....	15	6	3.9	.8	Guibal,.....	Steam,...	2	34,950	19,675	40,150	105	187
Franklin,	Tunnel,...	Natural,					Guibal,.....	Steam,...	5	115,670	69,430	125,820	167	416
Warrior Run,	Slope,....	Fan,....	20	6.5	5		Guibal,.....	Steam,...	5	115,670	69,430	125,820	167	416
Delaware, Lackawanna and Western Railroad Co.														
Bliss Colliery—														
Bliss,	Shaft,....	2 fans,	35	9.2	9.10	1.5	Guibal,.....	Steam,...	11	145,500	136,200	166,700	355	384
Bliss,†	Shaft,....	2 fans,	24	4.3	10	1.5	Guibal,.....	Steam,...	3	31,300	29,400	34,200	70	420
Esny,	Tunnel,...	2 fans,	13	3.6	3	.6	Guibal,.....	Steam,...	2	29,000	17,200	22,000	62	245
Esny,	Tunnel,...	2 fans,	10	2.7	100	.6	Guibal,.....	Steam,...	2	29,000	17,200	22,000	62	245
Auchincloss Colliery—	Tunnel,...	2 fans,	10	2.7	100	.6	Guibal,.....	Steam,...	2	29,000	17,200	22,000	62	245
Nos. 1 and 2,	Shafts,...	Fan,....	35	9.6	7.10	1.4	Guibal,.....	Steam,...	10	150,800	131,000	161,200	285	460

†Emergency fan.

\*Old workings.

TABLE I.—Continued.

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 range 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
Truesdale Colliery— Mills Nos. 1 and 2.	Slope..... Shafts..... Tunnel.....	Gaseous..... Gaseous..... Non-gas.....	Fan..... Fan..... Natural.....	12.....	3.6.....	3.....	90.....	1.2.....	Guibal.....	Steam.....	7.....	69,800.....	63,000.....	71,800.....	96.....	676.....
Alden Coal Co.																
Red Ash No. 1.....	Shaft.....	Gaseous.....	Fan.....	15.....	5.....	5.....	57.....	.8.....	Guibal.....	Steam.....	5.....	92,700.....	80,000.....	100,000.....	61.....	1,311.....
Ross vein No. 1.....	Shaft.....	Gaseous.....	Fan.....	15.....	5.....	5.....	56.....	1.1.....	Guibal.....	Steam.....	2.....	19,399.....	46,300.....	60,950.....	49.....	945.....
No. 2 shaft.....	Shaft.....	Gaseous.....	Fan.....	24.....	8.....	8.....	66.....	1.1.....	Guibal.....	Steam.....	7.....	101,700.....	91,100.....	112,850.....	12.....	474.....
No. 2 shaft.....	Shaft.....	Gaseous.....	Fan.....	24.....	9.....	5.10.....	68.....	1.5.....	Vulcan.....	Steam.....	4.....	55,090.....	50,000.....	61,384.....	80.....	625.....
Red Ash Coal Co.																
Red Ash Colliery— Red Ash No. 1.....	Slope.....	Non-gas.†	Fan.....	15.....	5.....	3.9.....	72.....	1.4.....	Vulcan.....	Steam.....	5.....	53,850.....	35,000.....	54,640.....	155.....	226.....
Red Ash No. 2.....	Slope.....	Non-gas.†	Fan.....	15.....	5.....	3.9.....	70.....	1.6.....	Vulcan.....	Steam.....	4.....	58,450.....	22,000.....	60,440.....	126.....	175.....
Delaware and Hudson Co.																
Conyngnam Colliery— Hillman.....	Shaft.....	Gaseous.....	Fan.....	20.....	5.8.....	5.....	78.....	1.8.....	Guibal.....	Steam.....	3.....	86,030.....	80,580.....	90,200.....	102.....	610.....
Baltimore.....	Shaft.....	Gaseous.....	Fan.....	17.....	5.4.....	4.....	90.....	1.7.....	Guibal.....	Steam.....	4.....	136,950.....	124,350.....	146,069.....	86.....	1,016.....
Pittston Coal Mining Co.																
Hadleigh.....	Shaft.....	Non-gas.....	Fan.....	17.....	4.6.....	5.6.....	80.....	2.....	Guibal.....	Steam.....	3.....	105,000.....	46,000.....	122,000.....	136.....	338.....
Wilkes-Barre and Scranton Coal and Iron Co.																
Hillman vein.....	Shaft.....	Gaseous.....	Fan.....	30.....	10.....	8.....	30.....	1.3.....	Tanaka.....	Steam.....	2.....	18,140.....	13,040.....	28,800.....	29.....	450.....

\*Fan not yet erected.

†Emergency fan.



TABLE 2.—Number of tons of coal mined, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Totals are averages, 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
<b>Lehigh and Wilkes-Barre Coal Co.</b>												
Hollenback, .....		298,010	31,042	40,201	369,253	252	668	3	11	7,447	59,295	85
South Wilkes-Barre, .....		354,328	28,188	55,724	417,840	227	922	6	22	10,249	120,075	126
Sutton, .....		329,859	43,737	10,594	384,620	239	943	7	21	12,069	41,109	118
Sugar Notch, .....		1,010	13,892	1,010	220,352	222	381	.....	6	7,197	8,685	59
Maxwell, .....		400,687	37,417	10,272	507,806	254	1,042	3	27	13,227	62,234	111
Jersey washery, .....		1,627,361	154,306	118,291	1,899,901	239	3,962	19	87	50,129	290,898	409
		30,302	4,236	.....	34,538	249	40	.....	2	.....	.....	2
Totals, .....		1,717,666	158,542	118,291	1,994,439	239	4,002	19	89	50,129	290,898	501
<b>Susquehanna Coal Co.</b>												
Colliery No. 5, .....		326,148	76,038	18,227	420,413	221	1,267	1	19	14,454	18,042	144
Colliery No. 6, .....		363,684	41,232	3,241	408,157	221	1,112	1	17	13,383	13,273	89
Colliery No. 7, .....		343,380	60,283	2,238	405,901	225	1,222	5	11	6,332	134,724	161
Totals, .....		1,033,212	177,553	23,706	1,234,491	222	3,591	7	47	36,169	108,041	404
<b>Lehigh Valley Coal Co.</b>												
Dorrance, .....		248,779	21,420	64,901	335,100	242	717	3	14	12,067	34,860	107
Franklin, .....		253,183	19,920	4,034	277,137	256	566	2	2	10,692	11,954	106
Warrior Run, .....		150,917	23,212	1,663	175,732	219	339	.....	4	5,632	1,537	29
Totals, .....		652,879	64,552	70,598	788,029	229	1,613	5	20	28,391	48,351	242

\*Sugar Notch breaker destroyed by fire in March; coal prepared at Maxwell breaker the remainder of the year.





TABLE 2.—PART 2.

Names of Operators	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	Steam	Air								Electric
Lehigh and Wilkes-Barre Coal Co., .....	[ Luzerne,..... ]	30	1,270	48	9,358	10,628	8	1	257	20,191	17	12,780	6,875	.....	1	
Susquehanna Coal Co., .....		40	1,400	42	10,764	12,164	13	4	63	11,400	13	7,450	4,900	.....	.....	
Lehigh Valley Coal Co., .....		26	4,750	26	4,750	4,750	3	.....	40	4,250	12	5,200	3,490	.....	.....	
Delaware, Lackawanna and Western R. R. Co., .....		.....	.....	.....	3,284	3,284	1	.....	30	5,916	9	5,219	2,415	.....	.....	
Alden Coal Co., .....		7	1,343	7	1,343	1,343	.....	.....	9	1,375	.....	1,800	1,000	.....	.....	
Red Ash Coal Co., .....		.....	.....	.....	1,035	1,035	3	.....	16	1,112	.....	1,824	824	.....	.....	
Delaware and Hudson Co., .....		.....	.....	5	1,125	1,125	.....	.....	35	2,337	.....	1,800	540	.....	.....	
Pittston Coal Mining Co., .....		.....	.....	5	550	550	.....	.....	10	300	.....	300	290	.....	.....	
Wilkes-Barre and Scranton Coal and Iron Co., .....		.....	.....	7	1,050	1,050	.....	.....	7	558	.....	800	350	.....	.....	
Totals, .....		.....	93	3,705	161	32,224	35,929	29	5	467	47,439	55	38,273	21,504	5	25



TABLE 3.—Continued

Names of Operators and Collieries	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employes
D., L. and W. R. R. Co.	Luzerne.....	1	1	2	109	29	10	1	89	.....	372	.....	1	5	10	47	.....	2	60	125	47
Auchincloss, .....		1	1	5	205	58	30	2	28	.....	675	.....	1	7	1	122	5	114	263	388	675
Bliss, .....		1	1	1	65	50	7	1	8	17	199	.....	1	5	1	51	21	4	58	256	416
Truesdale, .....		1	1	1	65	50	7	1	8	17	199	.....	1	5	1	51	21	4	58	256	416
Totals, .....		3	1	9	379	94	41	5	120	112	1,237	.....	3	17	28	266	32	9	259	614	1,851
Alden Coal Co.	Luzerne,.....	1	1	5	171	67	34	2	45	.....	477	.....	1	10	23	47	29	6	92	209	686
Red Ash Coal Co.	Luzerne,.....	1	1	.....	56	14	4	3	92	.....	167	.....	.....	.....	5	.....	.....	.....	63	68	235
Red Ash No. 1, .....		1	1	.....	38	23	2	.....	22	2	132	.....	1	1	13	11	17	34	2	118	197
Red Ash No. 2, .....	Luzerne,.....	2	2	.....	94	37	6	3	54	2	299	.....	1	1	13	16	17	34	2	181	265
Totals, .....		2	2	.....	94	37	6	3	54	2	299	.....	1	1	13	16	17	34	2	181	265
Delaware and Hudson Co.	Conyngham, .....	1	.....	4	68	28	11	3	49	19	258	.....	1	6	15	30	15	1	50	118	376
Pittston Coal Mining Co.		Luzerne,.....	1	.....	1	75	25	12	7	10	2	144	.....	1	4	8	21	3	1	30	78
Hadleigh, .....	Luzerne,.....	1	.....	1	75	25	12	7	10	2	144	.....	1	4	8	21	3	1	30	78	229

Wilkes-Barre and Scranton Coal

Hillman, .....	1	.....	2	7	2	31	1	1	2	5	.....	6	1	16	32	63						
Grand totals, .....	29	19 101	3,055	8	8	1,005	1	464	66	809	923	9,049	6	20	223	441	983	303	65	1,878	3,919	12,968

TABLE 3.—Recapitulation

Lehigh and Wilkes-Barre Coal Co., .....	6	8	29	1,072	733	294	230	15	405	196	2,198	.....	6	34	137	250	111	17	440	1,064	4,002
Susquehanna Coal Co., .....	10	4	28	778	790	320	88	25	119	316	2,304	1	3	101	162	279	44	18	579	1,187	3,591
Lehigh Valley Coal Co., .....	4	3	13	410	284	152	49	12	.....	279	1,301	1	3	36	47	64	29	10	222	412	1,613
D., L. and W. R. R. Co., .....	3	1	9	379	473	94	41	5	120	112	1,597	.....	3	17	28	266	52	9	259	613	1,851
Red Ash Coal Co., .....	1	1	5	171	151	67	34	2	56	.....	1,477	1	1	19	23	47	29	6	82	209	686
Alden Coal Co., .....	2	2	.....	94	99	37	6	3	56	.....	990	1	1	19	15	47	34	2	184	269	364
Delaware and Hudson Co., .....	1	.....	4	68	75	28	11	3	43	11	258	.....	1	6	15	30	15	1	59	118	376
Pittston Coal Mining Co., .....	1	.....	1	75	35	12	7	1	10	2	114	.....	1	4	8	21	3	1	39	78	222
Wilkes-Barre and Scranton Coal and Iron Co., .....	1	.....	2	8	8	1	.....	2	7	2	31	1	1	2	5	.....	6	1	16	32	63
Totals, .....	29	19	101	3,055	2,578	1,005	464	66	809	923	9,049	6	20	223	441	983	303	65	1,878	3,919	12,968





TABLE 4.—Fatal accidents inside and outside of mines

Date of accident.	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 10	Thomas Reese, .....	Welsh, .....	Miner, .....	56	M.	1	6	Hollenback, .....		Fatally injured by a fall of slate. Died February 7.
18	Anthony Kenyoski, .....	Polish, .....	Miner, .....	43	M.	1	5	Auchincloss, .....		Instantly killed by a fall of top coal.
21	Thomas Watson, .....	English, .....	Miner, .....	32	M.	1	2	Stanton, .....		Instantly killed by a fall of top rock.
24	Joe Munnick, .....	Polish, .....	Miner, .....	30	M.	1	1	Alden, .....		Fatally injured by a premature blast. Died February 3.
25	George Younger, .....	English, .....	Miner, .....	48	M.	1	.....	Colliery No. 6, .....		Instantly killed by a premature blast.
25	William Dew, .....	English, .....	Driver, .....	19	S.	.....	.....	Bliss, .....		Instantly killed by falling under moving trip of cars.
March 8	Charles Dohoditus, .....	Lithuanian, .....	Laborer, .....	35	M.	1	4	So. Wilkes-Barre, .....		Fatally injured by a fall of bony coal.
9	John Tometsch, .....	Slavonian, .....	Car loader, .....	23	S.	.....	.....	Maxwell, .....	Luzerne, .....	Fatally injured by falling under moving railroad car. Outside.
11	Mike Rush, .....	Russian, .....	Miner, .....	35	M.	1	4	Stanton, .....		Instantly killed by a fall of rock.
13	Charles Staley, .....	American, .....	Laborer, .....	26	M.	1	2	Stanton, .....		Instantly killed by 40 feet of the screening pocket collapsing, causing these two men to be buried under the timber and dirt. Outside.
13	Ed. McManaman, .....	American, .....	Laborer, .....	29	M.	1	.....	Stanton, .....		Fatally injured; squeezed between railroad cars. Outside.
April 14	Luke Pesovitch, .....	Russian, .....	Loader, .....	27	M.	1	2	Bliss, .....		Fatally injured by premature blast. Died April 25.
20	Felix Besenski, .....	Polish, .....	Miner, .....	22	S.	.....	.....	Franklin, .....		
26	Wm. F. Haney, .....	German, .....	Miner, .....	45	M.	1	.....			These ten men were being lowered down the shaft when the rope broke. The carriages fell to the bottom of the shaft, a distance of about 400 feet. They were all instantly killed.
26	Frank Royal, .....	German, .....	Miner, .....	41	M.	1	6			
26	John Chase, .....	Canadian, .....	Miner, .....	38	M.	1	4			
26	Lawrence Warick, .....	Polish, .....	Miner, .....	32	M.	1	4			
26	James Matcoddak, .....	Polish, .....	Miner, .....	42	M.	1	6	Conyngham, .....	Luzerne, .....	
26	August Zajancy, .....	Polish, .....	Miner, .....	39	M.	1	.....			
26	Harry Zayancy, .....	Polish, .....	Miner, .....	17	S.	.....	.....			
26	Michael Zayants, .....	Polish, .....	Laborer, .....	35	M.	1	4			
26	John Lubinski, .....	Slavonian, .....	Miner, .....	28	M.	1	2			
26	Anthony Zilvick, .....	Polish, .....	Miner, .....	48	M.	1	6			
26	Barney Koschowack, .....	Polish, .....	Offet, .....	16	S.	.....	.....	Colliery No. 7, .....		Instantly killed by clothes catching on a revolving shaft in breaker. Outside.
May 25	Peter Lubinski, .....	Polish, .....	Laborer, .....	40	M.	1	1	Dorrance, .....	Luzerne, .....	Instantly killed by a premature blast.
15	Patrick Walsh, .....	American, .....	Driver, .....	22	S.	.....	.....	So. Wilkes-Barre, .....		Fatally injured, squeezed between a loaded and an empty car.

TABLE 4.—Continued

Date of accident.	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
May 22	John Urbin, .....	Lithuanian, ..	Laborer, .....	24	S.	.....	.....	Dorrance, .....	.....	Fatally injured; struck by trip of cars on plane.
June 1	William P. Price, .....	Welsh, .....	Miner, .....	57	M.	1	1	Alden, .....	.....	Instantly killed by a fall of coal.
June 7	Matt Sopovinski, .....	Polish, .....	Laborer, .....	24	M.	1	.....	Stanton, .....	.....	Instantly killed by a fall of rock.
June 8	Michael Buck, .....	Slavonian, ..	Miner, .....	38	M.	1	3	Red Ash No. 2, ..	.....	Instantly killed by a fall of top coal.
June 17	Adam Markosky, .....	Polish, .....	Miner, .....	28	M.	1	1	So. Wilkes-Barre, ..	.....	Suffocated by gas.
July 28	John Lech, .....	Polish, .....	Patcher, .....	18	S.	.....	.....	Alden, .....	.....	Instantly killed by car jumping track and striking him.
Aug. 4	Anthony Seckowski, .....	Polish, .....	Laborer, .....	48	M.	1	6	Colliery No. 5, .....	.....	Instantly killed by a fall of rock.
Aug. 4	John Davis, .....	Welsh, .....	Timberman, ..	35	M.	1	6	Conyngham, .....	.....	Instantly killed by a fall of top coal.
Aug. 7	Eddie Ebert, .....	Polish, .....	Buckwheat loader, ..	19	S.	.....	.....	Colliery No. 7, .....	.....	Fatally injured by falling in front of a trip of moving cars. Outside.
Aug. 12	Anthony Lavitch, .....	Lithuanian, ..	Miner, .....	24	M.	1	1	Hollenback, .....	.....	Instantly killed by a piece of bony coal rolling down pitch and striking him.
Aug. 12	John Hunt, .....	Irish, .....	Co. miner, .....	45	M.	1	6	Stanton, .....	.....	Instantly killed by a fall of rock.
Aug. 12	John Lovett, .....	Welsh, .....	Miner, .....	39	M.	1	6	Truesdale, .....	.....	Instantly killed by a fall of bony coal.
Aug. 12	Mathew Okales, .....	Polish, .....	Miner, .....	35	S.	.....	.....	Truesdale, .....	.....	Instantly killed by a fall of bony coal.
Aug. 12	Anthony Zakarokus, .....	Polish, .....	Laborer, .....	38	S.	.....	.....	Truesdale, .....	.....	Instantly killed by a fall of bony coal.
Aug. 23	George Granater, .....	Hungarian, ..	Miner, .....	45	M.	1	3	Colliery No. 7, .....	.....	Instantly killed by a fall of rock.
Aug. 23	John Lincho, .....	Slavonian, ..	Miner, .....	28	S.	.....	.....	Hollenback, .....	.....	Instantly killed by a fall of rock.
Aug. 24	Metro Julia, .....	Austrian, .....	Miner, .....	38	M.	1	4	Alden, .....	.....	Instantly killed by a fall of rock.
Aug. 29	Edward Thomas, .....	Welsh, .....	Miner, .....	52	M.	1	1	So. Wilkes-Barre, ..	.....	Fatally injured by a blast.
Aug. 29	Michael Pyrah, .....	Austrian, .....	Laborer, .....	31	M.	1	1	Maxwell, .....	.....	Instantly killed by a fall of rock.
Aug. 31	Alex Komarcowski, .....	Polish, .....	Laborer, .....	40	S.	.....	.....	Bliss, .....	.....	Instantly killed by a fall of coal.
Sept. 27	Peter Krosco, .....	Slavonian, .....	Laborer, .....	23	M.	1	2	Red Ash No. 2, ..	.....	Stone fell upon him while working at stripping. Outside.
Sept. 28	John Barrett, .....	Irish, .....	Miner, .....	43	M.	*	4	Red Ash No. 1, ..	.....	Fatally injured by a fall of rock. Died October 6.
Oct. 4	Griffith Davis, .....	Welsh, .....	Miner, .....	41	M.	1	3	Red Ash No. 2, ..	.....	Fatally injured by a fall of coal. Died November 7.
Oct. 7	Stanley Cyvinski, .....	Polish, .....	Slate pocker, ..	16	S.	.....	.....	Bliss, .....	.....	Fatally injured; squeezed between culm car and breaker; died October 25. Outside.

\*Widower.

Oct.	24	Reuben Everland, .....	American, .....	Laborer, ....	33	M.	1	4	Colliery No. 7, .....	Instantly killed by a fall of rock. Slightly burned by gas and fatally injured by falling down chamber. Died same day. Fatally injured by falling in front of moving trip of loaded cars. Fatally burned by burning stick of dynamite in his boot leg. Struck by loaded car and fatally injured. Instantly killed by a fall of rock. Fatally burned by gas. Died December 18. Fatally injured by a fall of rock. Died December 13. Instantly killed by a fall of top coal. Fatally injured by a fall of top coal. Instantly killed by runaway car.
	26	John Martin, .....	English, .....	Miner, .....	31	M.	1	3	Bliss, .....	
Nov.	18	Jos. Kennite, .....	German, .....	Driver, .....	17	S.	.....	3	Colliery No. 7, .....	
	22	Anthony Kluchnick, ...	Lithuanian, ..	Miner, .....	26	M.	1	3	Bliss, .....	
Dec.	1	Jos. Verecotch, .....	Polish, .....	Laborer, ....	24	S.	.....	1	Alden, .....	
	5	Victor Tom, .....	Polish, .....	Laborer, ....	26	M.	1	1	So. Wilkes-Barre,	
	7	John Brown, .....	Polish, .....	Miner, .....	28	M.	1	2	Maxwell, .....	
	9	John Dyvitch, .....	Russian, .....	Laborer, ....	22	S.	.....	2	Stanton, .....	
	16	Martin Croski, .....	Polish, .....	Laborer, ....	18	S.	.....	.....	So. Wilkes-Barre,	
	16	Andrew Yorokofki, .....	Russian, .....	Laborer, ....	25	S.	.....	.....	Dorrance, .....	
	29	Patrick Murphy, .....	Irish, .....	Footman, ..	24	S.	.....	.....	Franklin, .....	

Luzerne,.....

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Are Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 4	Frank Petulis, .....	Polish,.....	Miner, .....	M.	Maxwell, .....		Injured about kidneys and thigh by a fall of bony coal.
5	Joe Melinsky, .....	Lithuanian,.....	Miner, .....	S.	So. Wilkes-Barre, .....		Leg fractured by a fall of rock.
5	Thomas Leskoskey, .....	Lithuanian,.....	Miner, .....	M.	Franklin, .....		Shoulder cut by a fall of bony coal.
7	Frank Baker, .....	German,.....	Driver, .....	S.	Dorrance, .....		Leg broken and badly cut; struck by car.
7	Anthony Bershinsky, .....	Lithuanian,.....	Miner, .....	S.	So. Wilkes-Barre, .....		Side and back bruised by premature blast.
13	Richard Kromis, .....	American,.....	Miner, .....	M.	So. Wilkes-Barre, .....		Finger cut off; prop rolled upon it while helping to pull a car off the cage.
14	Elick Miconis, .....	Polish,.....	Laborer, .....	S.	Stanton, .....		Leg crushed and head cut by a fall of rock.
14	Mike Conyngnam, .....	Polish,.....	Platform boss, .....	M.	Stanton, .....		Struck on eye ball by a piece of coal. Outside.
16	Anthony Koszski, .....	Polish,.....	Laborer, .....	M.	Stanton, .....		Leg fractured by a fall of rock.
17	Caradoc Jones, .....	American,.....	Runner, .....	S.	Red Ash No. 2, .....		Squeezed between car and rib by car jumping track.
18	John Barron, .....	Slavonian,.....	Laborer, .....	S.	Warrior Run, .....		Squeezed between car and rib while trying to hold the car.
18	John Norecki, .....	Polish,.....	Laborer, .....	M.	Anonymous, .....		Collar bone broken by a fall of top coal.
18	Michael Mazza, .....	German,.....	Runner, .....	S.	Collier, No. 7, .....		Leg bruised by car running against it.
19	Michael Cuff, .....	Irish,.....	Driver, .....	S.	Maxwell, .....	Luzerne,.....	Squeezed about the hips between car and
19	Evan Williams, .....	Welsh,.....	Slate picker,.....	S.	Warrior Run, .....		Leg cut and toes crushed by a gear wheel. Outside.
20	John R. Williams, .....	Welsh,.....	Laborer, .....	M.	Stanton, .....		Shoulder bruised by being struck by car.
21	Peter Rice, .....	Polish,.....	Laborer, .....	S.	Stanton, .....		Leg broken by a fall of rock.
23	John Richards, .....	Welsh,.....	Runner, .....	S.	Alden, .....		Hand smashed by fall of rock, necessitating amputation.
24	William Bolonege, .....	Lithuanian,.....	Miner, .....	M.	Stanton, .....		Leg fractured by a fall of bony coal.
25	Simon Vinechock, .....	Slavonian,.....	Platemanager, .....	S.	Red Ash No. 2, .....		Hand cut off between gear wheel and cog. Outside.
25	Anthony Tomal-tus, .....	Lithuanian,.....	Miner, .....	M.	Dorrance, .....		Eye knocked out and hand smashed by the explosion of a cartridge which he was trying to push in a hole with his needle and scraper. Hand amputated.

Jan.	28	John Hunt	Irish	43	M.	Stanton,	Luzerne,	Burned on face and hands by an explosion of gas.
	28	John S. Jones	Welsh	38	M.			Collar bone broken by falling from car against prop.
	28	Benjamin J. Thomas	Welsh	49	M.			Leg fractured by a piece of coal from wheel, using a pick, a small piece of coal they and struck him on the eye, bruising it.
	28	William Morgan	American	21	S.			He fell and was struck by an engine, breaking the small bone in his leg. Outside.
	28	Leslie Harrison	American	24	S.			Leg fractured and two toes cut off; caught between car and door.
	28	Walter Roberts	American	35	M.			Collar bone broken; caught between car and railing at head of breaker. Outside.
	1	John Gezalaki	Lithuanian	35	M.	Colliery No. 6,		Arm fractured by a small piece of rock falling upon it.
Feb.	9	John Tokarahak	Polish	46	M.	Warrior Run,		Fingers bruised; caught when hooking stretcher to car.
	10	George Bowman	German	30	M.	Bliss,		Finger cut off while helping to turn steam shovel. Outside.
	11	Peter Pruse	Polish	26	S.	Colliery No. 6,	Luzerne,	Leg fractured and back bruised by runaway cars.
	12	Joseph Sweeney	American	17	S.	Stanton,		Badly squeezed and bruised by falling under car.
	16	Anthony Polco	Slavonian	45	M.	Hollenback,		Foot badly bruised by fall of rock. Eye cut, causing loss of sight of eye by a small piece of coal bursting out from the face of his chamber.
	20	John Stafinski	Polish	27	M.	Hollenback,		Two fingers smashed by car running over them. Outside.
	20	George W. Jones	American	27	S.	Red Ash No. 1,		Savely bruised by falling down manway. Kicked in the abdomen by a mule.
	20	John Hudock	Slavonian	20	S.	Jersey Washery,		Leg broken by a piece of rock rolling against it while loading a car.
March	1	Edward Hughes	American	22	S.	Auchincloss,		Savely squeezed between cars and a prop.
	2	Thomas Arnott	Welsh	18	S.	Alden,	Luzerne,	Burned on hands and face by powder. Thumb cut off by a spindle. Outside.
	2	John Sullivan	German	43	M.	Auchincloss,		Badly bruised by being drawn under sprocket wheel by scraper line. Outside.
	3	Martin Smith	Lithuanian	33	M.	So. Wilkes-Barre,		Bruised about hips by being caught between brattice and car.
	4	Peter Kredler	American	18	S.	So. Wilkes-Barre,		Burned on hands, face, and neck by gas. Burned on hands, face and breast by oil. Outside.
	11	John Sets	Slavonian	26	M.	So. Wilkes-Barre,		Side and back injured by a fall of top coal.
	15	Thomas J. Price	American	19	S.	So. Wilkes-Barre,		
	17	Moses Keen	American	38	S.	Dorrance,		
	17	Michael Green	American	21	S.	Dorrance,		
	20	George Henry	Russian	24	S.	Stanton,		
	26	William Van Why	American	18	S.	So. Wilkes-Barre,		
	22	Anthony Beldovage	Austrian	13	S.	Colliery No. 6,		
	27	Morris Gallagher	American	22	S.	Hollenback,		
	27	John Smith	Polish	38	S.	Maxwell,		
	28	Charles Steele	American	27	S.	Sugar Notch,		
	28	John Voshefski	Polish	45	M.	Colliery No. 7,		
April	3	Daniel Doryan	Irish	32	S.	Conyngnam,		

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
April 3	David J. Owens, .....	Welsh.....	Laborer, .....	22	S.	Truesdale, .....		Bruised and shoulder cut by small fall of rock.
6	Peter Kelogy, .....	Polish.....	Laborer, .....	28	M.	Colliery No. 5,....		Squeezed about the breast and hips by car running over a block and catching him against a prop.
8	Mike Vetrckl, .....	Polish.....	Miner, .....	49	M.	Colliery No. 5,....		Injured about face and hands by premature blast.
8	John Meyers, .....	Polish.....	Laborer, .....	69	M.	Colliery No. 5,....		Injured about face and hands by premature blast.
10	John Daley, .....	American.....	Driver, .....	18	S.	Red Ash No. 2,...		Jaw bone fractured; mule knocked him against car.
10	Anthony Doran, .....	American.....	Driver, .....	28	S.	Maxwell, .....		Collar bone fractured; squeezed between car and mule.
11	Joseph Shusta, .....	Polish.....	Miner, .....	38	S.	Maxwell, .....		Struck on back by a piece of top bone.
15	Michael Paylock, .....	Russian.....	Brakeman, .....	19	S.	Colliery No. 6,....		Leg fractured, the sliding between engine and a car while getting out of the way.
17	Stanislaus Lipski, .....	Polish.....	Miner, .....	29	M.	Colliery No. 6,....	Luzerne,.....	Outside car which had jumped the track. Leg broken by a large piece of loose coal rolling against it.
18	Joseph Bayek, .....	Austrian.....	Carpenter, .....	37	M.	Colliery No. 6,....		Stopped upon a 20-penny nail which went through his foot. Outside.
18	David Lloyd, .....	Welsh.....	Miner, .....	49	M.	Colliery No. 5,....		Thumb almost cut off while using an axe.
19	William P. Jones, .....	Welsh.....	Coupler, .....	16	S.	Colliery No. 7,....		While riding on top of some props his leg was caught between the roof and the car, breaking the small bone.
19	James Swank, .....	American.....	Machinist, .....	46	M.	Jersey Washery, ..		While oiling some machinery his clothing got caught and he was thrown to the floor, breaking the small bone in his leg. Outside.
22	George Lipinski, .....	Polish.....	Miner, .....	33	S.	Auchincloss, .....		Bruised about back and hips by a piece of coal falling upon him.
22	Thomas Weitzouak, .....	Polish.....	Miner, .....	41	M.	Bliss, .....		Bruised on back by premature blast.
22	Jacob Jabolski, .....	Polish.....	Laborer, .....	34	M.	Bliss, .....		Cut on head by premature blast.



April	25	Joseph Bennett, .....	American.....	Shaft footman, .....	23	S.	Conyngnam, .....	Some cars jumped the track and struck a spring latch, causing it to swing around and strike him, fracturing his ankle.
	26	Anthony Lubinski, .....	Polish, .....	Miner, .....	35	M.	Dorrance, .....	While tamping a blast, the blast exploded severely injuring him.
	26	George Collett, .....	American, .....	Driver, .....	32	M.	So. Wilkes-Barre, .....	Arm fractured while helping to load a tool box into a car; caused by team starting up before time.
	26	George Brooker, .....	Lithuanian, .....	Miner, .....	24	S.	Maxwell, .....	Burned on back, face and hands by gas.
	26	Andrew Zolender, .....	Polish, .....	Miner, .....	45	M.	Colliery No. 6, .....	While standing a prop he slipped and strained his back.
	28	Mike Sock, .....	Polish, .....	Laborer, .....	35	M.	Colliery No. 7, .....	Burned on face, hands and body by powder.
May	1	Lewis Kritefski, .....	Polish, .....	Runner, .....	20	S.	Colliery No. 5, .....	Squeezed about chest by falling in front of moving car.
	4	Peter Wilworthy, .....	German, .....	Brakeman, .....	35	S.	Sugar Notch, .....	Caught between cars while uncoupling them; dislocated his hip. Outside.
	6	Frank Broskoski, .....	American, .....	Footman, .....	18	S.	Colliery No. 7, .....	Leg broken, tried to jump on moving car and fell under it, outside track.
	8	Joe Knappish, .....	German, .....	Miner, .....	38	M.	Bliss, .....	Back bruised by a fall outside track.
	8	Koyel Lagrenni, .....	Italian, .....	Laborer, .....	37	S.	Truesdale, .....	The crank wheel that was being dropped into position. Outside.
	9	Anthony Grobleski, .....	Lithuanian, .....	Laborer, .....	21	S.	Hollenback, .....	Leg broken by a fall of top slate.
	12	William Channing, .....	Welsh, .....	Runner, .....	22	S.	Hollenback, .....	Leg cut; car jumped track and struck him.
	17	Mike Peacole, .....	Austrian, .....	Miner, .....	35	M.	Stanton, .....	Burned about face, hands and back by gas.
	19	William Miscavage, .....	Polish, .....	Miner, .....	33	M.	Colliery No. 5, .....	Arm broken; while on his way to the foot of the shaft he needlessly got in between cars.
	19	Mike Kulcofski, .....	Polish, .....	Miner, .....	52	M.	Colliery No. 5, .....	Cut and bruised by premature blast.
	20	Fred Schuetter, .....	American, .....	Plane runner, .....	18	S.	Colliery No. 5, .....	Bruised on hip, stomach, back and back of head by plane wheel brake.
	21	Joseph Fisher, .....	Slavonian, .....	Driver, .....	17	S.	Colliery No. 5, .....	Cut over left eye and head bruised by plane wheel brake.
	23	Anthony Follandis, .....	Polish, .....	Miner, .....	30	M.	Maxwell, .....	Two ribs fractured by piece of slate falling on him.
	23	David Jones, .....	Welsh, .....	Miner, .....	38	M.	Maxwell, .....	Burned on hands and face by gas.
	23	Martin Beliski, .....	Polish, .....	Laborer, .....	38	S.	Maxwell, .....	Burned on hands and face by gas.
	23	Joseph Savage, .....	Polish, .....	Laborer, .....	22	S.	Maxwell, .....	Thumb fractured between bumpers of cars while trying to couple them.
	24	William J. Williams, .....	Welsh, .....	Patcher, .....	17	S.	So. Wilkes-Barre, .....	Hip and leg bruised by a piece of bony coal falling on him.
	27	Waddie Shelowofski, .....	Polish, .....	Miner, .....	33	M.	Colliery No. 5, .....	Finger dislocated, struck by a small piece of coal from roof.
June	5	Thomas Lyons, .....	Irish, .....	Miner, .....	52	M.	So. Wilkes-Barre, .....	Fore finger blown off and top of thumb smashed by the explosion of a cap, which he was trying to open with a file.
	5	Marion Pavlitz, .....	Polish, .....	Miner, .....	33	M.	Colliery No. 7, .....	Cut his right arm by a piece of coal from a blast.
	6	Martin Bednarik, .....	Polish, .....	Miner, .....	37	M.	Colliery No. 5, .....	

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TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or Single	Name of Mine	County	Nature and Cause of Accident in Brief
June 6	Nick Greizko, .....	Polish, .....	Miner, .....	44	S.	Colliery No. 5, .....		Slightly hurt on legs by flying coal from a blast.
6	John Demeterko, Jr., .....	Polish, .....	Slate picker, .....	14	S.	Colliery No. 6, .....		Head bruised by falling plank. Outside.
7	Frank Kubuofski, .....	German, .....	Miner, .....	45	M.	Bliss, .....		Three ribs fractured and hip badly cut by falling down breast.
9	Mike Andrako, .....	Russian, .....	Coupler, .....	17	S.	Colliery No. 6, .....		Leg broken; when car bumped head block the hind end jumped the track and struck him.
13	John Hughes, .....	American, .....	Trackman, .....	22	S.	Auchincloss, .....		Thumb and two fingers of left hand smashed by car running over them while trying to block the car.
15	John Shortz, .....	American, .....	Patcher, .....	16	S.	Maxwell, .....		Right ankle dislocated; struck by an empty car.
15	John Konyack, .....	Polish, .....	Miner, .....	38	M.	Auchincloss, .....		Hip bruised by piece of coal falling on him.
16	Joshua T. Jones, .....	Welsh, .....	Miner, .....	42	M.	Bliss, .....		Collar bone fractured by a fall of coal.
20	Alexander Forninski, .....	Polish, .....	Miner, .....	42	M.	Sugar Notch, .....		Burned on hands, face and neck by gas.
21	Ernest Dunlap, .....	American, .....	Laborer, .....	22	S.	Maxwell, .....		Leg fractured by a piece of top bone falling upon it.
22	Albert Howells, .....	Welsh, .....	Runner, .....	24	M.	Auchincloss, .....	Luzerne, .....	Thigh fractured between car and door frame while trying to run ahead of the car.
22	Alex Miller, .....	German, .....	Laborer, .....	24	M.	Auchincloss, .....		Burned about face, hands and body by head and face cut and body bruised by falling down manway.
22	John Slmefski, .....	Lithuanian, .....	Laborer, .....	40	M.	Bliss, .....		Four toes smashed and head cut by car jumping the track.
23	Enoch Williams, .....	Welsh, .....	Slope footman, .....	20	S.	Bliss, .....		Thumb fractured by piece of coal, which burst from the face of the gangway.
24	George Sulpas, .....	Lithuanian, .....	Laborer, .....	40	M.	So. Wilkes-Barre, .....		Two fingers crushed by a car running over them. Outside.
26	Barney Visnfski, .....	American, .....	Footman, .....	18	S.	Colliery No. 7, .....		Cut on side and arms by premature blast. While crossing a foot-bridge with some ice in his arms the bridge broke and he fell to the ground spraining his ankle and running a nail through his upper jaw. Outside.
27	Michael Gorham, .....	Irish, .....	Miner, .....	48	M.	Maxwell, .....		
29	Thomas Hughes, .....	Welsh, .....	Laborer, .....	45	S.	Red Ash No. 2, .....		

June	30	John Swales, .....	English, .....	Laborer, .....	29	M.	Colliery No. 5, .....	Back and hips bruised by fall of rock.
July	1	Gust Grolowski, .....	German, .....	Miner, .....	43	M.	Colliery No. 7, .....	Bruised on left side by fall of top rock.
	2	Charles Bernaski, .....	Polish, .....	Miner, .....	33	M.	Dorrance, .....	Head cut, two ribs fractured and collar bone broken by premature blast.
	6	John Vishniefski, .....	Polish, .....	Miner, .....	24	S.	Colliery No. 7, .....	Leg broken by blast. He returned to the blast before it exploded.
	10	Eddie Garduskie, .....	Polish, .....	Laborer, .....	25	S.	Alden, .....	Face and head cut by a piece of coal striking him.
	11	Adam Laman, .....	Polish, .....	Laborer, .....	42	M.	Bliss, .....	A piece of coal burst from the rib and bruised his back and hips.
	12	Voychack Graba, .....	Polish, .....	Laborer, .....	26	S.	Alden, .....	Back and leg cut and bruised by a piece of rock falling on him.
	19	Michael Sakubski, .....	Polish, .....	Miner, .....	48	M.	Colliery No. 6, .....	Fore broken by piece of rock falling on it.
	20	Alexander Darnie, .....	Polish, .....	Rock unloader, .....	40	M.	Red Ash No. 1, .....	Fore finger of right hand cut off by a piece of coal falling on it from a car.
	20	Jacob Branno, .....	German, .....	Laborer, .....	40	M.	Maxwell, .....	Right leg and back bruised by a fall of top bone.
	20	William Hotko, .....	Russian, .....	Laborer, .....	20	S.	Stanton, .....	Three ribs broken by a piece of rock falling on him.
	20	John Stachinski, .....	Polish, .....	Miner, .....	36	M.	Colliery No. 5, .....	Bruised on back and shoulder by a piece of bony falling on him.
	22	John Rodock, .....	Slavonian, .....	Laborer, .....	20	S.	Red Ash No. 2, .....	While breaking coal, a piece struck him in the right eye, causing loss of his eye.
	22	Andrew Drank, .....	Slavonian, .....	Timber cutter, .....	54	M.	Maxwell, .....	Prop rolled upon him, bruising him severely, outside.
	24	David Williams, .....	Welsh, .....	Timberman, .....	42	M.	Dorrance, .....	Leg broken by a fall of rock.
	25	C. W. Wheeler, .....	American, .....	Carpenter, .....	24	S.	Truesdale, .....	Still fractured by fall while working in breaker, outside.
	28	Emil Munson, .....	Swedish, .....	Car roller, .....	17	S.	Sugar Notch, .....	Thumb smashed while coupling cars, outside.
	28	Bolish Meshinski, .....	Polish, .....	Runner, .....	17	S.	Colliery No. 6, .....	Arm broken; struck by cars.
	31	Henry Davies, .....	Welsh, .....	Driver, .....	20	S.	Stanton, .....	Foot caught between bumpers of cars, causing painful injury.
Aug.	2	Robert Jones, .....	Welsh, .....	Laborer, .....	37	M.	Dorrance, .....	Leg bruised by a piece of rock falling on it.
	2	William Steckroat, .....	American, .....	Door boy, .....	15	S.	Colliery No. 5, .....	Foot bruised by car.
	4	Lewis Johnston, .....	Swedish, .....	Timberman, .....	46	M.	Conyngnam, .....	Hand bruised by fall of top coal.
	4	John Wagon, .....	English, .....	Miner, .....	56	M.	Conyngnam, .....	Hand injured by a fall of coal.
	8	Albert Sabenski, .....	Polish, .....	Miner, .....	30	S.	So, Wilkes-Barre, .....	Supposing his blast had missed fire, he returned to the face and the blast exploded, cutting and bruising his head and face.
	8	Andrew Pestlosky, .....	Polish, .....	Blacksmith, .....	25	M.	Hadleigh, .....	While taking timber from a pile, a piece fell from the top and struck his leg, breaking it, outside.
	9	Patrick Caffrey, .....	Irish, .....	Teamster, .....	45	M.	Hadleigh, .....	Arm broken; fell from wagon, outside.
	11	Joseph Kobosh, .....	Slavonian, .....	Laborer, .....	26	M.	Red Ash No. 1, .....	Bruised by fall, outside.
	12	Thomas Walters, .....	American, .....	Slope runner, .....	23	S.	Truesdale, .....	Badly bruised by fall of bony coal.
	19	Alex Yarashofski, .....	Polish, .....	Miner, .....	26	M.	Colliery No. 6, .....	Foot cut by piece of rock falling upon it.
	21	William Smith, .....	Welsh, .....	Blacksmith, .....	35	M.	Auchincloss, .....	Kicked on the head and stomach by a mule.
	21	Fred Schletter, .....	American, .....	Driver, .....	18	S.	Colliery No. 5, .....	Arm broken and face bruised; fell under trip of cars.
	23	Thomas Hazilinski, .....	Slavonian, .....	Laborer, .....	20	S.	Hollenback, .....	Slightly injured by a fall of rock.

Luzerne, .....

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Aug. 24	Adam Zokuski, .....	Polish, .....	Miner, .....	21	S.	Auchincloss, .....		Severely cut and bruised by premature blast.
26	Stanley Pancovitch, .....	Lithuanian, .....	Laborer, .....	26	M.	Bliss, .....		Back and ankle bruised by a piece of coal falling upon him.
26	George Kenewer, .....	American, .....	Laborer, .....	35	M.	So. Wilkes-Barre, .....		Arm fractured by a small piece of rock falling upon it.
28	Charles Mitchell, .....	Polish, .....	Driver, .....	17	S.	Dorraine, .....		Collar bone broken; caught between car and rib.
29	Stanley Kaski, .....	Polish, .....	Miner, .....	29	M.	Sugar Notch, .....		Foot squeezed between car and vertical slope roller.
29	William Gallegher, .....	Italian, .....	Miner, .....	22	S.	Franklin, .....		Eye and face badly injured by the explosion of a hole loaded with giant powder which had missed fire and which was trying to drill out.
30	Wm. B. Williams, .....	Welsh, .....	Tracklayer, .....	28	M.	Red Ash No. 1, .....		Head struck between car and prop.
Sept. 6	Anthony Boer, .....	Polish, .....	Laborer, .....	25	S.	So. Wilkes-Barre, .....		Both legs fractured by fall of rock.
7	Joseph Koons, .....	Lithuanian, .....	Miner, .....	36	M.	Hollenback, .....		Arm broken and scalp lacerated by explosion of gas.
11	George Transue, .....	American, .....	Engineer, .....	36	M.	Hillman vein, .....	Luzerne, .....	Leg broken; bumped against a car in the dark.
14	Thomas Conway, .....	American, .....	Driver, .....	17	S.	Hollenback, .....		Leg fractured; tried to jump on a car and fell in front of it.
15	Francis Reiley, .....	Irish, .....	Oiler, .....	18	S.	Hadleigh, .....		Squeezed by falling into conveyors. Outside.
18	James Malloy, .....	Polish, .....	Miner, .....	29	S.	Maxwell, .....		Burned by powder and hurt by falling down man-way.
18	Stanley Malloy, .....	Polish, .....	Laborer, .....	27	S.	Maxwell, .....		Burned by powder and hurt by falling down man-way.
18	Walter Leazer, .....	American, .....	Laborer, .....	21	S.	Maxwell, .....		Wrist bone fractured by lever striking it. Outside.
19	Oscar Doome, .....	German, .....	Slope headman, .....	19	S.	Bliss, .....		Head cut by being thrown from car against rib.

Month	No.	Name	Nationality	Occupation	Age	Location	Incident Description	
Sept.	20	Joseph Cominski	Lithuanian	Door boy	17	S. Sugar Notch	Hand smashed and thumb cut off by car run over it. He was pulling a block from front of a wheel and the wheel ran over the block.	
	26	Thomas C. Morgans	American	Laborer	45	So. Wilkes-Barre	Arm fractured; struck by a piece of coal from blast.	
	28	John Burshaw	Slavonian	Miner	55	M. Hollenback	Leg broken; struck by a piece of coal from blast.	
	28	Wm. Kostavage	Polish	Miner	23	S. Dorrance	Wrist dislocated and foot smashed by fall of coal and bone which he neglected to take down after being told to do so by the fire boss.	
Oct.	5	Robert Jones	Welsh	Miner	55	M. Maxwell	Several ribs fractured by a fall of rock.	
	5	George Slack	American	Driver	21	S. Stanton	Hip squeezed between car and prop.	
	9	Stanley Micosh	Polish	Laborer	19	S. Red Ash No. 2	Two fingers cut off between car bumper and piece of coal.	
	9	George McCallen	Russian	Laborer	33	M. Red Ash No. 2	Head and arms cut by a fall of top coal.	
	9	Mike Smith	Polish	Driver	21	M. Dorrance	Squeezed between car and prop.	
	13	Thomas Durkin	Irish	Timberman	47	M. Conyngham	Back injured by fall of rock.	
	23	Michael Andrecktus	Polish	Miner	31	M. Colliery No. 6	Burned and bruised by an explosion of powder.	
	24	Steve Yatzko	Slavonian	Miner	25	M. Colliery No. 5	Two ribs fractured; fell between bumpers of moving cars.	
	Nov.	10	Anthony Gorham	Irish	Company man	59	M. Maxwell	Arm broken by prop falling against it.
	11	Anthony Tomick	Polish	Miner	43	M. Red Ash	While trying to pull a cog into a wheel the cog fell on his head, blowing the drill through his leg, fracturing his leg and hip and burning his face and hands.	
11	Albert Winecavage	Polish	Laborer	23	M. Auchincloss	Burned on face and hands, and face and arms cut by the explosion.		
11	Jacob Mikrut	Polish	Laborer	39	M. Colliery No. 6	Leg broken; struck by piece of coal from rib.		
11	Thomas D. Williams	Welsh	Miner	45	M. Maxwell	While loading a car at the face of the slope, the block slipped from under the wheel, allowing the car to run over the end of the road and squeezing him against the face of the slope.		
13	Charles Duncan	English	Supply clerk	35	M. Colliery No. 5	Squeezed between engine and car, caused by wheel on car breaking. Outside.		
16	Morris J. Hughes	Welsh	Miner	33	M. Stanton	While barring down a piece of coal, part of it struck him on the ankle, fracturing it.		
17	Richard P. Evans	Welsh	Miner	35	M. Stanton	These five men, with others, were being lowered on the cage in No. 3 shaft, when the engineer lost control of his engine, allowing the cage to strike on the bottom very hard, jarring and bruising them.		
17	John Sopoy	Polish	Miner	39	M. Stanton	Head squeezed between cars while trying to prop them.		
17	John D. Jones	Welsh	Rock miner	27	S. So. Wilkes-Barre	Leg broken by fall of rock.		
17	George Savage	Polish	Miner	40	M. Stanton	Skull fractured by a piece of coal striking him.		
17	Irwiln Kronus	American	Patcher	17	S. Stanton			
18	Rollo Oriell	Welsh	Runner	18	S. Dorrance			
20	George Cobby	American	Timberman	31	M. Conyngham			
20	Patrick Patalonis	Polish	Miner	26	S. Maxwell			



TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Nov. 22	Charles Urban, .....	Lithuanian, .....	Miner, .....	25	S.	Warrior Run, .....		Face burned by gas.
	John Giatcki, .....	Polish, .....	Driver, .....	21	S.	Colliery No. 7, .....		Jaw fractured; kicked by a mule.
Dec. 4	Peter Muzukavage, .....	Polish, .....	Miner, .....	48	M.	Colliery No. 6, .....		Leg broken; coal which he was barring down fell on him.
5	Andrew Coll, .....	American, .....	Miner, .....	60	M.	Dorrance, .....		Badly bruised by fall of rock.
7	Robert Owens, .....	Welsh, .....	Miner, .....	38	M.	Maxwell, .....		Slightly burned on hands and face by gas.
9	Adam Ochoposki, .....	Russian, .....	Laborer, .....	22	S.	Stanton, .....		Squeezed between rib and car, by car jumping track.
9	John Slotchilomis, .....	Lithuanian, .....	Laborer, .....	25	S.	So. Wilkes-Barre, .....		Slightly burned on face and breast by powder about abdomen; caught between squeezed and blow-off pipe of pump while in the dark.
15	Henry Mayor, .....	English, .....	Pumpman, .....	29	M.	Colliery No. 5, .....		Three ribs fractured by being struck by a piece of rock.
15	John Harris, .....	Welsh, .....	Miner, .....	38	M.	Maxwell, .....		Hands and face burned by powder.
18	Edward Carey, .....	Irish, .....	Miner, .....	48	M.	Maxwell, .....		Face and hands burned by gas.
21	Arthur Poole, .....	Welsh, .....	Rock man, .....	20	M.	Stanton, .....		Right leg bruised by a piece of coal falling upon it.
23	John James, .....	Welsh, .....	Miner, .....	33	S.	Hollenback, .....	Luzerne, .....	Right leg bruised by a piece of coal falling upon it.
23	Thomas Beynon, .....	Welsh, .....	Miner, .....	41	M.	Hollenback, .....		Bruised on both legs and shoulder by a piece of rock falling and then rolling down pitch and striking him.
23	John Suddock, .....	Polish, .....	Miner, .....	27	S.	Colliery No. 7, .....		Both legs bruised by being struck by a trip of cars on slope.
23	William Magda, .....	Slavonian, .....	Laborer, .....	27	M.	Maxwell, .....		Hands and face burned by gas. He lit the gas by opening his safety lamp.
28	Peter Bobb, .....	Polish, .....	Miner, .....	32	M.	Maxwell, .....		Squeezed between car and rib by falling off the car.
29	George Lash, .....	Polish, .....	Coupler, .....	31	M.	Colliery No. 6, .....		Arm broken and face and body bruised by falling in front of moving trip.
30	John Clune, .....	American, .....	Driver, .....	19	S.	Dorrance, .....		Leg and head hurt by falling off roof of boiler house. Outside.
30	John Markovitz, .....	Polish, .....	Carpenter, .....	30	M.	Colliery No. 6, .....		



## FATAL ACCIDENTS

## By Falls of Coal, Slate and Roof

Thomas Reese, miner, at the Hollenback colliery, had fired a blast and returned to the face of his chamber, and started to work some of the coal loose, when a piece of slate fell on him. One of his legs was broken and he received internal injuries. The accident occurred January 10, and he died at the City Hospital February 7.

Anthony Kenyoski, miner, at the Auchincloss, was instantly killed January 18, by a piece of top coal falling on him. The chamber was well timbered, but the piece that fell was almost surrounded by a blind slip.

Thomas Watson, miner, at the Stanton, was instantly killed by a large fall of top rock in the face of his Chamber, January 21. He had evidently been deceived by the top rock, as there was a slip in it on one side.

Charles Doboditus, laborer, at the South Wilkes-Barre, was injured March 8 by a fall of bone and rock, and died next day. He was laboring for a miner named George Yakites in a chamber in the Kidney vein, where there is a piece of bony coal about 8 inches thick over the coal. When this is kept up the roof can be kept good by propping, but when it starts to break down the chamber and gangway have to be collared close to the face, and then it is very hard to keep the roof up.

The miner was starting a new chamber off No. 6 slope and it was in about 20 feet and was about 12 feet wide. He said that he noticed that the bony was breaking and that he tried to pull it down, but was unable to do so. He then went to work in the face and allowed his two laborers to start to load a car, and while they were loading the car, some of the bony and rock fell and caught Doboditus.

Mike Rush, miner, at the Stanton, was working in the face of his chamber when he was instantly killed by a fall of top rock, March 11. He had been warned by the assistant forman that the rock was bad and should be taken down, but he delayed, and when he started a hole that would blow it down, it fell on him.

William P. Price, miner at the Alden, was instantly killed, June 1, in the face of his chamber by a large piece of coal falling on him. The fall was due to a slip.

Matt Sopovinski, laborer, at the Stanton, was instantly killed June 7. He was preparing to load a car when a large piece of rock fell on him.

Michael Buck, miner, Red Ash No. 2, was instantly killed June 8. He was robbing pillars in the Red Ash vein. He had fired a blast and went to bar down some of the top coal, when it fell on him.

Anthony Seckowski, laborer, Colliery No. 5, was instantly killed August 4. He was about to drill a hole in the center of the chamber. He had fastened the machine bar and was going to start the hole when he noticed a piece of top coal, which he evidently thought was in his way. This top coal extended about 18 inches from the face. He took a drill and pulled it down and when it fell a large piece of rock that was above the coal fell on him.

John Davis, timberman, Conyngham, was instantly killed by a

fall of top coal, August 4. Davis and Lewis Johnston, another company timberman, were sent to do some timbering in the first chamber, and while they were standing a prop the top coal fell upon them, killing Davis and injuring Johnston.

John Hunt, company miner, Stanton, was instantly killed August 12. He was timbering a double branch in the west five foot vein, and while he was preparing a place for a leg, a piece of rock fell on him.

John Lovett, miner, Matthew Okales, miner, and Anthony Zakaruskus, laborer, were instantly killed and Thomas Walters, slope runner was badly injured by a fall of bony coal in No. 2 West Mills vein slope of the Truesdale. The accident happened between 12 and 1 o'clock in the morning of August 12. Lovett and his laborer Zakaruskus had finished their shift, but stayed to help lay some track. When Okales and his laborer, Joseph Foley came in to change them, they all went to work together to put down some road. Joseph Foley and Charles Polonus went back to the slope for some ties, and in the meanwhile, Walters, the slope-runner came in to see if they needed a car. About the time he reached them, the bony coal came down with a crash catching all four under it. The miners should have taken this bony coal down, stood props under it, and not have risked it as it was.

John Lincho, miner, at the Hollenback, was instantly killed and Thomas Hazlinski, his laborer, was slightly injured August 23, by a fall of rock. Lincho was sitting about 12 feet from the face and the laborer was loading a car. They heard a crack in the roof and it instantly fell. This accident would have been avoided if the miner had stood props as he had been ordered by the assistant mine foreman.

George Granater, miner, Colliery No. 7, was standing a prop in the face of his chamber when he was crushed to death by a fall of rock, August 23.

Metro Jula, miner, Alden, was fatally injured August 24. He was working a breast in the Mill's vein, Mills slope. He had finished all but loading one car. It seems that he had not enough coal to fill the car and he started to dig some from the pillar, and while he was doing so, a piece of top coal and clod fell upon him. He died same day.

Michael Pyrah, laborer, Maxwell, was instantly killed August 29. He was laboring for Robert Lloyd in first east gangway, Ross vein. They fired a shot in the face and then went back to the box to eat supper. After supper, they commenced work again, when a large piece of rock fell on Michael. This rock had two blind slips and was very deceptive.

Alex Komerofski, laborer, Bliss, was instantly killed August 31. He worked for Robert Clarke, Clarke left Komerofski and William Clarke, another laborer, to load a car of coal and gave them instructions to go home when the car was loaded. Instead of doing so, Komerofski started to pick coal under a piece of top coal and the top coal fell upon him.

John Barrett, miner, Red Ash No. 1, was fatally injured September 28. He returned to the face of his chamber before the smoke from the blast had cleared away. He failed to notice a large piece of rock that was still hanging above the 6 foot vein, and as soon as he

stepped under it, it fell on him breaking several ribs and fracturing his spine. He died October 6.

Griffith Davis, miner, Red Ash No. 2, was fatally injured October 4. He was robbing pillars in the fourth lift, and was preparing to drill a hole when a large piece of coal fell upon him. He died November 7.

Ruben Everland, laborer, Colliery No. 7, was instantly killed October 24. He was laboring for William J. Davis, who was reopening an old lift on No. 9 slope, Forge seam. He was loading a car in company with two other workmen, when a piece of rock fell, striking him on the back of the neck.

Victor Tom, laborer, South Wilkes-Barre, was instantly killed December 5. He was loading a car when a piece of rock fell from the rib. It knocked down a set of timber that was at the face, and it fell on him.

John Dyvitch, laborer, Stanton, was fatally injured December 9. He was throwing coal back alongside the track, when a piece of rock fell upon him, and broke several of his ribs and also his leg. He died December 13.

Martin Croski, laborer, South Wilkes-Barre, was instantly killed December 16. He was loading a car at the face of the chamber when a piece of top coal and bone suddenly fell upon him.

Andrew Yorokofki, laborer, Dorrance, was almost instantly killed December 16. He was working in a heading in Cooper vein, No. 16 slope. The miner had prepared a blast in the face of the heading and Yorokofki was retreating to a place of safety at the corner of the heading, when a piece of bone and rock fell on him.

### By Cars (Inside)

William Dew, driver, Bliss, was instantly killed, February 25, while taking a trip of two loaded cars out the gangway from the head of No. 2 slope, Ross vein, in Espy tunnel. He tried to jump on the head end of a car, made a misstep and fell under it and was so badly injured that he died without speaking.

Patrick Walsh, driver, South Wilkes-Barre, was fatally injured May 15 by being squeezed between cars at the head of No. 3 slope, Hillman vein. He was pulling an empty trip from the head of No. 3 slope to No. 5 slope, and while getting on the head end of the trip where the empty cars pass the loaded cars, he was caught between the two trips. He died May 30.

John Urbin, laborer, Dorrance, was instantly killed by trip of cars, May 22. He started down the West plane without waiting for the miner to hoist the trip of cars. When the trip was hoisted he was found on the plane in a dying condition. He had been struck by the trip of cars.

John Lech, patcher, was instantly killed July 28. He stood along the road where he had no occasion to stand and as a car was passing it jumped the track and struck him.

Joseph Kennite, driver, Colliery No. 7, was almost instantly killed November 18. He was driving a team of mules along No. 22 tunnel gangway, riding on the head end of a trip of 5 loaded cars that he was bringing out to the foot of No. 3 shaft. In some way he fell



under the trip of cars and was found with his skull fractured and both legs broken.

Joe Verecotch, laborer, Alden, was killed December 1. He was employed by Wm. Gould, contractor, who was sinking a slope in the East vein in No. 2 shaft. His miner and he were working in the face of the slope. Above them about 90 feet up along the slope a car was standing that had been loaded by the night shift from the airway. The footman signaled to the engineer to slack off so that he could couple the car on and hoist it to the top of the slope. When the engineer slacked off he bumped the car with such force, that it broke the block that was holding it. The car ran to the bottom and struck the laborer. This accident should have never happened. The night shift men had been instructed to place a drag on their cars in order to prevent them from running down the slope, but this they neglected to do. The men working in the slope had also been instructed to leave the face of the slope and go to a place where there would be no danger whenever there was any hoisting or lowering of cars on the slope. This they neglected to do.

Patrick Murphy, footman, Franklin, was instantly killed December 29 while working at the foot of Long slope. Two cars jumped the track and one of them became uncoupled and ran away. Murphy was struck by flying coal or wood and instantly killed. He had a hole in the back of his head and was found 40 feet in No. 1 tunnel.

#### By Blasts (Inside)

Joe Munick, miner, Alden, was pushing his needle through the powder at the back of the hole when the powder exploded. He was so badly injured (January 24) that he died on February 3.

George Younger, miner, Colliery No. 6, was instantly killed in his chamber by premature blast, January 28. He had prepared a blast.

He lighted the squib, yelled "fire," and began to retreat. Scarcely more than a second had elapsed before the blast exploded. The laborer found Younger lying dead about 10 yards from the face.

Felix Besenski, miner, Franklin (April 20), had charged a hole and lighted the squib, and had retreated about 40 feet from the face when the blast exploded. He was struck on the head by a piece of flying coal, rendering him unconscious for several hours. He was taken to Mercy Hospital, where he died April 25.

Peter Lubinski, laborer, Dorrance, was laboring for Anthony Lubinski on April 26. The miner had drilled a hole in the bottom rock, and put the powder in it and Peter began to tamp it. While he was tamping it the blast exploded, killing him instantly.

Edward Thomas, miner, South Wilkes-Barre, was fatally injured on August 29. He was driving a heading at the face of No. 12 tunnel. He exploded his blast by an electrical battery. He had prepared a blast and was ready to fire it but he found that some gas had accumulated at the face, and he stayed at the face to remove it. He instructed one of his two laborers to go to the battery so as to be ready to fire when he (Thomas) would give the signal. The laborer says that Thomas gave the signal, and the shot was fired while Thomas was yet near the face. He was fatally injured, dying at his home three hours later.

### By Explosions of Gas (Inside)

John Brown, miner, Maxwell, was fatally burned by an explosion of gas December 7 and died at Mercy Hospital, December 18. About 8 A. M. he was shoveling coal from the face to make room for brattice. He was using his safety lamp and he had his naked light a few feet back from the face. By shoveling he must have driven the gas to his naked light. This exploded the gas and he was burned on his hands, face and back.

### Suffocated by Gas (Inside)

Adam Markosky, miner, South Wilkes-Barre, was going to do some timbering on June 17, at the face of No. 4 slope, fourth East gangway, Baltimore vein. He wanted to get his drill which was up in chamber No. 40. So he and his laborer went up the chamber close to the face, but they could not get to the drill on account of the gas there. So the laborer stayed there and Markosky went down and up on the other side of the brattice. The laborer heard him fall and called to him, but he received no answer. He then went and notified others, but when David Reese, Thomas Quinn and others arrived, they pulled him down to the cross-cut, and upon examining him they saw that he was dead. He had been suffocated by the gas. He had been warned by L. J. Davies, assistant foreman, not to go up this chamber.

### Miscellaneous (Inside)

Anthony Lavitch, miner, Hollenback, was working in a breast (August 12) that had a pitch of about 30 degrees. There was a flat in his place about 12 feet from the face. He was standing here shoveling coal down the breast and while he was doing so, a piece of bone coal about 3 feet by 3 feet by 3 feet rolled out of the face of his breast upon him, crushing his head and killing him instantly.

John Martin, miner, Bliss, worked in a pitching chamber on first East lift, off No. 4 tunnel, Ross vein (October 26). This chamber has an average pitch of 40 degrees. He had ascended his chamber to the face which is a distance of 290 feet. Instead of taking his safety lamp only to examine his place he took his naked light also. The naked light on his cap ignited a small quantity of gas which had accumulated since the fire-boss had made his morning examination. In his fright, caused by igniting the gas, he jumped for the man-way which was on the left side of the chamber, but instead of jumping into the man-way he jumped into the open chamber and fell the entire distance of the chamber. His injuries consisted of slight burns and severe bruises all over his body. He was removed to his home, where he died the same day at 11 P. M.

Anthony Kluchnick, miner, Bliss, was heating a stick of dynamite (November 22) with his naked lamp. While doing so his attention was attracted by some noise, which he evidently thought was a fall of rock. Without a second thought he placed the dynamite in his boot leg. The dynamite had become ignited and now burned. It severely burned his leg from the knee down. He died at the Moses Taylor Hospital, Scranton, on December 9.

### By Cars (Outside)

John Tometsco, car loader, Maxwell, had finished loading a large steel railroad car and started to run it down in the yard (March 9) He was standing on the front end by the brake. About 200 feet below the breaker in some way he fell off in front of the car. The car passed over him crushing his body at the hips and cutting off one arm. He lived about one hour and fifteen minutes after the accident.

Luke Pesovitch, loader, Bliss. Two box cars had been loaded and run down from the breaker on the North track (April 14). The car nearest the breaker was standing over the switch about 9 feet from the frog. The coal inspector was inspecting the first car of coal before it was weighed. An empty steel car ran away from under the breaker on the South track and Luke jumped on the front end of the steel car to stop it. Before he could apply the brake, the cars came together, catching Luke between the brake wheel on the steel car and the end of the box car. On account of the two cars coming together near the frog, the draw-heads were not in line, this allowing the draw head of the steel car to slip under the box car. This allowed the two cars to come close together. The coal inspector called to Luke before he got on the car to let it go, but he did not heed the warning. He died about an hour after the accident happened.

Eddie Ebert, Buckwheat loader, Colliery No. 7. While he was uncoupling the locomotive from a trip of cars while they were in motion (August 7) he lost his balance and fell under the cars. Several cars passed over him, causing fatal injuries. He died at the Mercy Hospital on October 8.

Stanley Cyvinski, slatepicker, Bliss, had been out on an errand October 7, and was returning to the breaker by way of the dirt road. He jumped on one of the refuse cars to ride in. He was chased off by the driver. He then jumped on the next car and as it entered the breaker Stanley was squeezed between the car and the side of the breaker, breaking his leg just above the knee and inflicting internal injuries. He died October 25.

### By Machinery (Outside)

Barney Koschowaek, oiler, Colliery No. 7. was instantly killed April 26, by having his clothes caught on a revolving shaft. The victim had evidently climbed over the railing which guarded the shafting and attempted to get down alongside of the revolving shaft.

### Smothered to Death (Outside)

Charles Staley and Edward McManaman, outside laborers, Stanton, were picking ice off the fuel tracks underneath the breaker on March 13, when about 40 feet of the screening pockets in the middle of the breaker gave away, and the men were buried under the timber and dirt. They were suffocated before they could be reached.

### By Stone Falling Upon Him (Outside)

Peter Creson was stripping the dirt from the top of some coal and he was undermining a large stone. A large piece of the stone fell upon him, instantly killing him, September 27.



## CONYNGHAM DISASTER

Shortly after 6 o'clock A. M. April 26, ten men were killed at the Conyngham colliery of the Delaware and Hudson Company, by the breaking of the rope in the shaft in which the men are lowered to and hoisted from their work. Several cage loads of workmen had already descended to their work. These ten men in their turn stepped upon the cage. The cage had just about reached the Hillman landing where most of them intended to get off. The engineer had slackened the speed and was about to stop when the rope parted. The safety catches failed to work and the cage dropped to the bottom of the shaft, a distance of about 400 feet.

The engineer in charge of the engine at the time was William Cunningham, a man of many year's experience as an engineer. He said that all went well until he was about to stop the engine, when he felt a jerk on the engine, and the rope, which is usually drawn taut by the weight of the cage, hung slack. He knew instantly that something was wrong. A few moments later word came up through the speaking tube from the footman that the cage with its load of human freight had struck the bottom with a terrific crash. A rescuing party of officials and workmen labored for several hours before they finally succeeded in extricating all of the bodies from the tangled mass of wreckage.

The question arises, why did the safety catches on the cage fail to work? I must say that I was greatly deceived in them. At the Delaware shaft of the Delaware and Hudson Company, where I was foreman for a number of years, the same kind of safety catches was used upon the cage. I had often seen them tested and they never failed to work satisfactorily.

These safety catches were what are called the quadrants. They are made of brass, with a row of teeth around the outer rim. They are adjusted by means of rubber springs through which the draw-bolt on the cage passes. If the rope breaks or becomes detached from the cage, they are supposed to wedge and grip tight upon the guides in an instant. There are four of these quadrants on each cage, or two to each guide, opposite each other.

Why they did not grip the guides and hold the cage on the morning in question is in my opinion due to one of two causes:

1st. That the safety catches on that cage were out of order at the time of the accident; or,

2nd. If they were not out of order, they were not safety catches such as the law requires that will be effective under any condition that may arise in hoisting shafts.

As to the first condition, we have the sworn testimony of John Moore, carpenter, and Thomas Ruddy and Harry Mills, engineers, whose duty it was to examine and keep in good order these safety catches, that they had examined them and that they were in good working condition.

As to the second condition, it was shown by the testimony of Mr. Thomas, who was looking at the cage as it was coming to the Hillman landing, that when the rope broke, the cage disappeared in an instant, showing conclusively that the safety catches failed absolutely to act. The guides at the point where the cage was when

the rope broke were in good condition, but they showed no signs of the safety catches having taken hold of them. This was a surprise to us all.

After the accident a great many opinions were expressed by different persons as to why the catches failed to work. The opinion most expressed was that the piece of rope hanging to the cage had held the catches taut and therefore they could not grip the guides as their inventor intended they should. If this theory be true then it must be acknowledged that the safety catches are not equal to all emergencies that may arise in our shafts.

I had intended, after being notified by the Chief of the Department of Mines, to test all the cages in the shafts in my district, and to test some of them under about the same conditions as prevailed at the Conyngham shaft at the time of this accident, namely, to drop a cage when several hundred feet of rope were attached to it. But when I spoke to some of the superintendents about doing this they were loath to do it. They felt that it would not be right for me as a Mine Inspector to cause them any more trouble or expense than operators were subjected to in other inspection districts. I had to acknowledge that their point was well taken, and as I had no authority to compel them to furnish pieces of rope of different lengths, I was compelled to abandon my idea of making such tests. The problem whether a piece of rope attached to the cage and falling with the cage will hold the safety catches taut and prevent them from taking hold is so far as I know at the present time unsolved.

Since this disaster, I doubt whether superintendents, foremen and intelligent mining men generally believe that if a cage loaded with men were descending a shaft and the rope were to break, or the cage become detached, the cage would stop in its descent.

In my experience in testing safety catches, I have found that if the cage does not stop the very instant it is cut loose it generally goes to the bottom. There seems always to be a reason for this. Sometimes something about the catches breaks, or the catches having small teeth get filled up with wood from the guides, or pieces break out of the guides, and when this happens the cage gets a start and generally lands upon the bottom.

After the above explanation of my experience in testing the safety catches, it will be seen how unlikely it would be for a heavy cage loaded with men going down some of our shafts as fast as they do sometimes, to be caught by the safety catches. In my opinion it seems nearly impossible for the reason that the heavy weight and the momentum of the cage going down would cause something to break or give way.

Even if the catches did hold fast and the cage stop suddenly, the result to the men would be the same as if the cage had struck the bottom hard. The chances are that they would all be injured or possibly killed by being thrown off the cage into the shaft. It is evident that all the dangers to which we are subjected in going up and down our hoisting shafts are not eliminated by the safety catches.

I have no wish to create any unnecessary alarm among mining people. Some of the safety devices now in use are the best that the market affords, but the question arises: Are they given proper attention? Every person whose duty it is to look after them should

do so without fear or favor, and according to law. If he does this he should have nothing to fear, but on the contrary he should have the thanks of his employers and of the men who must ride upon the cages.

The two best safety devices are:

1st. To always keep good ropes in shafts where men are hoisted or lowered. 2nd. To employ good and careful engineers, and not allow them to be overworked, men, who when hoisting or lowering men will run their engines as the law requires. If these two safety devices were adopted, there would scarcely be an accident of this kind.

The officials in charge of the mine always sincerely deplore any serious accident. The Mine Inspectors also regret them exceedingly and sympathize with the victims and their friends. But regret and sympathy amount to nothing to the victims, or to widows and orphans. What is needed is more strict oversight. If the provisions of the mine law were carefully followed, as the law intended they should be, there would be fewer accidents.

Take for instance the accident at the Conyngham. It shows plainly that the law had not been fully complied with, for what reason I am unable to explain. There were four men, three engineers and one carpenter, delegated by the foreman to look after the ropes and cages in this shaft. At the inquest, three of these men swore that they had examined this particular rope on the day before the accident, and that they could not see any broken strands in it. Yet when the rope broke the next day, there were numerous broken strands to be plainly seen on both ends back along from where the rope parted. I do not think that all of these broken strands had been broken between the time of their examination and the accident. It seems to me that these broken strands must have been visible to any one examining the rope for several days before the accident, and if they were, then all of those men whose duty it was to examine the rope and report its condition to the foreman, failed to do their duty, both to themselves and the company employing them, and also to the unfortunate victims and others who were compelled to ride upon this cage.

The only explanation that I can give as to why these men did not see those broken strands was, that they did not examine it as carefully as they should, and the reason they reported it in good condition, was that they took it for granted that as it was used only to lower and hoist men there would be no danger of it breaking. Of course this is only my supposition and I may be wrong.

I was sick at the time of the accident, and told them to notify Mine Inspector P. M. Boyle, who would assume my duties in the case. Mr. Boyle arrived at the colliery a short time after the accident and assisted in getting the bodies out. He notified Coroner Dodson to hold an inquest. There were several sessions before all the testimony was secured.

The verdict was as follows:

#### Verdict of Coroner's Jury

We, the jury, do say, that from the circumstances connected with this case and the evidence, that Frank Royal came to his death from being hurled down the shaft of the Conyngham mine, in North Wil-

kes-Barre, of the Delaware and Hudson Coal Company, on April 26, 1905, owing to the breaking of the rope and the dogs not working while the cage was descending. We are unable to determine from the evidence the cause of the breaking of the rope. We further find from the evidence given at the various hearings that the company had incompetent men to inspect this rope. We, the undersigned jurors, recommend that the company adopt some other method than the one now in use for testing the dogs, as the present method has proved inadequate. We further recommend that engineers, where men are to be lowered or hoisted, be required to be on duty but eight hours at one time, and we heartily approve of the method of employing engineers as recommended by Mine Inspector Martin in the Wilkes-Barre Record of February 28, 1905.

D. W. DODSON, Coroner.  
 JACOB EVANS,  
 JOHN CRAWFORD,  
 FRANK CASTERLINE,  
 THOMAS P. WILLIAMS,  
 CHARLES CUNNINGHAM,  
 JAMES HALL,

Jurors.

#### CONDITION OF COLLIERIES

The condition of the collieries in this district is good in regard to ventilation, except in a few instances.

It seems as if some foremen do not consider that it is necessary that all parts of a mine should be kept in good condition, especially as to ventilation. I have often found fault with the ventilation, but of course the foremen always have some excuse to offer, such as: "We expect to get a certain heading through so that the air will be better;" or, "The doors have been left standing open somewhere, which affects the ventilation badly. They know, however, that they have no one to attend to the doors properly. Numerous other excuses are also offered.

In my opinion it should not be necessary for any foreman to make excuses for the proper ventilation of any part of a mine, as required in Article 12, Rule 3, of the Anthracite mine law.

The mine foreman under this rule has charge of all matters pertaining to ventilation, and the speed of the ventilator is particularly under his charge and direction; and any superintendent who shall cause him to disregard the provision of the law shall be amenable in the same manner as the mine foreman.

#### IMPROVEMENTS

##### LEHIGH AND WILKES-BARRE COAL COMPANY

##### Hollenback No. 2 Colliery

Outside—Brick oil house; brick power house.

Inside—No. 18 Tunnel Red Ash to Top Red Ash; No. 19 Tunnel Red Ash to Top Red Ash.



## South Wilkes-Barre No. 5 Colliery

Outside—Two pairs 24x48 hoisting engines Nos. 6 and 7 slope; brick oil house.

Inside—No. 13 Tunnel Baltimore to Five Foot; No. 14 Tunnel Baltimore to Five Foot; No. 15 Tunnel Five Foot to Stanton.

## Stanton No. 7 Colliery

Inside.—Compound condensing duplex pump and reinforced concrete pump room.

## Sugar Notch No. 9 Colliery

Outside.—Supply store; started erection new breaker.

Inside.—No. 19 Tunnel Twin to Twin; No. 15 Tunnel extended Stanton to Hillman.

## Maxwell No. 20 Colliery

No. 19 Tunnel Hillman to Kidney; No. 20 Tunnel Red Ash to Twin; Rock plane airway Hillman to Kidney; Bore hole for culm slushing.

## LEHIGH VALLEY COAL COMPANY

## Dorrance Colliery

Baltimore shaft extended 170 feet and landings are being turned off from which tunnels will be driven to the Red Ash vein.

No. 13 Rock slope has been finished to the Red Ash vein. This to be used for a second outlet.

No. 6 Rock slope has been finished and a tunnel is being driven through Mill Creek Anticlinal to the main South dip.

No. 14 sub-slope in the Cooper and No. 15 sub-slope in the Bennett vein have been extended 800 feet.

Two tunnels are being driven in the Five Foot plane level to the Hillman vein.

No. 13 Tunnel from the Hillman to the Abbott finished.

No. 10 slope in the Bowkley has been finished to the basin.

Two tunnels, each 125 feet long, were driven from Bennett to Cooper vein in bottom lift of extension slope.

No. 1 Tunnel Hillman to Bowkley has been finished to the Abbott vein.

A new concrete wash-house equipped with 100 lockers has been erected.

One thousand five hundred H. P. Stirling water tube boilers has been installed, dispensing with 1,200 H. P. tubular.

The boiler house has been rebuilt with brick and corrugated iron roof.

The outside barn has been rebuilt, also mule hospital and concrete fire hose house.

## Franklin Colliery

Three hundred H. P. Stirling water tube boilers are being erected.

The water has been pumped out of the fire water submerged district in long slope and the Sump vein No. 7 slope has been extended to the No. 2 old level.

No. 11 Sump vein slope equipped with 12x12 hoisting engine on surface and rope hole.

New stable finished in Sump vein.

Extraordinary repairs and changes made to breaker, circular screens being dispensed with shakers, also additional mechanical pickers.

Thirty-five new steel cars.

New rock slope started and sunk 200 feet during past year from surface. Idea being to connect with inside No. 10 slope, Ross vein.

Silting has been continued and extended in the top split of Red Ash and Ross vein district.

A new bore hole for silt.

William's crusher and engine installed, taking care of refuse from breaker.

### Warrior Run Colliery

New boiler house finished.

One thousand five hundred H. P. return tubular boilers installed, equipped with eight foot fan blast, new feed pump and Cochran water heater. The three old cylinders and return tubular boiler plants dispensed with.

New steam lines have been completed between boiler house and Buck Mountain and Rope Hole engine houses.

Williams crusher installed and silting extended.

The breaker is now equipped with mechanical pickers.

A system of fire protection lines, fire hydrants, fire pump, etc., installed.

A bore hole is being drilled from surface to carry steam to the inside pump.

Every effort is being made by the present operators to bring this colliery in a safe working condition.

### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Auchincloss.—Made no improvements of note outside at this colliery.

Inside improvements consist of the following:

Seven by twelve rock tunnel from Baltimore to Forge vein. Length 190 feet.

Seven by twelve rock tunnel for ventilation, Forge to Baltimore vein, on a pitch of 30 degrees.

No. 5 tunnel No. 2 shaft was extended from Forge vein to Ross vein, a distance of 369 feet.

Besides this three other short rock tunnels were driven through faults, being necessary in connection with the development and ventilation of this colliery.

During the year several mine fires occurred at this colliery, some of which were very difficult to contend with, but fortunately no one was injured in subduing the fires.

Bliss.—No improvements of note were made either inside or outside at this colliery during the year.

Truesdale.—This mammoth breaker began operation on November 8, and is one of the largest in the Anthracite region. The management of the company has spared no labor or expense in putting up



this plant, consisting of improved and up-to-date machinery. Great results will be expected from this colliery some few years hence, when the shafts are fully developed, which of course is absolutely necessary in cases of this kind.

#### ALDEN COAL COMPANY

Outside.—A concrete reservoir 40x60x7 with a capacity of 112,000 gallons, has been erected to supply the colliery and dwellings with water.

An addition has been made on the breaker to be used for a washery for the purpose of washing the small size coal.

A steel conveyor line 300 feet long has been erected to carry fuel from washery to boiler house.

One set of 200 H. C. water tube boilers has been erected and enclosed.

An air shaft 16 feet x 18 feet has been sunk from surface to George vein, over which has been erected a 24 foot Vulcan fan, all of which is made of steel.

Inside.—A tunnel from Cooper to Hillman vein, 120 feet, completed.

A slope has been driven in the Cooper vein about 800 feet, also one in the Bennett vein; 900 feet of these slopes will continue to the basin.

#### Mine Foremen's Examinations

The examination for mine foremen and assistant mine foremen was held at Wilkes-Barre high school May 8 and 9.

The examining board was James Martin, Mine Inspector; Gwilym Edwards, Superintendent; Thomas Finn and Felix Wisniewski, miners.

The following persons received certificates:

#### Mine Foremen

Clarence S. Robbins, David W. Phillips, Walter E. Davis, Fred Lancaster, H. C. Kreiger, George A. Bound, John P. Kane, Joseph P. Evans, James C. Anderson.

#### Assistant Mine Foremen

Andrew Seletski, Henry Amos, William T. Dickie, Joseph P. Gibbon, D. J. Jones, Nicholas Cook, Lemuel E. Fine, Harry A. Mills, William Gwyn, Alfred W. Downs, David M. Stanton, Charles F. Gallagher, Edwin J. Richards, Wm. Broderick, John B. Corgan, John C. Hermansen, David W. Davies, Albin Molin, Evan T. Fulton, Zachariah Davis, Evan W. Owens, Evan O. Owens, Howard Davis, William James Varker.



# Eighth District

LUZERNE COUNTY

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Wilkes-Barre, Pa., February 28, 1906.

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

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines for the Eighth Anthracite District, for the year ending December 31, 1905. 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,

D. T. DAVIS,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	17
Number of mines, .....	35
Number of mines in operation, .....	35
Number of tons of coal shipped to market, .....	6,230,618
Number of tons used at mines for steam and heat, .....	447,411
Number of tons sold to local trade and used by employes, ..	91,993
Number of tons produced, .....	6,770,022
Number of persons employed inside of mines, .....	9,256
Number of persons employed outside, .....	3,353
Number of fatal accidents inside of mines, .....	38
Number of fatal accidents outside, .....	10
Number of non-fatal accidents inside of mines, .....	70
Number of non-fatal accidents outside, .....	11
Number of tons of coal produced per fatal accident inside, ..	172,460
Number of persons employed per fatal accident inside, ..	243
Number of persons employed per fatal accident outside, ..	335
Number of persons employed per non-fatal accident inside, ..	132
Number of persons employed per non-fatal accident outside, ..	304
Number of wives made widows, .....	33
Number of children orphaned, .....	83
Number of steam locomotives used inside of mines, .....	4
Number of steam locomotives used outside, .....	13
Number of compressed air locomotives used inside, .....	3
Number of electric motors used inside, .....	15
Number of fans in use, .....	40
Number of gaseous mines in operation, .....	31
Number of non-gaseous mines in operation, .....	4

TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Lehigh and Wilkes-Barre Coal Company, .....	1,679,441
Delaware and Hudson Company, .....	1,315,875
Delaware, Lackawanna and Western Railroad Company, ..	1,151,402
Parrish Coal Company, .....	687,644
Kingston Coal Company, .....	668,480
West End Coal Company, .....	513,795
North American Coal Company, .....	294,850
Plymouth Coal Company (People's Bank, Receiver), .....	190,206
Old Plymouth Coal Company, .....	179,507
George F. Lee Coal Company, .....	53,102
West Nanticoke Coal Company, .....	35,720
Total, .....	<u>6,770,022</u>

## Production by Counties

Luzerne, .....	<u>6,770,022</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	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 and Wilkes-Barre Coal Co., .....	8	4	12	19	3	22	209,390	88,362	2,065	649	2,714	258	162	109	216
Delaware and Hudson Co., .....	9	4	13	10	4	14	146,208	131,588	2,201	758	2,959	245	189	220	389
D., L. and W. R. Co., .....	5	7	12	7	2	9	230,280	164,486	1,626	337	2,063	325	232	232	198
Parrish Coal Co., .....	5	5	10	16	.....	16	137,529	42,978	1,244	433	1,677	249	.....	78	.....
Kingston Coal Co., .....	2	7	9	7	.....	7	334,240	96,487	967	470	1,437	483	.....	138	.....
West End Coal Co., .....	6	1	7	9	2	11	85,632	57,088	731	254	985	122	253	81	156
Plymouth Coal Co., .....	3	3	6	1	.....	4	63,402	190,206	291	166	457	97	.....	291	.....
George F. Lee Coal Co., .....	.....	.....	.....	1	.....	1	.....	53,102	125	50	175	.....	.....	125	.....
North American Coal Co., .....	.....	1	.....	.....	.....	.....	.....	.....	.....	68	68	.....	.....	.....	.....
Miscellaneous companies, .....	.....	.....	.....	.....	.....	.....	.....	.....	6	108	114	.....	.....	.....	.....
Totals and averages for district, .....	38	10	48	70	11	81	172,460	102,917	9,256	2,353	12,009	243	335	132	304



TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Falls of coal, .....				1	1	1	1	2	1	1	2		10	26.32
Falls of slate, .....			1										1	2.63
Falls of roof, .....	1	1		1		1	2	1		1	1		15	39.47
Mine cars, .....												2	5	13.16
Explosions of gas and dust, .....				1			1						2	5.26
Premature blasts, .....								1	1		1	1	3	7.90
Falling into shafts, .....								1					1	2.63
Miscellaneous, .....								1					1	2.63
Totals, .....	1	1	2	3	5	3	5	5	2	2	4	4	33	100
Causes of Accidents Outside														
Machinery, .....	1							1		1		2	5	50.00
Miscellaneous, .....						1	2		1		1		5	50.00
Totals, .....	1					1	2	1	1	1	1	2	10	100
Grand totals inside and outside, .....	2	1	2	3	5	4	7	6	3	3	5	6	43	.....

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Falls of coal, .....		1	1	1	1					1			5	7.14
Falls of slate, .....				1	1	1	3	2	2				16	5.71
Falls of roof, .....						1	1	2	2	1			16	22.86
Mine cars, .....	1			3	2			4		3	1		19	27.14
Explosions of gas and dust, .....	2	1				1	2						8	11.43
Premature blasts, .....	4						1				1	1	8	11.43
By mules, .....							1				1	1	3	4.29
Miscellaneous, .....			1	1	1		1		2	1		1	8	11.43
Totals, .....	7	7	13	7	5	3	8	6	4	6	1	3	70	100
Causes of Accidents Outside														
Cars, .....			1		1				2				4	36.36
Machinery, .....				1	1	1							3	27.27
Miscellaneous, .....	1	1							1		1		4	36.37
Totals, .....	1	1	1	1	2	1			3		1		11	100
Grand totals inside and outside, .....	8	8	14	8	7	4	8	6	7	6	2	3	81	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....	1	1	2	2	2	2	3	3	2	1	2	2	23
Miners' laborers, .....			1	1	1	1	2	1				1	11
Drivers and runners, .....					1	1							1
Company men, .....						1	1	1				1	3
Totals, .....	1	1	3	3	5	3	5	5	2	2	4	4	38
Outside													
Blacksmiths and carpenters, .....								1				1	1
Engineers and firemen, .....									1				1
Slatepickers (boys), .....	1					1	2		1	1		1	4
All other employes, .....						1	2			1			1
Totals, .....	1					1	2	1	1	1	1	2	10
Grand totals inside and outside, .....	2	1	3	3	5	4	7	6	3	3	5	6	48

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....	5	3	7	2	3		4	3	1	1		1	29
Miners' laborers, .....	1	4	4	3	1	3		2	1		1		23
Drivers and runners, .....			2	3		1	1		3				9
Doorboys and helpers, .....					1		1	2					5
Company men, .....	1						1					2	4
Totals, .....	7	7	13	7	5	3	8	6	4	6	1	3	70
Outside													
Engineers and firemen, .....					2	1		1					4
Slatepickers (boys), .....		1						1		1			3
All other employes, .....	1		1	1				1					4
Totals, .....	1	1	1	1	2	1		3		1			11
Grand totals inside and outside, .....	8	8	14	8	7	4	8	6	7	6	2	3	81

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals	
	January	February	March	April	May	June	July	August	September	October	November	December		
American, .....	1					1	1	1					2	6
Welsh, .....		1											1	1
Irish, .....	1							1	1				2	5
German, .....			1	1	2	2	1	2	1	2	2			11
Polish, .....														1
Italian, .....			2	1		1		1	1					5
Slavonian, .....						1			1				1	4
Lithuanian, .....				1			2	1			2			4
Austrian, .....				1						1	1			1
Russian, .....								1						1
Greek, .....														1
Totals, .....	2	1	3	3	5	4	7	6	3	3	5	6		48

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals	
	January	February	March	April	May	June	July	August	September	October	November	December		
American, .....	1	1	2	2	2	1	2	1	2	2	1	1		18
English, .....		1	1	1		1								5
Welsh, .....	1	1												3
Irish, .....				1										1
German, .....				1										1
Polish, .....	2	2	4	1	2	1	2		2	2		1		21
Slavonian, .....			1	1	1	1	1		1					7
Lithuanian, .....			4	1	1	1	1			1				10
Austrian, .....			2					1						3
Russian, .....	2			1		1	2			1				7
Totals, .....	5	5	14	5	7	4	8	6	7	6	2	3		81

TABLE I.—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 person 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 Coal Co	Shaft.....	Gaseous,	Fan.....	24	7.10	6	70	1.2	} Guibal, .....	Steam.....	11	414,000	312,000	487,000	601	502	
	Shaft.....	Gaseous,	Fan.....	8	6	70	1.6										
	Shaft.....	Gaseous,	Fan.....	24	8	6	70	1.9	} Guibal, .....	Steam.....	16	443,950	285,100	487,080	426	624	
	Shaft.....	Gaseous,	Fan.....	34	10.11	8.4	49	1.2									
	Shaft.....	Gaseous,	Fan.....	35	11.9	8.9	49	1.8	} Guibal, .....	Steam.....	4	98,700	54,450	101,300	220	248	
	Shaft.....	Gaseous,	Fan.....	35	11.9	8.9	49	1.8									
	Reynolds No. 16, .....	Slope.....	Gaseous,	Fan.....	23.9	5.7	5.10	68	1.4	} Guibal, .....	Steam.....	14	290,290	259,200	317,370	519	500
	Wanlimie No. 18, .....	Slope.....	Gaseous,	Fan.....	15	4.6	7.6	70	1								
		Drift.....	Gaseous,	Fan.....	24	8.0	6	70	1.9	} Guibal, .....	Steam.....	6	169,000	154,000	196,000	585	277
		Drift.....	Gaseous,	Fan.....	22	5	6.6	85	1.8								
Delaware and Hudson Co.	Shaft.....	Gaseous,	Fan.....	22	5	6.6	85	1.8	} Guibal, .....	Steam.....	10	310,000	290,000	330,000	485	536	
	Shaft.....	Gaseous,	Fan.....	28	10	7.10	60	2.4									
	Boston, .....	Drift.....	Gaseous,	Fan.....	17	5	4	90	1.7	} Guibal, .....	Steam.....	11	208,000	191,000	227,000	416	435
		Drift.....	Gaseous,	Fan.....	17	5	4	40	1								
	Plymouth No. 3, .....	Slope.....	Gaseous,	Fan.....	17	5	4	65	3	} Guibal, .....	Steam.....	9	190,000	177,000	190,000	389	400
	Plymouth No. 2, .....	Slope.....	Gaseous,	Fan.....	28	10	7.6	80	2.4								
	Plymouth No. 5, .....	Shaft.....	Gaseous,	Fan.....	22	5	6.6	75	1.5	} Guibal, .....	Steam.....	7	108,000	93,000	10,900	250	372
	Plymouth No. 4, .....	Shaft.....	Gaseous,	Fan.....	17	5	4	130	.9								

Delaware, Lackawanna and Western Railroad Co.	Woodward, .....	Shaft.....	Gasous,	Fan.....	16	5	6.3	105	1.5	Dickson open...	} Steam... 24	333,500	266,600	356,400	908	294
		Shaft.....	Gasous,	Fan.....	16	5.8	6.3	105	1.5	Dickson closed..						
		Shaft.....	Gasous,	Fan.....	30	6	6	35	2.2	Dickson closed.						
		Shaft.....	Gasous,	Fan.....	35	9	10	52	2.5	Dickson open...						
		Shaft.....	Gasous,	Fan.....	16	5	4	100	.36	Dickson open...						
Parrish Coal Co.	Parrish, .....	Slope.....	Gasous,	Fan.....	24	8	7.4	70	2.1	} Guibal, .....	} Steam... 10	127,000	104,000	130,000	376	297
		Slope.....	Gasous,	Fan.....	20	5.8	5.8	80	2.1							
		Slope.....	Gasous,	Fan.....	20	5.8	5.8	80	2.1							
		Shaft.....	Gasous,	Fan.....	35	11.9	10.8	48	2.2							
		Shaft.....	Gasous,	Fan.....	24	8.5	7.4	70	3.3							
Kingson Coal Co.	Gaylord, .....	Slope.....	Gasous,	Fan.....	25	8	7	60	1.1	} Guibal, .....	} Steam... 4	65,000	40,000	80,000	198	292
		Slope.....	Gasous,	Fan.....	28	8	7.8	60	1.2							
		Shaft.....	Gasous,	Fan.....	21	6	6.9	60	1.3							
		Shaft.....	Gasous,	Fan.....	21	6	6.9	60	1.3							
		Shaft.....	Gasous,	Fan.....	21	6	6.9	60	1.3							
West End Coal Co.	West End, .....	Drift.....	Gasous,	Fan.....	16	6	4	75	.1	} Guibal, .....	} Steam... 6	177,860	112,000	151,750	315	356
		Drift.....	Gasous,	Fan.....	20	6	6	60	1.4							
		Drift.....	Gasous,	Fan.....	15	4.9	3.9	60	.8							
		Drift.....	Gasous,	Fan.....	3	2.4	2.4	200	.1							
		Drift.....	Non-gas.	Natural,	.....	.....	.....	.....	.....							
		Drift.....	Non-gas.	Natural,	.....	.....	.....	.....	.....							
		Drift.....	Non-gas.	Natural,	.....	.....	.....	.....	.....							
		Slope.....	Non-gas.	Natural,	.....	.....	.....	.....	.....							
		Slope.....	Non-gas.	Natural,	.....	.....	.....	.....	.....							
		Drift.....	Non-gas.	Natural,	.....	.....	.....	.....	.....							
Plymouth Coal Co.	Dodson, .....	Shaft.....	Gasous,	Fan.....	20	6.6	5.6	92	1.2	} Guibal, .....	} Steam... 7	120,205	98,000	121,000	231	424
		Shaft.....	Non-gas.	Natural,	.....	.....	.....	.....	.....							
		Slope.....	Non-gas.	Natural,	.....	.....	.....	.....	.....							
		Slope.....	Non-gas.	Natural,	.....	.....	.....	.....	.....							
		Drift.....	Non-gas.	Natural,	.....	.....	.....	.....	.....							
George F. Lee Coal Co.	Chauncey, .....	Slope.....	Non-gas.	Natural,	.....	.....	.....	.....	.....	} Steam... 1	} 42,000	25,000	46,000	40	625	
		Slope.....	Non-gas.	Natural,	.....	.....	.....	.....	.....							
		Slope.....	Non-gas.	Natural,	.....	.....	.....	.....	.....							
		Slope.....	Non-gas.	Natural,	.....	.....	.....	.....	.....							
		Drift.....	Non-gas.	Natural,	.....	.....	.....	.....	.....							

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh and Wilkes-Barre Coal Co	Luzerne.....	C. F. Huber, .....	Wilkes-Barre, .....	{ Morgan R. Morgan, Inside Supt. W. H. Herring, Out- side Supt. }	Wilkes-Barre, .....	C. R. R. of N. J.
Nottingham, .....						
Lance, .....						
Reynolds, .....						
Wanamie, .....						
Delaware and Hudson Co.	Luzerne.....	C. C. Rose, .....	Scranton, .....	E. R. Pettebone, .....	Scranton, .....	Dela. and Hudson
Plymouth No. 2, .....						
Plymouth No. 3, .....						
Plymouth No. 4, .....						
Boston, .....						
Delaware Lackawanna and West- ern Railroad Co.	Luzerne.....	R. A. Phillips, R. A. Phillips, .....	Scranton, Scranton, .....	Henry G. Davis, Henry G. Davis, .....	Kingston, Kingston, .....	D., L. and W. D., L. and W.
Woodward, .....						
Avondale, .....						
Parrish, .....						
Buttonwood, .....	Luzerne.....	H. H. Ashley, H. H. Ashley, .....	Plymouth, Plymouth, .....	Thomas R. Evans, Thomas R. Evans, .....	Plymouth, Plymouth, .....	C. R. R. of N. J. C. R. R. of N. J.
Parrish Coal Co.						
Kingston Coal Co.						
Gaylord, .....						
West End Coal Co.	Luzerne.....	R. S. Mercur, R. S. Mercur, .....	Kingston, Kingston, .....	Gwilliam Edwards, Gwilliam Edwards, .....	Edwardsdale, Edwardsdale, .....	D., L. and W. D., L. and W.
West End, .....						
Plymouth Coal Co.						
Dodson, .....						
George F. Lee Coal Co.	Luzerne.....	H. H. Brady, Jr., .....	Scranton, .....	H. A. Fillmore, .....	Shickshinny, .....	Pennsylvania
Chauncey, .....						
North American Coal Co.						
West Nanticoke Coal Co.						
West Nanticoke washery, .....	Luzerne.....	James B. Davis, George F. Lee, .....	Plymouth, Plymouth, .....	J. J. Richards, .....	Plymouth, .....	C. R. R. of N. J. Pennsylvania
Old Plymouth Coal Co.						
Old Plymouth washery, .....						
	Luzerne.....	H. W. Samms, .....	Wilkes-Barre, .....	J. J. Richards, .....	Plymouth, .....	C. R. R. of N. J.
	Luzerne.....	A. D. W. Smith, .....	Kingston, .....	J. J. Richards, .....	Plymouth, .....	C. R. R. of N. J.
	Luzerne.....	H. E. Bissinger, .....	Plymouth, .....	J. J. Richards, .....	Plymouth, .....	C. R. R. of N. J.



TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons and heat for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Totals are averages, 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 and Wilkes-Barre Coal Co.												
Nottingham, .....	Luzerne,.....	474,919	43,291	5,774	523,894	301	876	5	1	9,490	4,825	120
Lancey, .....		26,642	2,617	.....	432,816	255	675	1	1	12,446	62,814	106
Reynolds, .....		179,652	19,356	375	291,838	234	915	2	1	3,818	21,742	71
Wanmille, .....		32,830	2,211	.....	522,923	249	845	1	1	14,282	21,929	116
Totals, .....		1,545,974	122,286	11,181	1,679,441	236	2,714	12	22	40,496	92,301	422
Delaware and Hudson Co.												
Plymouth No. 2, .....	Luzerne,.....	258,276	35,247	.....	294,023	250	682	6	4	10,358	2,972	85
Plymouth No. 3, .....		309,312	22,803	3,814	326,921	246	680	1	1	9,517	710	51
Plymouth No. 4, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plymouth No. 5, .....		318,159	48,847	3,716	370,722	213	297	1	1	4,799	342	53
Boston, .....		295,893	28,298	.....	324,211	239	758	3	4	5,852	525	57
Totals, .....	1,173,550	135,295	7,530	1,315,875	237	2,959	13	14	40,672	5,658	355	
Delaware, Lackawanna and Western Railroad Co.												
Woodward, .....	Luzerne,.....	945,582	50,514	6,579	1,002,675	279	1,512	4	9	27,351	19,043	125
Avondale, .....	Luzerne,.....	127,530	20,076	1,121	148,727	157	511	1	.....	3,228	1,410	54
Totals, .....	1,073,112	70,590	7,700	1,151,402	218	2,023	5	9	28,582	11,473	189	
Parrish Coal Co.												
Parrish, .....	Luzerne,.....	245,876	11,550	4,090	261,426	228	694	4	1	6,937	88,235	115
Buttonwood, .....	Luzerne,.....	408,688	11,839	5,699	426,218	247	983	1	9	13,998	33,170	135
Totals, .....	654,564	23,489	9,689	687,644	231	1,677	5	16	20,935	122,325	250	

\*Coal taken through Plymouth No. 5.

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Totals are averages, 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.												
Gaylord, .....	Luzerne, .....	144,062	9,911	1,749	155,792	189	329	1	1	4,631	1,675	54
Kingston No. 2, .....	Luzerne, .....	475,947	12,039	24,772	512,758	248	1,108	6	6	19,994	3,460	127
Totals, .....		620,009	21,950	26,521	668,480	218	1,437	7	7	24,625	5,125	181
West End, .....												
West End Coal Co. ....	Luzerne, .....	475,186	30,000	8,601	513,785	281	982	7	11	12,415	119,325	83
Plymouth Coal Co. ....	Luzerne, .....	167,186	20,000	3,020	190,206	225	457	3	1	3,301	3,700	38
Dodson, .....												
George F. Lee Coal Co. ....	Luzerne, .....	47,561	5,000	551	53,102	191	175	.....	1	1,250	4,000	24
North American Coal Co. ....	Luzerne, .....	275,437	9,570	9,843	294,850	267	68	1	.....	.....	.....	.....
Plymouth washery, .....												
Old Plymouth Coal Co. ....	Luzerne, .....	165,268	7,300	6,939	179,507	203	82	.....	.....	.....	.....	.....
Old Plymouth washery, .....												
West Nanticoke Coal Co. ....	Luzerne, .....	32,273	1,940	597	35,720	173	32	.....	.....	.....	.....	.....
West Nanticoke washery, .....												
Grand totals, .....		6,230,618	447,411	91,983	6,770,022	230	12,609	48	81	172,186	363,887	1,547

TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Average 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 and Wilkes-Barre Coal Co., .....	Luzerne,.....	1,545,874	122,286	11,181	1,679,411	234	2,714	12	22	40,496	92,301	422	
Delaware and Hudson Co., .....		1,173,650	135,295	7,530	1,315,875	237	2,959	13	13	40,672	5,658	355	
Delaware, Lackawanna and Western Railroad Co., .....		1,073,112	70,580	1,700	1,151,402	218	2,023	5	9	28,582	11,483	189	
Parrish Coal Co., .....		654,564	23,480	9,660	687,644	328	1,677	5	16	20,815	122,425	130	
Kingston Coal Co., .....		620,069	21,350	26,521	648,480	328	1,465	5	7	24,925	3,425	181	
West End Coal Co., .....		475,194	30,000	8,001	513,795	281	986	7	11	12,415	119,323	85	
Miscellaneous companies, .....		688,715	43,810	29,860	753,385	196	814	4	2	4,551	7,700	67	
Totals, .....			6,239,618	447,411	91,993	6,770,022	230	12,609	48	81	172,186	963,887	1,547

TABLE 2. —PART 2.

Names of Operators	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	Steam	Air								Electric
Lehigh and Wilkes-Barre Coal Co., .....	Luzerne.....	18	882	39	6,538	7,431	1	3	169	10,353	6	8,074	4,260	2	1	
Delaware and Hudson Co., .....		114	2,440	9	1,900	5,349	5,349	3	.....	168	10,800	7	10,500	2,500	2	6
Delaware, Lackawanna and Western Railroad Co., .....		6	180	18	4,125	4,315	4,315	3	.....	42	5,228	9	9,950	3,900	4	.....
Parrish Coal Co., .....		18	740	26	3,900	4,620	4,620	3	.....	43	1,816	12	4,167	1,452	.....	1
Kingston Coal Co., .....		26	655	7	1,350	2,015	2,015	3	.....	21	1,790	1	640	350	.....	1
West End Coal Co., .....		.....	.....	15	1,875	1,875	1,875	6	.....	36	1,375	5	865	350	.....	2
Plymouth Coal Co., .....		.....	.....	12	1,800	1,800	1,800	.....	.....	4	1,500	8	2,100	674	.....	.....
George F. Lese Coal Co., .....		.....	.....	4	225	225	225	.....	.....	12	240	.....	.....	.....	.....	.....
North American Coal Co., .....		.....	.....	6	560	560	560	.....	.....	12	400	.....	.....	.....	.....	.....
Old Plymouth Coal Co., .....		.....	.....	5	500	500	500	.....	.....	17	400	.....	.....	.....	.....	.....
West Nanticoke Coal Co., .....		.....	.....	3	250	250	250	.....	.....	2	200	1	800	800	.....	.....
Totals, .....		182	5,898	133	23,223	29,121	29,121	17	3	517	40,162	39	35,036	14,286	8	24

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
<b>Lehigh and Wilkes-Barre Coal Co.</b>																						
Lehigh	Luzerne	1	1	7	172	137	59	37	6	.....	91	511	.....	1	7	26	52	26	3	49	164	
Nottingham	Luzerne	1	2	8	246	132	83	21	7	.....	125	674	.....	1	14	30	36	18	3	39	202	
Reynolds	Luzerne	1	1	2	53	122	88	8	.....	15	279	.....	1	4	4	3	18	3	3	34	178	
Wanlike	Luzerne	1	2	6	286	184	68	33	7	77	6	679	.....	1	6	26	43	11	4	84	175	
<b>Totals</b>																						
4 6 23 754 578 234 99 20 122 225 2,065 ..... 4 31 97 165 73 13 266 649 2,714																						
<b>Delaware and Hudson Co.</b>																						
Plymouth No. 1	Luzerne	1	1	4	137	156	54	26	3	69	34	485	.....	1	6	22	48	35	2	53	197	
Plymouth No. 2	Luzerne	1	1	3	193	158	75	24	.....	35	25	515	.....	1	6	20	35	47	5	54	165	
Plymouth No. 3	Luzerne	1	.....	2	101	61	37	8	.....	25	58	265	.....	1	9	.....	.....	.....	.....	20	32	
Plymouth No. 4	Luzerne	1	.....	.....	116	139	73	14	1	32	22	331	.....	1	7	13	38	48	.....	72	181	
Plymouth No. 5	Luzerne	1	1	3	166	226	61	21	2	45	29	555	.....	1	6	14	76	18	.....	66	183	
Boston	Luzerne	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	6	14	76	18	.....	66	183	
<b>Totals</b>																						
5 3 15 713 740 280 93 8 296 138 2,291 ..... 5 27 78 197 148 8 295 758 2,859																						
<b>D., L. and W. R. R. Co.</b>																						
Woodward	Luzerne	2	2	9	399	412	169	67	7	243	.....	1,250	.....	1	26	26	36	12	4	137	262	
Avondale	Luzerne	1	1	3	115	125	33	9	9	8	72	376	.....	1	4	24	36	.....	2	68	135	
<b>Totals</b>																						
3 3 12 514 537 142 76 16 251 72 1,626 ..... 2 20 50 72 12 6 225 397 2,023																						
<b>Parrish Coal Co.</b>																						
Parrish	Luzerne	1	2	5	159	144	61	34	4	94	.....	504	1	7	23	27	70	7	4	57	190	
Burtonwood	Luzerne	1	3	6	215	210	87	46	2	170	.....	740	2	1	20	35	89	5	82	243	983	
<b>Totals</b>																						
2 5 11 374 354 148 80 6 264 ..... 3 2 16 43 62 159 9 139 433 1,677																						

TABLE 3.—Continued

Names of Operators and Collieries	County	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	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employes	Total outside	Grand total inside and outside
Kingston Coal Co.	Luzerne	2	1	1	71	53	42	6	10	218	1	1	8	10	29	39	1	1	51	111	329	
Gaylord	Luzerne	4	1	1	328	231	98	28	51	749	1	2	26	22	160	160	3	3	145	354	1,108	
Kingston No. 2	Luzerne	6	1	1	399	254	140	34	85	967	2	3	34	32	199	199	4	4	196	470	1,437	
Totals, .....																						
West End Coal Co.	Luzerne	2	5	1	250	248	93	29	72	731	1	1	6	29	48	48	3	3	123	254	985	
Plymouth Coal Co.	Luzerne	1	1	3	84	80	34	19	44	291	1	1	6	18	44	44	5	2	89	166	457	
George F. Lee Coal Co.	Luzerne	1	1	1	40	51	8	4	15	125	1	1	3	4	14	14	8	1	19	50	175	
Chauncey, .....	Luzerne																					
North American Coal Co.	Luzerne																					
Plymouth washery, .....	Luzerne																					
Old Plymouth Coal Co.	Luzerne																					
Old Plymouth washery, .....	Luzerne																					
West Nanticoke Coal Co.	Luzerne																					
West Nanticoke washery, .....	Luzerne																					
Grand totals, .....		24	23	67	3,128	2,842	1,079	434	61	1,063	535	9,556	8	23	159	371	827	470	50	1,445	3,353	12,069

\*Flushing culm.



TABLE 3.—Recapitulation

Names of Operators	County	Inside										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	Foremen	Blacksmiths and carpenters	Painters and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employes	Total outside
Lehigh and Wilkes-Barre Coal Co.	Luzerne	4	6	23	754	578	234	99	20	122	225	2,065	4	31	97	165	73	13	965	649	2,714	
Delaware and Hudson Co.		5	3	15	713	749	280	93	8	296	138	2,201	5	37	78	197	148	8	965	758	2,959	
D., L. and W. R. R. Co.		3	3	12	514	537	142	76	16	251	72	1,626	3	30	50	50	72	6	225	397	2,023	
Parrish Coal Co.		2	5	11	374	374	148	80	6	264	.....	1,244	.....	16	43	62	159	9	139	433	1,677	
Kingston Coal Co.		6	.....	1	389	254	140	24	.....	85	48	967	2	3	32	199	.....	.....	4	196	479	1,437
West End Coal Co.		2	5	1	250	248	93	29	4	72	27	731	1	1	6	29	48	43	3	123	254	985
Plymouth Coal Co.		1	1	3	34	80	34	19	5	44	29	291	1	1	6	18	44	5	2	89	166	457
George F. Lee Coal Co.		.....	.....	.....	1	40	51	8	.....	15	5	127	.....	.....	.....	.....	.....	.....	.....	1	19	59
Miscellaneous companies,		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals,		.....	24	23	67	3,128	2,842	1,079	434	61	1,063	585	9,256	8	23	159	371	470	59	1,445	3,853	12,609

TABLE 3.—PART 2.

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Lehigh and Wilkes-Barre Coal Co. Nottingham, .....	Luzerne,.....	19	20	22	20	23	22	6	9	23	17	19	201	
		15	19	21	21	23	22	18	22	24	22	19	233	
		15	16	19	20	22	21	17	22	21	19	19	234	
		18	17	21	20	21	21	20	22	23	21	20	249	
Delaware and Hudson Co. Plymouth No. 2, .....	Luzerne,.....	20	18	22	20	23	22	20	22	22	21	20	250	
		20	14	21	20	25	24	21	20	19	21	20	246	
		*												
		20	15	20	20	25	22	17	6	8	22	20	213	
		21	18	22	21	24	23	6	21	22	22	18	239	
Delaware, Lackawanna and Western Railroad Co. Woodward, .....	Luzerne,.....	22	22	26	23	25	24	22	23	24	22	21	279	
		18	19	13	23	24	24	10			4	22	157	
Parrish Coal Co. Parrish, .....	Luzerne,.....	19	17	22	20	22	17	23	23	20	22	247		
		16	17	19	17	22	18	24	20	21	18	18	228	
Kingston Coal Co. Gaylord, .....	Luzerne,.....	15	16	13	16	18	19	16	21	10	17	19	189	
		16	22	15	20	24	23	20	21	20	23	23	248	
West End Coal Co. West End, .....	Luzerne,.....	20	21	24	24	24	27	23	23	22	24	21	281	
Dodson, .....	Luzerne,.....	18	18	19	18	20	19	15	20	20	20	18	225	
George F. Lee Coal Co. Chauncey, .....	Luzerne,.....	15	18	19	17	16	14	11	17	14	16	16	191	

\*Coal taken through No. 5 colliery.

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 3	Michael Chelus, .....	American,.....	Slater, .....	16	S.	.....	.....	Lance No. 11, .....	.....	Attempted to step over shaft and became fastened in sprocket wheel. Outside. Instantly killed by a fall of rock.
Feb. March	John Burke, .....	Irish,.....	Miner, .....	47	M.	1	.....	Plymouth No. 2, .....	.....	While examining the roof it fell on him. Fatally injured by a fall of top slate.
	Stephen Williams, .....	Welsh,.....	Miner, .....	45	M.	1	.....	Kingston No. 3, .....	.....	Instantly killed by a fall of top rock.
	Jacob Mickolay, .....	Slavonian,.....	Miner, .....	45	M.	1	2	Dodson, .....	.....	Instantly killed by a fall of top rock.
April	John Babuka, .....	Slavonian,.....	Miner, .....	50	M.	1	.....	West End, .....	.....	Instantly killed by an explosion of gas.
	Frank Gonsuvek, .....	Polish,.....	Laborer, .....	28	M.	1	1	West End, .....	.....	Instantly killed by an explosion of gas.
	Frank Blasl, .....	Italian,.....	Miner, .....	26	M.	1	1	West End, .....	.....	Died April 13 at hospital.
May	Stanley Paceka, .....	Austrian,.....	Laborer, .....	40	M.	1	1	Parrish, .....	.....	Instantly killed by a fall of top rock.
	Andrew Kollinauskas, .....	Polish,.....	Miner, .....	31	M.	1	1	Plymouth No. 2, .....	.....	Instantly killed by a fall of top coal. Died April 29 at hospital.
	Stanley Bellis, .....	Lithuanian, ..	Miner, .....	36	M.	1	1	Nottingham, .....	.....	Instantly killed by being struck with an empty car.
June	Stanley Magrorage, .....	Polish,.....	Driver, .....	17	S.	.....	.....	West End, .....	.....	Instantly killed by falling under an empty trip.
	John Pombor, .....	Russian,.....	Laborer, .....	20	S.	.....	.....	Parrish, .....	.....	Instantly killed by a fall of top rock.
	Thomas Bardulis, .....	Lithuanian, ..	Miner, .....	41	S.	.....	.....	Lance No. 11, .....	.....	Fatally injured by a fall of top coal.
July	John Mushill, .....	Polish,.....	Laborer, .....	23	S.	.....	.....	Reynolds, .....	.....	Fatally injured by a fall of top coal. Died same day at Moses Taylor Hospital.
	George Bessick, .....	Slavonian,.....	Miner, .....	35	M.	1	.....	Woodward, .....	.....	Fatally injured by a fall of top rock.
	Andrew Metallick, .....	Polish,.....	Miner, .....	37	M.	1	1	Plymouth No. 5, .....	.....	Fatally injured by a fall of top rock. Died June 14.
July	Charles Hatten, .....	American,.....	Co. man,.....	40	M.	1	4	Avondale, .....	.....	Fatally injured between a derailed car and prop. Died same day.
	Peter Webber, .....	Polish,.....	Laborer, .....	40	M.	1	8	West End, .....	.....	Fatally injured by falling from breaker to ground. Died same day. Outside.
	Andrew Miller, .....	German,.....	Footman, .....	18	S.	.....	.....	Plymouth No. 2, .....	.....	Fatally injured; struck on head by a wooden rail. Died July 8 at Hospital. Outside.
July	Joseph Sobleski, .....	Polish,.....	Miner, .....	42	M.	1	1	Lance, .....	.....	Instantly killed by a fall of top rock.
	Joseph Movankovicz, .....	Austrian,.....	Miner, .....	28	M.	1	1	Parrish, .....	.....	Instantly killed by a fall of top rock.
	Adam Raklevicz, .....	Lithuanian, ..	Laborer, .....	30	M.	1	1	Lance, .....	.....	Fatally injured by an explosion of gas. Died at Mercy Hospital July 20.
Frank Detrick, .....	American,.....	Miner, .....	49	M.	1	3	West End, .....	.....	Fatally injured by a fall of top rock. Died same night.	

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
July	25 Felix Motolevick, .....	Lithuanian.	Laborer, ...	24	S.	.....	.....	Dodson, .....		Fatally injured by a fall of coal from side. Died at hospital same night.
	31 Paul Shuraek, .....	Greek, .....	Laborer, ...	29	M.	1	2	Nottingham, ....		Fatally injured; struck by handle of small crab. Died at Mercy Hospital August 9. Outside.
Aug.	4 Charles Swithers, .....	Lithuanian.	Miner, .....	40	M.	1	2	West End, .....		Fatally injured by falling off scaffold while engaged in barring down coal. Died same day at Hospital.
	8 Constant Semanski, .....	Polish, .....	Miner, .....	29	M.	1	2	Buttonwood, ....		Instantly killed by a fall of top rock.
	18 William Newberry, .....	American, .....	Footman, ...	43	M.	1	3	Woodward, .....		Instantly killed by falling down shaft.
	26 John Armstrong, .....	Polish, .....	Laborer, ...	27	M.	1	1	North American		Fatally injured by a fall of top coal.
	29 Anthony Brittraham, .....	Slavonian, .....	Engineer, ...	21	M.	1	1	North American Washery.		Fatally injured by machinery. Died at Mercy Hospital same day. Outside.
	31 Timothy Conahan, .....	Irish, .....	Miner, .....	45	S.	.....	.....	Gayford, .....		Fatally injured by a fall of top coal. Died at Mercy Hospital same day.
Sept.	7 John Fisher, .....	Irish, .....	Miner, .....	52	M.	1	4	Plymouth No. 2, .....		Fatally injured by premature blast. Died at Mercy Hospital September 1.
	21 Stephen Lynch, .....	Slavonian, .....	Slater, .....	17	S.	.....	.....	Boston, .....	Luzerne, .....	Fatally injured by falling from breaker to ground. Died the same day at City Hospital. Outside.
	26 William Schultz, .....	Polish, .....	Miner, .....	47	M.	1	6	Plymouth No. 2, .....		Fatally injured by a fall of top coal. Died October 3 at City Hospital.
Oct.	5 Frank Sigler, .....	Austrian, .....	Miner, .....	35	M.	1	4	Plymouth No. 2, .....		Fatally injured by a fall of top rock. Died October 8 at City Hospital.
	16 Joseph Lavan, .....	Polish, .....	Laborer, ...	22	S.	.....	.....	Nottingham, ....		Instantly killed by a fall of coal from the side.
	20 Frank Dopcow, .....	Polish, .....	Slater, .....	17	S.	.....	.....	Nottingham, ....		Fatally injured by having his leg mangled in rolls. Died in City Hospital October 31. Outside.
Nov.	11 Michael Muisel, .....	Austrian, .....	Laborer, ...	25	S.	.....	.....	Plymouth No. 2, .....		Instantly killed; struck with flying coal from blast.
	14 William Wazopki, .....	Lithuanian.	Miner, .....	29	M.	1	3	Dodson, .....		Instantly killed by a fall of top coal.
	17 Peter Stuvoski, .....	Polish, .....	Laborer, ...	27	S.	.....	.....	Woodward, .....		Instantly killed by a fall of coal from the side.

Nov.	24	Michael Androski, .....	Lithuanian, .....	Dumpman, .....	41	M.	1	5	Nottingham, .....	Instantly killed by falling down tower shaft, Outside.
	27	Martin Morris, .....	Polish, .....	Miner, .....	34	M.	1	2	Plymouth No. 5, .....	Fatally injured by a fall of rock. Died at City Hospital same night.
Dec.	2	Benjamin Censick, .....	American, .....	Slater, .....	16	S.	.....	.....	Boston, .....	Instantly killed by machinery, Outside.
	9	Charles O'Brien, .....	Irish, .....	Road cleaner, .....	67	S.	.....	.....	Wanmle No. 18, .....	Fatally injured by falling under loaded trip. Died same night at Mercy Hospital.
	9	Jacob Stubblevine, .....	American, .....	Carpenter, .....	49	M.	1	5	Plymouth No. 4, .....	Fatally injured by being caught in a sprocket wheel. Died December 4 at Hospital, Outside.
	18	John Thomas, .....	Welsh, .....	Miner, .....	46	M.	1	.....	Parrish, .....	Instantly killed by flying coal from a premature blast.
	18	Patrick Morahan, .....	Irish, .....	Miner, .....	55	M.	1	2	Boston, .....	Instantly killed by a fall of top rock.
	29	John Orzechok, .....	Slavonian, .....	Laborer, .....	30	M.	1	.....	Reynolds, .....	Fatally injured by being squeezed between car and prop. Died December 30.
									Luzerne, .....	

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Ages	Marrled or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 3	Michael Gorman, .....	Polish,.....	Miner, .....	50	M.	Woodward, .....		Fractured leg struck by flying coal from a blast.
4	John Melepski, .....	Polish,.....	Miner, .....	57	M.	Lanes No. 11, .....		Burned on face and hands by explosion of gas.
12	John W. Williams, .....	Welsh,.....	Slopmen, .....	41	S.	Nottingham, .....		Left leg fractured by a derailed car.
12	Patrick Car, .....	Irish,.....	Miner, .....	24	S.	Nottingham, .....		Burned on hands and face by explosion of gas.
16	Charles Parry, .....	American,.....	Laborer, .....	26	M.	Plymouth No. 2, .....		Leg fractured by pile of plank striking him, outside.
21	Harry Puvotcavage, .....	Russian,.....	Miner, .....	32	M.	Parish, .....		Left leg fractured by premature blast.
21	John Waduka, .....	Russian,.....	Laborer, .....	36	M.	Parish, .....		Face and head lacerated by premature blast.
23	William W. Jones, .....	Welsh,.....	Miner, .....	39	M.	Buttonwood, .....		Fractured arm and body lacerated by premature blast.
Feb. 2	Alexander Sulefski, .....	Polish,.....	Laborer, .....	35	M.	Nottingham, .....		Fractured leg by a fall of top coal.
10	Thomas F. Williams, .....	Welsh,.....	Miner, .....	35	M.	Gaylord, .....		Fractured ribs by a fall of top coal.
10	Thomas F. Whelan, .....	American,.....	Laborer, .....	32	S.	Keynolds, .....		Runured while lifting loaded mine car.
11	Paul Polish, .....	Polish,.....	Miner, .....	31	M.	Autimie, .....	Luzerne,.....	Body bruised by a fall of top coal.
11	Joseph Shickwet, .....	Polish,.....	Slater, .....	31	S.	Wanmie, .....		Fractured ribs by falling down breaker stand, outside.
15	John Kelly, .....	Irish,.....	Laborer, .....	60	M.	Plymouth No. 5, .....		Fractured ribs and bruised back by falling under loaded car.
24	Ignatz Zhyrovich, .....	Polish,.....	Laborer, .....	21	S.	Nottingham, .....		Fractured ankle and bruised back by fall of rock.
28	Joseph Lubitski, .....	Polish,.....	Miner, .....	42	M.	Parrish, .....		Burned on head, face and arms by explosion of gas.
March 4	Peter Tonalis, .....	Lithuanian,.....	Miner, .....	26	S.	Woodward, .....		Skull fractured by premature blast.
9	Joseph Yiskoski, .....	Polish,.....	Laborer, .....	35	M.	Woodward, .....		Left leg fractured between derailed car and rib.
13	Anthony Frank, .....	Lithuanian,.....	Miner, .....	45	S.	Wanmie, .....		Body bruised by a fall of top coal.
13	Wadiek Lacoski, .....	Polish,.....	Laborer, .....	20	S.	Nottingham, .....		Body bruised by a fall of top coal.
16	Adam Missavaga, .....	Polish,.....	Miner, .....	40	S.	West End, .....		Ribs fractured by a fall of top rock.
16	William Simms, .....	Welsh,.....	Driver, .....	22	S.	Nottingham, .....		Collar bone fractured by running against a prop.
22	John Rumble, .....	American,.....	Laborer, .....	45	M.	West End, .....		Fractured leg and rib by empty cars, outside.
28	Frank Shander, .....	Polish,.....	Miner, .....	33	M.	Lanes No. 11, .....		Left leg fractured by premature blast.



Month	No.	Name	Nationality	Occupation	Age	Location	Details	Accident Description	
March	29	John Shultus	Austrian	Miner	25	S. Buttonwood	Burned on face, neck and hands by explosion of gas.	Burned on face, neck and hands by explosion of gas.	
	29	John Mishalla	Austrian	Laborer	32	M. Buttcnwood		Burned on face, neck and hands by explosion of gas.	
	30	John Bessnavaige	Lithuanian	Miner	31	M. Kingston No. 2		Fractured leg by a fall of slate.	
	30	Walter Buscowski	Lithuanian	Vest driver	16	S. Wanmie		Fractured leg between prop and car.	
	31	William Laughlin	American	Miner	28	M. Woodard		Fractured thigh by a fall of slate.	
	31	John Vusoski	Slavonian	Laborer	34	M. Plymouth No. 3		Fractured leg by a fall of slate.	
	April	6	James Hicks	English	Miner	61	M. Plymouth No. 2		Bruised about the body by a fall of slate.
		7	John Duravaige	Lithuanian	Driver	17	S. Kingston No. 2		Right leg fractured by a derailed car.
	May	8	John Carry	American	Laborer	19	S. Woodward		Compound fracture of right arm by placing belt on a moving wheel. Outside.
		10	Dennis McCarthy	Irish	Miner	45	M. Kingston No. 3		Skull fractured by a fall of rock.
12		Anthony Raab	German	Laborer	45	M. West End		Leg fractured between cars.	
12		John Gruncavitch	Russian	Laborer	19	S. Buttonwood		Cut and bruised on body by a fall of coal.	
17		Hiram Seales	American	Runner	28	S. West End		Ankle fractured between empty cars.	
17		George Kinock	Polish	Driver	17	S. Wanmie		Hand blown off by explosion of a box of caps he was trying to open.	
May		2	Garfield Parsons	American	Loco engineer	29	S. Wanmie		Foot crushed between cars. Outside.
		5	John J. Wilson	English	Doorboy	17	S. Buttonwood		Left leg fractured while trying to cross in front of a moving car.
June		12	Joseph Melep ki	Polish	Miner	23	M. West End		Leg fractured by a fall of top coal.
		13	John Buttman	American	Engineer	32	M. Plymouth No. 2		Left hand and wrist crushed placing a valve in pump the plunger caught him. Outside.
	13	Stephen Pribish	Slavonian	Miner	45	M. Lance		Two ribs fractured by a prop falling against him.	
	15	Michael Rieho	Polish	Laborer	40	M. Bcston		Leg fractured and scalp lacerated by a fall of top rock.	
	June	19	Anthony Bonawiech	Lithuanian	Miner	39	M. Plymouth No. 2		Right leg fractured by a loaded car.
		3	Albert Wood	American	Pan runner	46	M. Lance		Right arm fractured by connecting rod while engaged in cleaning compressor. Outside.
	July	9	Henry Linden	Russian	Laborer	45	M. Kingston No. 3		Head and back bruised by a fall of rock.
		27	Michael Ksavage	Polish	Laborer	28	S. West End		Leg fractured by being struck by a loaded car.
	July	30	Felix Belufski	Lithuanian	Laborer	39	M. Nottingham		Burned by an explosion of gas.
		10	Valentine Trebliski	Russian	Miner	32	M. Parrish		Jaw fractured and body cut by a premature blast.
Aug.	14	John Liwellyn	American	Doorboy	16	S. Woodward		Injured on head by a piece of coal falling down shaft.	
	18	Joseph Powosok	Lithuanian	Miner	35	M. Lance		Burned on hands, face and back by an explosion of gas.	
Aug.	22	Joseph Redaka	Russian	Laborer	40	S. Parrish		Leg and one rib fractured by a fall of rock.	
	25	Stephen Pubish	Slavonian	Miner	45	M. Lance		Burned on face and hands by explosion of gas.	
Aug.	28	Silas Reiter	American	Driver	21	S. West End		Fractured skull and nose by being kicked by mule.	
	31	Charles Leonard	Polish	Laborer	24	S. Kingston No. 3		Hip dislocated by a fall of rock.	
Aug.	3	Edward Strouk	Polish	Doorboy	16	S. Lance		Skull fractured by a fall of rock.	
	9	Carl Filla	Austrian	Laborer	45	M. Buttonwood		Leg fractured; squeezed between derailed car and rib.	
							Jaw and arm fractured by fall of rock while resetting timber.		

Luzerne.....

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Aug. 17	John McNelis, .....	American, .....	Doorboy, .....	16	S.	Plymouth No. 3, ...		Right arm fractured while trying to sprag a car.
19	Anthony Cominski, ....	Polish, .....	Footman, .....	27	M.	Wanimie, .....		Two ribs fractured by derailed cars knocking him against a prop.
22	Michael Kopton, .....	Polish, .....	Doorboy, .....	18	S.	West End, .....		Leg fractured; squeezed between mule and car.
31	Joseph Wilchonoski, ....	Polish, .....	Laborer, .....	40	M.	Boston, .....		Compound fracture of right leg by a fall of rock.
Sept. 14	John Lloyd, .....	American, .....	Miner, .....	27	M.	Boston, .....		Body lacerated by a fall of top rock.
14	Stephen Forack, .....	Slavonian, .....	Miner, .....	42	M.	Boston, .....		Three ribs fractured by a fall of top rock.
16	Andrew Moroski, .....	Polish, .....	Slater, .....	15	S.	West End, .....		Leg fractured by car running against him. Outside.
16	Martin Jacob, .....	Polish, .....	Laborer, .....	22	S.	Dodson, .....		Leg fractured by a prop falling on him.
20	John Brennan, .....	American, .....	Engineer, .....	34	M.	Plymouth No. 3, ...		Two ribs fractured by being struck by wire rope. Outside.
25	John Phicozki, .....	Polish, .....	Miner, .....	47	M.	Chauncey, .....		Leg fractured by a piece of rock sliding from job.
30	John Ababazy, .....	Slavonian, .....	Dumpman, ....	37	M.	Woodward, .....		Right leg fractured between empty cars.
Oct. 12	William Evans, .....	American, .....	Driver, .....	19	S.	Buttonwood, .....	Luzerne, .....	Thoracic bone fractured between car and top rock.
13	Isador Terkofski, .....	Polish, .....	Laborer, .....	22	S.	Woodward, .....		Leg fractured and heel crushed by a fall of top rock.
14	Joseph Bittner, .....	Polish, .....	Driver, .....	20	S.	Woodward, .....		Skull fractured between mules and loaded cars.
21	Silas Relder, .....	American, .....	Runner, .....	22	S.	West End, .....		Arm fractured by cars.
24	George Bosser, .....	Russian, .....	Laborer, .....	30	M.	Buttonwood, .....		Leg fractured. Fell while carrying a prop.
27	Andrew Petraulic, .....	Slavonian, .....	Miner, .....	45	M.	Kingston No. 3, ...		Leg fractured by a fall of top coal.
Nov. 16	Frank Rowe, .....	English, .....	Laborer, .....	22	S.	Parrish, .....		Hip fractured between car and rib.
18	Thomas Corbin, .....	American, .....	Slater, .....	14	S.	Plymouth No. 3, ...		Leg fractured by falling off a trestle. Outside.
20	William Wolfe, .....	American, .....	Motorman, ....	32	S.	West End, .....		Leg fractured by motor running against bin.
26	Andrew Andrescovitch, ...	German, .....	Barn man, ....	59	M.	Buttonwood, .....		Hips fractured by kick of a mule.
27	Alexander Perkowski, ...	Polish, .....	Miner, .....	39	M.	Parrish, .....		Three ribs fractured and lung punctured by flying coal from premature blast.

## FATAL ACCIDENTS

## By Falls of Coal, Slate and Roof

Plymouth No. 2, January 18, John Burke, miner, was killed instantly. He had fired three holes in the top rock in order to make room for a set of timber, and while barring the top rock down a piece fell on him.

Kingston No. 3 shaft, February 7, Stephen Williams, miner, was instantly killed. He had just fired a blast in the coal, and returned to the face of his place a short time after firing to see what was the result of the blast, when a piece of rock fell on him.

Dodson colliery, March 28, Jacob Mickolay, miner, was fatally injured. He permitted a dangerous piece of top slate to hang over where he was working. He knew of his danger, but was waiting for a more favorable time to bar it down. Before he had a chance to do this it fell on him. He died on the way to the hospital.

West End, March 29, John Baluka, miner, and Frank Gonswock, laborer, were instantly killed. The miner had just fired a blast in the coal and he and his two laborers pushed a car to the face to load. One of the laborers said the rock was working, and considering it dangerous, he warned the others to retreat to a place of safety. The miner and his other laborer stopped to listen, when a fall of rock occurred, killing them both instantly.

Plymouth No. 2 shaft, Red Ash vein, No. 7 slope, 2d air-way, April 27, Andrew Kolinauskas, miner, was fatally injured. He had just entered the face of his place after firing a blast, and was engaged in helping his laborer to load a car when a piece of top coal fell, striking him on the head. He died in the hospital April 30.

Parrish, April 26, Stanley Paceka, laborer, was instantly killed. He, in company with his miner, had been barring down top rock after a blast, and had started in toward the face of the gangway, when a piece of rock fell on him. The fall was due to a slip.

West End, May 9, Stanley Magrorage, driver, was instantly killed. He was warned not to drive on the main slope, and went around another way. The way he drove intersected the main slope at the place where he was warned it was dangerous. Upon his arrival at the intersection the timbers were breaking, permitting a fall of rock to occur.

Red Ash vein, Reynolds colliery, May 24, John Mushill, laborer, was instantly killed. He was loading a car when suddenly a rush of coal came down from the heavy pitch above him, and knocked down several sets of timbers. He was buried under a mass of coal.

Woodward, June 9, George Bessick, miner, working in No. 1 slope, Red Ash vein, was fatally injured. While standing at the end of a car in the face of the gangway. A portion of the top coal fell on him. Died same day.

Dodson colliery, July 25, Felix Motolevick, laborer, was fatally injured in the Bennett vein, No. 1 plane, East Side outlet. He, in company with others, was lagging a set of timbers, when a large piece of coal fell from the roof, crashed through the set of timbers and caught him. He died in the hospital the same day.

Lance, May 12, Thomas Bardulis, miner, Five-foot vein, was instantly killed. He had fired a blast in the top rock, and after pro-

ceeding to the face he discovered that the blast did not do its work. He made an effort to bar the rock down, but failed, and after resuming work it suddenly fell on him.

Plymouth No. 5, June 12, Andrew Metallick, miner, bottom split of Red Ash vein, was fatally injured. He was engaged in standing a prop assisted by the timbermen, when a small piece of rock fell from the roof on him. He died at his home June 14.

Lance No. 11, July 10, Joseph Sobleski, miner, Five-foot vein to West 15 plane, was instantly killed. While in the act of drilling a hole in the face of his chamber a large piece of coal fell on him.

Parrish, July 14, Joseph Movankevicz, miner, No. 6 West Bennett vein, was instantly killed. He had fired a blast of coal, and had proceeded to the face of his chamber, when a piece of rock fell on him.

West End, July 20, Frank Deitrick, miner, Ross vein, was fatally injured. He had been engaged in barring down top rock. A small triangular piece projected from the roof and thinking it was not securely fastened, he instructed his laborer not to go under it; but while making preparations to do other work about the face of his place, he went under it for one of his tools, when suddenly it fell on him. He died the same day.

Woodward, August 26, John Armanski, laborer, was instantly killed. His miner had tried to bar down some top coal but failed. He then decided to drill a hole back of it thinking that would bring it down. Before firing, he was engaged in loading a car and was warned to stay away from under the treacherous piece but said he considered it safe. While working under it, it fell on him.

Gaylord, August 31, Timothy Conahan, miner, was fatally injured. He was starting a hole in face of his chamber in the Cooper vein, when a large piece of coal fell from the roof on him. Died the same day at the Mercy Hospital.

Plymouth No. 3 shaft, Hillman vein, September 26, William Schultz, miner, was fatally injured. After firing a blast he proceeded to the face of his chamber, and while working out some loose coal in the face, a piece of top coal fell on him. Died October 2, at Mercy Hospital.

Nottingham, October 16, Joseph Levan, laborer, was instantly killed. He was working in the second gangway, No. 5 slope, Red Ash vein, and while in the act of loading a car in the face of the gangway, a piece of coal from the rib fell on him.

Woodward, November 17, Peter Stuyoski, laborer, was instantly killed. While engaged in loading a car in air-way, Baltimore vein, a piece of coal chipped off the rib, striking him on the head.

Buttonwood, August 9, Constant Semanski, miner, Kidney vein, was instantly killed. He went to the next chamber to help another miner reset timber that had been dislocated by a blast, and while doing this work a piece of rock fell on him.

Plymouth No. 2, October 5, Frank Sigler, miner, Bennett vein, No. 13 plane, was fatally injured. He was picking a hole in a bad piece of top rock, and while so doing a small piece fell on him, fracturing his leg. He died at the City Hospital October 8.

Dodson, November 14, William Wazdopki, miner, was instantly killed. He was in the act of blasting down the main bench in West Side, Red Ash vein, when a fall of coal from the 10-inch seam came down on him.



Plymouth, No. 5, November 27, Martin Morris, miner, 5th way, No. 5 plane, Top split, Red Ash vein, was fatally injured. He was engaged in doing some work in the face of the gangway, when a fall of top rock struck him. He died the same day at the City Hospital.

Boston, December 18, Patrick Morahan, miner, Bennett vein, was instantly killed. He had just fired two holes in succession and immediately proceeded to the face of his chamber, when a fall of rock struck him. He permitted the rock to hang back a distance, and had been repeatedly warned of his danger.

#### Cars

Nottingham, May 2, Stanley Bellis, miner, 14 West gangway, Ross vein, was fatally injured. He came out from the face of his place to assist the slope foot-men, and gave the signal for the trip to descend. He then ran towards the door, when the coupling broke, permitting the head car to run away, catching him. He died shortly after being taken home.

Parrish, May 12, John Bombar, laborer, was instantly killed in the Bennett slope. He in company with his miner and two others, went in an empty trip. Bombar was sitting on the door rod of the car making a cigarette, when through some cause he fell backward and the trip passed over him.

Avondale, June 22, Charles Hatten, helper, Red Ash vein, was fatally injured. He was tending the head of No. 1 slope, when the head car became derailed and caught him between the car and timbers. He died the same day.

Wanimmie, December 9, Charles O'Brien, road cleaner, was fatally injured. He was standing on the side of the gangway, when the driver passed with his trip, and was resting on his shovel, when suddenly it slipped out of his hand, and fell towards the cars. He made an effort to recover it by placing his foot forward, and his foot became fastened under the car. He was dragged some distance, and died same day at Mercy Hospital.

Reynolds, December 29, John Oruchok, laborer, Seven plane, Ross vein, was fatally injured. An empty car became derailed in the face of the gangway and squeezed the victim between the car and leg of a set of timber. He did not consider the accident very serious, and walked most of the distance to his home. He died December 30.

#### Blasts

Plymouth No. 2 colliery, September 7, Five foot vein, No. 8 plane, John Fisher, miner, was fatally injured by being struck with flying coal from a premature blast. The shot exploded while he stood in the face of his chamber. He died September 17, at Mercy Hospital.

Plymouth No. 2, November 11, Top split, Red Ash vein, Michael Muisel, laborer, was instantly killed. He was walking toward the face of the back switch air-way, when a blast was fired in the cross-cut outside. The shot broke through and he was struck by flying coal.

Parrish, December 18, Bennett vein, No. 3 slope, John Thomas, miner, was instantly killed. He was in the act of firing a blast, and had placed the squib in the hole, and instructed his son to light the

match. The shot exploded prematurely, before he had reached a place of safety, and a piece of flying coal struck him on the head.

### Gas

West End, April 3, Red Ash vein, Frank Blasi, miner, was fatally injured by explosion of gas. He was engaged in driving cross-cut, and after firing a shot he went back to examine the face of the cross-cut with a naked light, igniting a small portion of gas. He had been repeatedly warned to use his safety lamp, but paid no heed to the warning. He died April 13, at the hospital.

Lance No. 11, July 18, Ross vein, Adam Raklevicz, laborer, was fatally burned by gas. He was assisting his miner to place a loaded car on the track at foot of the chamber; where there was a feeder of gas. It ignited from his open light. He had been warned to use a safety lamp. He died at Mercy Hospital, July 20.

### Falling Down Shafts

Woodward, August 18, William Newberry, foot-man, was instantly killed. He went from Red Ash vein to Cooper vein to hoist coal; on the cage with him was Evan Pugh, a driver who was being sent to the Hillman vein. Pugh got off at the Cooper vein, and Newberry threw in the fans, and started to the Hillman vein with a boy. After the boy had returned to this vein, Newberry signalled the engineer to lower the cage to the Red Ash vein. As soon as he commenced to descend, it is evident he became aware of his error. The boy at the Hillman vein heard him shout frantically "Throw out the fans, MacCole!" Neal MacCole and the two other foot-men, that were at the Cooper vein, heard him shout, but did not catch his meaning for a time. When they understood him, MacCole rushed for the fan lever, and he had hardly grasped it when the cage struck the fans, precipitating Newberry down the shaft. William White, fire boss, and George Daly, engineer, found him in the sump at the Red Ash vein. It is evident that he made a mistake by throwing the fans in, when he took the other foot-men up to the Cooper vein. If the fans had been left out until his return from the Hillman, this accident could have been avoided. It developed at the inquest, both by the head tender, and the engineer, that when he gave the signal to descend, it was to the Red Ash vein, and not to the Cooper vein.

### Miscellaneous

Inside.—West End, August 4, Red Ash vein, Charles Swithers, miner, was fatally injured. He was working at the face of his place, taking down top coal, and when the coal fell it struck the rail on which he was standing, throwing him down the chute. He died same day at the City Hospital.

### By Machinery, Outside

Lance, No. 11, January 3, Michael Chelus, slater, was fatally injured. He was found several feet away from his place of work at



the screen hopper, with his clothing caught in the shafting that runs the conveyor. He died at the Mercy Hospital the same day.

North American Coal Company, Plymouth washery, August 29, Anthony Britrashan, engineer, was fatally injured. His arm was caught on a shaft of an outside bank conveyor engine. He could have saved himself if he had called to those who were close by, but instead he endeavored to extricate himself. He died the same day at the Mercy Hospital.

Nottingham, October 30, Frank Dopeow, chipper, was fatally injured. The signal had been given and the engineer started the breaker again. While it was in motion Dopeow started to go to the Chestnut rolls. He was warned to remain away on account of the extreme danger, but did not heed the warning. He started into the rolls, thinking they were blocked. His leg was so badly crushed that he died next day in the City Hospital.

Boston, December 2, Benjamin Comsick, slater, was instantly killed. It is supposed that the accident was caused by the belt wheel of the wing screens, as he was found under the wheel a distance of about seven feet below. No one saw the accident.

Plymouth No. 4, December 9, Jacob Stubblevine, carpenter, was fatally injured. He was working close by a conveyor line which was run occasionally during the day in conveying small coal to the boiler room. Through some cause unknown, his clothes became caught in the sprocket wheel and he was drawn underneath. He died December 14 at the hospital.

#### Miscellaneous, Outside

West End, June 29, Peter Webber, laborer, was fatally injured. He went up with the breaker foreman to see if the coal was blocked on the chute runway. At the same time a locomotive passed under the breaker, and knocked out the timber which supported the chute, permitting that portion of the floor which Webber stood upon to fall to the ground. He died on the way to the hospital.

July 7, Plymouth No. 2, Andrew Miller, foot-man, was fatally injured. He was engaged in taking down supplies, and while the time the material was being unloaded at the bottom of the shaft, he went into the breaker engine house to assist Anthony Linaviski to get the breaker engine off the centre, using a rail to do the work. It appears that when the engine was started one end of the lever caught in the fly wheel, allowing the other end to fly up. It struck Miller on the head and fractured the right side of his skull. He died July 8 at the City Hospital.

Nottingham, July 31, Paul Shurack, laborer, was fatally injured. They were pulling the old breaker down, and in falling it pulled the rope from the crab, permitting the lever to fly up, striking Shurack on the head. He was taken to Mercy Hospital, where he died August 9.

Boston, September 21, Stephen Lynch, skater, was fatally injured. He with other boys was playing on the roof of the breaker, and in some manner fell off the roof to the ground, crushing the back of his head. He died the same day at City Hospital.

Nottingham, November 24, Michael Androski, dumper, was instantly killed. He was taking tickets from the mine cars at the head

of the shaft, in the breaker, after the car was dumped, he gave the signal to the engineer to lower. It was presumed that after he had given the signal for the cage to descend that he made an effort to take the ticket off the car, and in so doing lost his footing, and was precipitated to the bottom of the shaft.

## CONDITION OF COLLIERIES

### LEHIGH AND WILKES-BARRE COAL COMPANY

Nottingham colliery, Reynolds colliery, Wanimmie No. 18 and Wanimmie No. 19.—Condition good as to safety, drainage and ventilation.

### DELAWARE AND HUDSON COMPANY

Plymouth No. 2, Plymouth No. 3, Plymouth No. 4, Plymouth No. 5, and Boston.—Condition good as to safety, drainage and ventilation.

### WEST END COAL COMPANY

West End in good condition; drainage good; a very notable improvement in regard to ventilation, especially in outside drifts.

Ross vein in long drift, is only in fair condition in regard to ventilation, but expect to have this vein well ventilated in short time.

### PLYMOUTH COAL COMPANY

Dodson.—Condition good as to safety, drainage and ventilation.

### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Woodward and Avondale.—Condition good as to safety, drainage and ventilation.

### PARRISH COAL COMPANY

Parrish and Buttonwood.—Condition good as to safety, drainage and ventilation.

### KINGSTON COAL COMPANY

Kingston No. 2, Kingston No. 3.—Condition safe, drainage good, ventilation good; special mention should be made as to the good ventilation now existing in the orchard vein, since the installation of a new fan.

### GEORGE F. LEE COAL COMPANY

Channey.—In safe condition, drainage good, ventilation fair.

## IMPROVEMENTS

### LEHIGH AND WILKES-BARRE COAL COMPANY

#### Lance No. 14 Colliery

Outside.—Supply store, brick oil house, re-inforced concrete retaining wall, 500 H. P. water tube boilers.

#### Nottingham No. 15 Colliery

Outside.—Complete new breaker and surface improvements, 500 H. P. water tube boilers.

Inside.—Two bore holes from surface for steam pipes, two car hoists at foot of shaft, two compressed air motors for haulage.

#### Wanimie No. 18 Colliery

Inside.—No. 7 rock slope Baltimore to Ross, No. 12 tunnel extended, Baltimore to Cooper.

#### DELAWARE AND HUDSON COMPANY

##### Plymouth No. 2

No. 10 plane, Top split Red Ash, extended 800 feet.

No. 6 slope, Stanton, extended 300 feet.

No. 8 slope, Hillman vein, extended 150 feet.

No. 12 Rock plane, Stanton to Kidney vein, driven 330 feet.

Eight inch rope hole for No. 7 Stanton vein plane, 246 feet deep, and 12½ inch x 15 inch engines installed.

Eight inch culm hole and crusher plant for flushing refuse into the mines.

##### Plymouth No. 3

Crusher plant installed, to break up refuse from breaker to be flushed into the mines.

##### Plymouth No. 4

No. 10 plane, Ross vein, extended 150 feet, and 10 inch x 12 inch engines installed for operation of same.

No. 9 plane, Bennett vein, driven through old workings 600 feet, and pair of 10 inch x 13 inch engines installed for operation of same.

Crusher plant installed for flushing purposes.

#### Boston

No. 12 Rock plane, from Upper to Lower Ross, 250 feet.

No. 9 plane, Top split extended 315 feet.

No. 10 plane, Top split extended 100 feet.

#### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

##### Avondale

Extensive breaker improvements made at this colliery. When repair work was begun on this structure it almost became necessary to rebuild the entire building, costing a large amount of money, with the result that the company has what might be considered a modern breaker on a small scale.

The work of changing the location of steam boilers from the Ross shaft to the main shaft will be completed early during the year 1906.

Connection is being made with the colliery to the Nanticoke Power Station, which will generate electric current for operating locomotives and hoists in this mine.

A 7x12 rock tunnel connecting Red Ash and Ross vein, 743 feet long on a 5 per cent, grade has been completed.

### Woodward

Notwithstanding the fact that this colliery was operated almost continually during the year, considerable improvements were made, consisting of the following:

Installing a 600 H. P. Cross compound engine and generator to furnish electric power for locomotives and hoists. Also new electrically driven centrifugal pump to furnish water for shakers, screens, etc., and one rope driven dust fan. All of which have added to the efficiency of this breaker.

Inside improvements consists of driving two rock tunnels, one from Cooper vein to Lance vein, and one from Cooper vein to Cooper vein through fault.

The ventilation in this colliery has been improved by the erection of six concrete brick and iron air bridges.

The condition of the haulage roads and return air-ways have been improved by cleaning up and enlarging.

### Report of Jersey Fire

I am pleased to be able to report that this most stubborn and serious mine fire, if not entirely extinguished, has been so surrounded by incombustible material that it will be practically impossible for it to spread into any other part of the adjacent old workings.

This fire was discovered on May 18, 1901. The origin has always been a mystery. It has cost the company a tremendous amount of money. The officials and workmen engaged at this work have also suffered a great many trying ordeals, and are very well pleased with the conditions existing at the present time, as the work of fighting a fire of the magnitude of this one in old abandoned workings, where no system of ventilation could be adopted or applied, is a problem that taxes the ability of the most competent mining men.

The most important question in fighting a mine fire is to produce a sufficient quantity of air to dilute and render harmless noxious and dangerous gases, so as to enable the mine workers to attack their most insidious enemy.

A great deal of credit is due the men in charge of this work and those who have worked with them.

### WEST END COAL COMPANY

#### West End

One 110 and one 250 K. W. electric generator installed in concrete power house. One 7 ton electric locomotive, No. 1 Lee, and one 7 ton electric locomotive, R. A. Split. One 4 stage Worthington turbine pump, electrically driven, No. 1 Lee, one 5 stage Worthington pump, electrically driven, Lee shaft, one 15 foot Guibal fan, No. 1 Lee, electrically driven, and two Flory electric hoists. Three 300 H. P. Maxim water tube boilers, in concrete boiler house; 54 steel mine cars.

# Ninth District

LUZERNE AND CARBON COUNTIES

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Hazleton, Pa., February 21, 1906.

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

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines for the Ninth Anthracite District for the year ending December 31, 1905.

In addition to the usual tables, it contains the report of the arbitrators on the dam placed between Cranberry colliery of A. Pardee and Company and the Harwood colliery of C. Pardee and Company in the Parlor vein. The full report, as well as their decision, will be found embodied herein.

Respectfully submitted,

DAVID J. RODERICK,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	30
Number of mines, .....	110
Number of mines in operation, .....	109
Number of tons of coal shipped to market, .....	6,081,321
Number of tons used at mines for steam and heat, .....	831,650
Number of tons sold to local trade and used by employes, ..	155,364
Number of tons produced, .....	7,068,335
Number of persons employed inside, .....	9,467
Number of persons employed outside, .....	5,751
Number of fatal accidents inside of mines, .....	36
Number of fatal accidents outside, .....	13
Number of non-fatal accidents inside of mines, .....	97
Number of non-fatal accidents outside, .....	34
Number of tons of coal produced per fatal accident inside, ..	196,342
Number of persons employed per fatal accident inside, ...	263
Number of persons employed per fatal accident outside, ...	442
Number of persons employed per non-fatal accident inside, ..	98
Number of persons employed per non-fatal accident out- side, .....	169
Number of wives made widows, .....	29
Number of children orphaned, .....	76
Number of steam locomotives used inside of mines, .....	18
Number of steam locomotives used outside, .....	102
Number of compressed air locomotives used inside, .....	14
Number of electric motors used inside, .....	3
Number of fans in use, .....	58
Number of furnaces in use, .....	1
Number of gaseous mines in operation, .....	30
Number of non-gaseous mines in operation, .....	79
Number of old mines abandoned, .....	1



TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Lehigh Coal and Navigation Company, .....	1,404,799
G. B. Markle and Company, .....	1,074,898
Coxe Brothers and Company, Incorporated, .....	1,007,577
Lehigh Valley Coal Company, .....	950,825
A. Pardee and Company, .....	511,989
Pardee Brothers and Company, .....	508,124
Estate A. S. Van Wickle, .....	341,179
Calvin Pardee and Company, .....	334,339
Upper Lehigh Coal Company, .....	280,292
C. M. Dodson and Company, .....	196,653
John S. Wentz and Company, .....	156,372
Hazle Mountain Coal Company, .....	108,309
M. S. Kemmerer and Company, .....	63,997
Pond Creek Coal Company, .....	49,039
Black Creek Coal Company, .....	44,806
Stauffer and Rowe, .....	15,933
Hacklebernie Coal Company, .....	12,160
Thomas R. Reese and Son, .....	7,065
Total, .....	<u>7,068,335</u>

## Production by Counties

Luzerne, .....	4,857,258
Carbon, .....	2,211,077
Total, .....	<u>7,068,335</u>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per 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., .....	8	4	12	1	2	1	175,539	1,633	1,192	2,785	210	298	1,613	1,192
G. B. Barfkle and Co., .....	3	2	5	10	10	20	214,378	1,339	404	1,743	239	361	149	553
Lowe Brothers and Co., Inc., .....	3	2	5	11	10	21	534,839	1,002	71	1,073	334	331	71	401
Lehigh Valley Coal Co., .....	3	2	5	22	4	26	163,338	1,810	457	2,267	164	437	51	477
A. Pardee Coal Co., .....	2	1	3	9	7	16	56,358	700	528	1,228	330	176	78	417
Pardee Brothers and Co., .....	2	2	4	1	1	2	251,061	37,068	215	1,054	330	176	78	417
Estate A. S. Van Winkle, .....	2	1	3	9	3	12	37,068	439	215	654	330	176	78	417
Calvin Pardee and Co., .....	2	1	3	2	2	4	167,160	111,446	345	756	235	215	49	273
Upper Lehigh Coal Co., .....	1	1	2	5	2	7	280,292	56,058	362	678	315	215	151	112
C. M. Dodson and Co., .....	1	1	2	4	2	6	167,160	111,446	345	756	235	215	49	273
John S. Wentz and Co., .....	1	1	2	3	4	7	280,292	56,058	362	678	315	215	49	273
Hazle Mountain Coal Co., .....	2	1	3	3	3	6	49,163	302	182	484	68	68	76	181
M. S. Kemmerer and Co., .....	2	1	3	6	6	12	52,124	205	158	363	68	68	76	181
Pond Creek Coal Co., .....	1	1	2	1	1	2	18,651	208	196	334	104	68	68	132
Black Creek Coal Co., .....	1	1	2	1	1	2	62,997	90	74	164	92	90	90	180
Thomas R. Reese and Son, .....	1	1	2	1	1	2	48,030	92	56	148	92	92	31	28
Miscellaneous companies, .....	1	1	2	1	1	2	44,846	95	80	175	95	95	95	190
	36	13	49	97	34	131	7,467	42	33	75	6	6	3	3
Totals and averages for district, .....	36	13	49	97	34	131	186,342	72,819	9,467	5,751	263	412	83	169

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Falls of coal, .....	1		1		2	1	1	2	1				9	25.00
Falls of slate, .....			1	1	2		1	1	1			1	8	25.00
Falls of roof, .....	2									1			4	5.56
Mine cars, .....			1				1	1					3	8.33
Suffocation by gas, etc., .....			3										3	8.33
Explosions of powder and dynamite, .....		1										1	2	5.56
Premature blasts, .....							1						1	2.78
Falling into shafts, .....				1									1	2.78
Falling into slopes, etc., .....	3								1				4	11.11
Miscellaneous, .....	1												2	5.55
<b>Totals, .....</b>	<b>7</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>35</b>	<b>100</b>
<b>Causes of Accidents Outside</b>														
Cars, .....				1				1		1		1	4	30.77
Machinery, .....		1		1				1	2				5	38.46
Suffocation in chutes, etc., .....			1										1	7.69
Miscellaneous, .....	1		1									1	3	23.08
<b>Totals, .....</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>				<b>2</b>	<b>2</b>	<b>1</b>		<b>2</b>	<b>13</b>	<b>100</b>
<b>Grand totals inside and outside, .....</b>	<b>8</b>	<b>2</b>	<b>8</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>3</b>		<b>4</b>	<b>49</b>	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Falls of coal, .....	2	4	3	3	2	3	1	3	1	1	2	2	27	27.83
Falls of slate, .....	1	2		1	1	3		4	4	2	1	1	17	17.53
Mine cars, .....	1	1			2	1	3	1		1			10	10.31
Explosions of gas and dust, .....							2			3	3		8	8.25
Explosions of powder and dynamite, .....			1		1	2	1	4		1			10	10.31
Premature blasts, .....	2	1	2				1	2	1	2		2	14	14.43
Falling into slopes, etc., .....											1		1	1.03
Miscellaneous, .....	2	2	3				1		1	1			10	10.31
<b>Totals, .....</b>	<b>4</b>	<b>11</b>	<b>7</b>	<b>9</b>	<b>6</b>	<b>6</b>	<b>9</b>	<b>14</b>	<b>7</b>	<b>11</b>	<b>7</b>	<b>6</b>	<b>97</b>	<b>100</b>
<b>Causes of Accidents Outside</b>														
Cars, .....	2	6		1			3	1		1		2	16	47.06
Machinery, .....				2					1		3		6	17.65
Miscellaneous, .....	2		3			1		1	1	1	2	1	12	35.29
<b>Totals, .....</b>	<b>4</b>	<b>6</b>	<b>3</b>	<b>3</b>		<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>3</b>	<b>31</b>	<b>100</b>
<b>Grand totals inside and outside, .....</b>	<b>8</b>	<b>17</b>	<b>10</b>	<b>12</b>	<b>6</b>	<b>7</b>	<b>12</b>	<b>16</b>	<b>9</b>	<b>13</b>	<b>12</b>	<b>9</b>	<b>131</b>	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Mine foremen, .....			1										1
Miners, .....	4	4	1	1	3	1	2	3	3			1	23
Miners' laborers, .....	1	1			1		1			1			7
Doorboys and helpers, .....				1									2
Pumpmen, .....	1												1
Company men, .....								1					1
All other employes, .....									1				1
Totals, .....	7	11	6	2	4	1	4	4	3	2		2	36
Outside													
Engineers and firemen, .....		1		1									2
Slatepickers (boys), .....								1		1			2
All other employes, .....	1		2	1				1	1			2	8
Totals, .....	1	1	2	2				2	2	1		2	13
Grand totals inside and outside, .....	8	12	8	4	4	1	4	6	5	3		4	49

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....	4	3	6	9	4	4	6	11	12	9	4	5	71
Miners' laborers, .....		1			1	1	1	1	5	1	2	1	13
Drivers and runners, .....					1		1	1		1			4
Doorboys and helpers, .....						1	1						2
All other employes, .....										1			1
Totals, .....	4	11	7	9	6	6	9	14	7	11	7	6	97
Outside													
Foremen, .....							1						1
Blacksmiths and carpenters, .....								1			1		2
Engineers and firemen, .....				2									2
Slatepickers (boys), .....			1						1		2		4
Bookkeepers and clerks, .....							1		1	1			3
All other employes, .....	1	6	2	1		1	1	1	1	1	2	3	23
Totals, .....	4	6	3	3		1	3	2	2	2	5	3	34
Grand totals inside and outside, .....	8	17	10	12	6	7	12	16	9	13	12	9	131

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	...	2	1	...	1	...	2	2	1	...	1	11
English, .....	...	...	1	...	...	1	...	...	...	...	...	...	1
Welsh, .....	...	...	...	1	...	...	...	...	...	...	...	...	1
German, .....	...	...	...	1	...	...	...	...	...	...	...	...	1
Polish, .....	1	...	...	...	1	...	...	1	...	...	...	1	4
Hungarian, .....	...	...	...	1	...	...	1	1	1	...	...	1	5
Italian, .....	...	1	1	...	1	...	...	...	...	3	...	...	6
Slavonian, .....	1	...	1	...	...	...	...	1	1	...	...	...	10
Russian, .....	1	...	1	...	1	...	1	1	...	...	...	1	5
Greek, .....	1	...	...	...	...	...	...	...	...	...	...	1	3
Tyrolean, .....	1	1	...	...	...	...	...	...	...	...	...	...	3
Totals, .....	8	2	8	4	4	1	4	6	5	3	...	4	49

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	3	1	3	1	1	5	1	3	2	2	2	27
English, .....	...	1	...	...	...	...	...	...	1	1	...	...	12
Welsh, .....	...	1	...	...	...	...	...	...	...	...	...	1	12
Irish, .....	1	...	1	...	...	1	...	2	...	1	1	...	7
German, .....	1	...	...	...	1	...	...	1	1	1	...	...	4
Polish, .....	1	1	1	1	1	3	4	4	2	1	1	...	25
Hungarian, .....	1	1	1	3	...	...	3	4	1	4	...	...	25
Italian, .....	1	1	1	...	...	1	...	3	2	...	3	1	16
Slavonian, .....	1	1	1	2	...	...	...	...	...	...	1	1	7
Lithuanian, .....	...	...	...	...	...	...	...	...	...	...	1	...	2
Austrian, .....	...	1	2	...	1	1	...	1	...	3	...	2	11
Russian, .....	...	...	1	1	...	...	...	...	...	...	...	...	2
Tyrolean, .....	...	1	...	...	...	...	...	...	...	...	...	...	1
Totals, .....	8	17	10	12	6	7	12	16	9	13	12	9	131

TABLE I.—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 person 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	Area of furnace bars in square feet	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 Coal and Navigation Co.																	
Colliery No. 1	Shaft	Gaseous	Fan	24	8	6	63	9	Guibal	Steam	.....	5	121,335	77,820	128,220	151	515
Colliery No. 1	Tunnel	Gaseous	Fan	15	5	3.9	84	7					59,635	50,740	64,150	163	482
Colliery No. 1	Slope	Gaseous	Fan	16	8	4	120	1.2	Guibal	Steam	.....	6	13,000	11,070	48,000	48	229
Colliery No. 1	Slope	Gaseous	Fan	21	7	5.3	78	9					58,000	36,770	58,000	153	289
Colliery No. 1	Shaft	Gaseous	Fan	12	8	3	70	1.0	Guibal	Steam	.....	3	68,060	78,248	191,409	409	296
Colliery No. 6	Shaft	Non-gas	Natural	24	8	6	80	1.5					41,370	47,000	40,550	135	296
Colliery No. 9	Tunnel	Gaseous	Fan	21	8	7	72	1.5	Guibal	Steam	.....	2	42,250	27,400	43,750	98	279
Colliery No. 9	Shaft	Non-gas	Natural	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colliery No. 9	Shaft	Non-gas	Natural	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colliery No. 9	Shaft	Non-gas	Natural	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colliery No. 9	Shaft	Non-gas	Natural	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colliery No. 9	Shaft	Non-gas	Natural	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
G. F. Markle and Co.																	
Ford No. 4	Slope	Gaseous	Fan	21	7.10	6.3	84	2	Guibal	Steam	.....	8	81,900	75,500	85,750	303	249
Ebervale No. 1	Slope	Non-gas	Fan	16	4.5	4.6	75	5					16,000	13,000	19,000	32	406
Ebervale No. 3	Slope	Non-gas	Fan	16	4.5	4.6	75	5	Guibal	Steam	.....	5	53,000	49,000	63,000	129	380
Ebervale No. 4	Slope	Non-gas	Fan	16	4.5	4.6	75	5					103,500	91,000	117,000	358	254
Hughland No. 1	Slope	Gaseous	Fan	16	4.5	4.6	70	1.2	Guibal	Steam	.....	8	64,000	57,900	71,500	246	281
Hughland No. 2	Slope	Gaseous	Fan	16	4.5	4.6	70	1.2					18,700	11,250	19,150	16	703
Hughland No. 6	Slope	Non-gas	Fan	10	3	2.9	80	5	.....	.....	.....	.....	.....	.....	.....	.....	.....

\*Robbing. No air measurement taken



Coxe Brothers and Co., Inc.															
Drifton No. 1	Slope	Non-gas.	Fan	20	6	5.6	45	Guibal	Steam	4	45,000	42,000	42,000	71	591
Drifton No. 2	Slope	Gaseous.	Fan	20	6	5.6	80	Guibal	Steam	3	145,138	138,000	147,000	146	946
Eckley No. 1	Slope	Non-gas.	Natural							1	6,000	6,000	6,000	1	1,000
Eckley No. 2	Slope	Non-gas.	Natural							1	30,000	10,000	30,000	15	667
Eckley No. 6	Slope	Non-gas.	Natural							3	24,000	20,000	34,000	29	436
Eckley No. 10	Slope	Non-gas.	Natural							3	24,000	19,000	25,000	45	630
Buck Mountain	Tunnel	Non-gas.	Natural							2	17,500	14,800	18,700	46	322
Buck Mountain No. II	Slope	Non-gas.	Natural							2	16,200	11,600	6,600	52	224
Stockton	Slope	Non-gas.	Fan	20	6	5.6	60	Guibal	Steam	2	35,000	21,000	35,130	48	450
Beaver Meadow No. 1	Slope	Non-gas.	Fan	12	5	5.8	65	Guibal	Steam	2	8,643	4,698	11,270	12	391
Beaver Meadow No. 2	Slope	Non-gas.	Fan	20	6	5.6	90	Guibal	Steam	8	84,810	42,360	86,310	85	498
Dornlicker	Drift	Gaseous.	Furnace	20	6	5.6	100	Guibal	Steam	8	54,810	43,360	86,310	85	510
Gowan Nos. 1 and 3	Tunnel	Gaseous.	Fan	18	5	4	100	Guibal	Steam	8	58,900	42,000	58,800	62	687
Gowan No. 4	Slope	Gaseous.	Fan	20	6.10	5.7	55	Guibal	Steam	8	58,900	42,000	58,800	62	687
Lehigh Valley Coal Co.															
Hazleton No. 1	Slope	Gaseous.	Fan	20	6	6	60				101,265	41,480	102,555	141	293
Hazleton No. 8	Slope	Non-gas.	Fan	16	4	6	80				101,265	41,480	102,555	141	293
Hazleton No. 1, Fager Ridge	Slope	Non-gas.	Fan	16	4	5			Steam	*					
Hazleton No. 2	Slope	Gaseous.	Fan	14	4.9	4	70	Guibal			47,250	23,150	50,300	50	115
Hazleton No. 3	Slope	Gaseous.	Fan	14	4.9	4	75	Guibal			52,300	48,000	61,500	186	345
Hazleton No. 5	Slope	Gaseous.	Fan	14	4.9	4	60	Guibal			127,000	76,000	153,000	313	628
Hazleton shaft	Shaft	Gaseous.	Fan	20	7	6	60	Guibal			40,000	17,500	38,000	73	221
Spring Brook No. 1	Slope	Gaseous.	Fan	16	3.6	4	55	Guibal			36,500	21,800	37,000	76	285
Spring Brook No. 2	Slope	Gaseous.	Fan	14	4.9	4	60	Guibal							
Spring Brook No. 10	Slope	Non-gas.	Natural												
A. Pardee and Co.															
Cranberry No. 1, North	Slope	Non-gas.	Fan	16	4	4	70			6	100,340	85,000	102,500	139	611
Cranberry No. 1, South	Slope	Non-gas.	Fan	16	4.10	4	50			9	83,200	70,000	87,000	130	538
Cranberry No. 4	Drift	Non-gas.	Fan	16	4.9	4	60	Guibal		10	60,000	45,000	64,000	110	469
Cranberry No. 5	Slope	Non-gas.	Fan	16	4.9	4	69	Guibal	Steam	1	5,000	5,000	5,000	6	833
Cranberry No. 6	Slope	Non-gas.	Fan	16	4.6	4	80	Guibal		6	24,500	22,000	26,000	90	244
East Crystal Ridge	Slope	Non-gas.	Fan	16	4.6	4	60	Guibal		6	21,000	15,000	22,000	40	375
East Crystal Ridge	Slope	Non-gas.	Fan	16	4.6	4	60	Guibal		6	36,400	25,000	37,000	52	481
Pardee Brothers and Co.															
Lattimer No. 13	Slope	Non-gas.	Fan	16	4.6	4.3	66	Guibal	Steam		18,500	14,000	19,000	30	466
Lattimer No. 9	Slope	Gaseous.	Fan	16	4.6	4.3	66	Guibal	Steam		35,000	25,000	64,000	400	
Lattimer No. 2	Slope	Gaseous.	Fan	16	4.6	4.3	66	Guibal	Steam	2	68,975	24,000	69,000	99	243
Lattimer No. 2, Basin	Slope	Gaseous.	Fan	16	4.6	4.3	66	Guibal	Steam	2					
Lattimer, Orphans Home	Slope	Non-gas.	Natural												
Lattimer, Carter's Basin	Slope	Non-gas.	Natural												
Lattimer, West End No. 3	Slope	Non-gas.	Natural												
Lattimer, Shaft Basin	Slope	Non-gas.	Natural												
Lattimer, South Gamma No. 4	Slope	Non-gas.	Natural												
Lattimer, Lime Pillar	Slope	Non-gas.	Natural												
Lattimer, Primrose	Slope	Non-gas.	Natural												
Lattimer, North Gamma	Slope	Non-gas.	Natural												

\*Robbing. No air measurement taken.

TABLE I.—Continued.

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	Area of furnace bars in square feet	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
Estate A. S. Van Winkle																	
Coleraine No. 1, New	Slope	Gasous	Fan	16	4	5	85		Guibal	Steam		4	34,460	33,125	41,615	136	243
Coleraine No. 2, New	Slope	Non-gas	Natural														
Coleraine No. 2, Old	Slope	Non-gas	Natural														
Coleraine No. 1	Slope	Non-gas	Natural														
Coleraine No. 8	Slope	Non-gas	Natural														
Coleraine No. 9	Slope	Non-gas	Natural														
Coleraine stripping	Slope	Non-gas	Natural														
Calvin Pardee and Co.																	
Harwood No. 2	Slope	Non-gas	Natural														
Harwood No. 4	Slope	Non-gas	Fan	16	4.6	4.3	72	2	Guibal	Steam		5					
Harwood No. 5	Slope	Gasous	Fan	16	4.6	4.3	72	2	Guibal	Steam		6	33,500	50,560	142	236	
Harwood No. 11	Slope	Non-gas	Fan	16	4.6	4.3	72	1	Guibal	Steam							
Harwood No. 13	Slope	Non-gas	Fan	16	4.6	4.3	72	2	Guibal	Steam		3	37,500	53,740	144	260	
Harwood No. 21	Slope	Non-gas	Fan	16	4.6	4.3	72		Guibal	Steam							
Harwood No. 10	Slope	Non-gas	Natural														
Harwood, Wharton stripping	Slope																
Harwood, Mammoth stripping	Slope																
Upper Lehigh Coal Co.																	
Slope No. 1	Slope	Non-gas	Natural														
Slope No. 2	Slope	Non-gas	Natural														
Slope No. 10	Slope	Non-gas	Natural														
Slope No. 3	Slope	Non-gas	Natural														
Slope No. 5	Slope	Non-gas	Natural														
Slope No. 6	Slope	Non-gas	Natural														
Slope No. 7	Slope	Non-gas	Natural														
Slope No. 2	Slope	Non-gas	Natural														
Shaft No. 4	Shaft	Non-gas	Natural														
Little No. 2	Shaft	Non-gas	Natural														
Striping No. 1	Striping	Non-gas	Natural														

\*Robbing. No air measurement taken.



TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh Coal and Navigation Co. Colliery No. 1, ..... Colliery No. 4, ..... Colliery No. 5, ..... Colliery No. 6, ..... Colliery No. 8, ..... Screen Building, .....	Carbon, .....	W. D. Zehner, ....	Lansford, .....	Baird Snyder, Jr.,	Lansford, .....	C. R. R. of N. J.
G. B. Markle and Co. Jeddo No. 4 and Ebervale, .....	Luzerne, .....	John Markle, managing partner.	Jeddo, .....	W. H. Smith, Jr.,	Jeddo, .....	Lehigh Valley
Highland Nos. 2 and 6, .....	Luzerne, .....					
Lehigh Valley Coal Co. Hazleton No. 1, .....	Luzerne, .....	S. D. Warriner, ..	Wilkes-Barre, .....	Thomas Thomas, ..	Hazleton, .....	Lehigh Valley
Hazleton shaft, .....	Luzerne, .....					
Spring Brook, .....	Carbon, .....					
Coxe Brothers and Co., Inc. Drifton Nos. 1 and 2, .....	Luzerne, .....					
Eckley and Buck Mountain, .....	Luzerne, .....					
Stockton, .....	Luzerne, .....	S. D. Warriner, ..	Wilkes-Barre, .....	W. H. Davies, ...	Hazleton, .....	Lehigh Valley
Beaver Meadow, .....	Carbon, .....					
Tomhicken, .....	Luzerne, .....					
Derringer and Gowan, .....	Luzerne, .....					
A. Pardee and Co. Cranberry, .....	Luzerne, .....	Frank Pardee, ....	Hazleton, .....			Lehigh Valley
East Crystal Ridge, .....	Luzerne, .....	Frank Pardee, ....	Hazleton, .....			Lehigh Valley
Lattimer, .....	Luzerne, .....	A. W. Drake, .....	Lattimer Mines, ..	Calvin Pardee, Jr.,	Lattimer Mines, ..	Lehigh Valley
Pardee Brothers and Co. Estate A. S. Van Winkle Coleraine, .....	Carbon, .....	John Harvey, .....	Hazleton, .....			L. V. C. R. R. of N. J. and P. and R.
Harwood, .....	Luzerne, .....	A. W. Drake, ....	Lattimer Mines, ..	Calvin Pardee, Jr.,	Lattimer Mines, ..	L. V. and D. S. and S.
Upper Lehigh Coal Co. Upper Lehigh, .....	Luzerne, .....	A. C. Lelensing, ..	Upper Lehigh, ....			C. R. R. of N. J.

C. M. Dodson and Co. Beaver Brook, .....	E. L. Bullock, .....	Audenried, .....	R. G. Russell, .....	Audenried, .....	L. V. and C. R. R. of N. J.
John S. Wentz and Co. Hazle Brook, .....	John S. Wentz, ..	1723 Land Title Building, Phila.	John Weber, .....	Hazle Brook, .....	Lehigh Valley
Hazle Mountain Coal Co. Hazle Mountain, .....	W. R. McTurk, ...	Pen Building, Philadelphia.	W. A. Fuller, .....	Hazleton, .....	Lehigh Valley
M. S. Kemmerer and Co. Sandy Run, .....	M. S. Kemmerer, ..	Upper Lehigh, ....	Walter Leisenring, ..	Sandy Run, .....	C. R. R. of N. J.
Pond Creek, .....	William G. Thomas	Hazleton, .....	I. D. Thomas, .....	Zehner P. O., .....	Lehigh Valley
Black Creek Coal Co. Harleigh, .....	William G. Thomas	Hazleton, .....	.....	.....	Lehigh Valley and C. R. R. of N. J.
Rowe, .....	James Rowe, .....	Hazleton, .....	.....	.....	Lehigh Valley
Hackelbernie Coal Co. Hackelbernie, .....	D. E. Pursell, ....	Mauch Chunk, ....	.....	.....	C. R. R. of N. J.
Thomas R. Reese and Son Dusky Diamond, .....	Thomas R. Reese, ..	Audenried, .....	.....	.....	C. R. R. of N. J.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Totals are averages, not including washers)	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>Lehigh Coal and Navigation Co.</b>													
Colliery No. 1, .....	Carbon,	389,691	25,574	4,100	398,765	266	732	2	.....	1,860	92,500	95	
Colliery No. 4, .....		197,694	29,787	9,255	236,736	256	417	.....	.....	.....	77,500	65	
Colliery No. 5, .....		91,530	8,562	.....	100,092	123	488	1	.....	675	47,000	40	
Colliery No. 6, .....		320,375	31,125	.....	351,700	254	727	1	.....	75	106,500	85	
Colliery No. 7, .....		262,381	25,330	12,130	279,831	264	370	.....	.....	200	43,425	43	
Screen Building, .....		18,266	.....	.....	18,266	336	301	1	.....	.....	.....	.....	.....
<b>Totals, .....</b>		<b>1,240,671</b>	<b>138,634</b>	<b>25,485</b>	<b>1,404,790</b>	<b>272</b>	<b>2,786</b>	<b>12</b>	<b>1</b>	<b>2,810</b>	<b>368,375</b>	<b>328</b>	
<b>G. B. Markle and Co.</b>													
Jeddo No. 4 and Ebervale, .....	Luzerne,	432,757	47,622	1,988	481,657	187	871	2	5	4,367	160,289	132	
Highland No. 5, .....		330,867	46,988	1,533	377,388	189	571	3	4	8,839	51,908	82	
Highland Nos. 2 and 6, .....		173,888	36,665	5,280	215,833	293	461	.....	3	3,319	49,644	67	
<b>Totals, .....</b>		<b>637,622</b>	<b>130,675</b>	<b>6,601</b>	<b>1,074,898</b>	<b>192</b>	<b>1,903</b>	<b>5</b>	<b>12</b>	<b>16,665</b>	<b>261,741</b>	<b>281</b>	
<b>Coxe Brothers and Co., Inc.</b>													
Drifton Nos. 1 and 2, .....	Luzerne,	290,091	39,832	8,962	298,885	252	525	.....	8	4,333	18,380	79	
Eckley and Buck Mountain, .....		145,695	27,618	815	174,128	187	244	1	2	901	36,376	39	
Stockton, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Beaver Meadow, .....		241,406	42,704	6,795	250,905	262	69	.....	1	928	3,980	12	
Tomblicken, .....		238,151	29,753	5,755	273,659	261	357	.....	2	3,637	30,510	97	
Derringer and Gowan, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>Totals, .....</b>		<b>845,343</b>	<b>139,907</b>	<b>22,827</b>	<b>1,067,577</b>	<b>229</b>	<b>1,723</b>	<b>5</b>	<b>21</b>	<b>16,215</b>	<b>102,135</b>	<b>273</b>	



Lehigh Valley Coal Co.											
Hazleton No. 1, .....	249,601	43,890	54,452	347,343	231	806	4	10	8,833	105,396	66
Hazleton shaft, .....	356,765	54,315	359	411,439	213	1,197	3	9	13,706	139,107	85
Spring Brook, .....	175,852	20,411	1,780	162,043	217	407	.....	7	3,456	8,445	34
Totals, .....	775,618	118,616	56,591	560,827	222	2,403	7	26	26,445	252,968	185
A. Pardee and Co.											
Cranberry, .....	391,673	55,381	5,284	452,338	236	1,102	6	7	8,284	272,025	162
Past Crystal Ridge, .....	52,590	6,352	709	59,651	.....	174	.....	3	.....	.....	29
Totals, .....	444,263	61,733	5,993	511,989	236	1,276	6	10	8,284	272,025	191
Pardee Brothers and Co.											
Lattimer, .....	457,082	45,000	6,039	508,121	249	1,298	5	16	8,700	246,675	110
Estate A. S. Van Wickie											
Coderaine, .....	295,269	43,016	2,894	341,179	500	654	1	12	2,900	92,000	90
Calvin Pardee and Co.											
Harwood, .....	289,363	43,809	1,170	294,339	262	786	2	6	7,580	124,225	90
Upper Lehigh, .....											
Beaver Brook, .....	233,254	41,967	5,071	280,292	238	678	1	7	5,362	39,044	76
C. M. Dodson and Co.											
Hazle Brook, .....	174,604	21,187	862	196,653	220	494	.....	4	5,200	19,175	60
John S. Wentz and Co.											
Hazle Mountain, .....	135,495	20,000	877	156,372	247	363	.....	3	2,159	1,050	32
Hazle Mountain Coal Co.											
Sandy Run, .....	100,680	7,500	129	108,309	255	334	2	6	500	66,850	23
M. S. Kemmerer and Co.											
Pond Creek, .....	54,665	7,300	2,032	63,997	214	164	.....	1	461	13,050	21
Fond Creek Coal Co.											
Harleigh, .....	44,945	3,800	265	49,080	214	148	1	5	370	25,700	10
Black Creek Coal Co.											
Rowe, .....	37,076	5,400	2,330	44,806	249	175	1	1	800	21,900	19
Stauter and Rowe											
Hacklebernie Coal Co., .....	3,923	2,220	4,790	15,938	264	48	.....	.....	.....	500	6
Hacklebernie tunnel, .....											
Thomas R. Reese and Son	4,746	250	7,164	12,160	275	27	.....	.....	.....	9,000	2
Dusky Diamond, .....	1,606	645	4,724	7,065	301	9	1	.....	195	220	4
Grand totals, .....	6,081,321	881,650	166,364	7,083,265	243	15,218	49	131	106,469	1,917,283	1,757

TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Totals are averages, 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., .....	Carbon, .....	1,240,671	138,634	25,485	1,404,790	250	2,795	12	1	2,810	368,375	328
C. B. Markle and Co., .....	Luzerne, .....	937,622	130,675	6,401	1,074,898	196	1,903	5	12	16,665	261,741	281
Coxe Brothers and Co., Inc., .....	Luzerne and Carbon, .....	845,343	139,907	22,327	1,007,577	240	1,723	5	21	16,215	102,135	233
Lehigh Valley Coal Co., .....	Luzerne and Carbon, .....	775,618	118,616	56,591	950,825	220	2,403	7	26	26,445	252,968	185
A. Pardee and Co., .....	Luzerne, .....	444,263	61,733	5,963	511,989	236	1,276	6	10	8,264	272,025	191
Miscellaneous companies, .....	Luzerne and Carbon, .....	1,837,804	242,085	38,367	2,118,256	252	5,118	14	61	35,070	690,139	539
Totals, .....	.....	6,081,321	831,650	155,264	7,068,335	248	15,218	41	131	105,469	1,917,383	1,757

TABLE 2.—PART 2.

Names of Operators	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	Steam	Air							
Lehigh Coal and Navigation Co.,	.....	23	424	43	12,452	12,876	24	.....	153	5,595	7	10,420	6,940	.....	2
G. B. Markle and Co.,	.....	.....	.....	56	8,910	8,910	12	6	89	5,700	9	8,821	8,221	2	6
Coxe Brothers and Co., Inc.,	.....	18	660	61	12,155	12,815	21	8	100	5,358	22	20,700	13,500	3	9
Lehigh Valley Coal Co.,	.....	46	1,380	42	6,340	7,720	12	.....	68	6,415	15	13,660	7,000	2	.....
A. Pardee and Co.,	.....	38	1,140	28	3,990	5,120	11	.....	65	18,229	15	23,100	7,600	.....	1
Pardee Brothers and Co.,	.....	12	240	13	2,415	2,632	11	.....	28	3,233	.....	.....	.....	.....	2
Estate A. S. Van Winkle,	.....	15	225	18	2,025	2,250	6	.....	26	1,144	.....	7,347	2,456	1	.....
Calvin Pardee and Co.,	.....	.....	.....	12	1,800	1,800	5	.....	29	1,224	.....	8,690	4,000	1	.....
Upper Lehigh Coal Co.,	.....	66	2,060	12	1,140	3,220	8	.....	54	1,216	19	12,150	4,950	.....	1
C. M. Dodson and Co.,	.....	16	340	14	1,910	2,240	3	.....	16	800	12	9,090	4,000	.....	1
John S. Wentz and Co.,	.....	.....	.....	9	1,350	1,350	4	.....	16	750	3	3,090	2,800	.....	.....
Itazle Mountain Coal Co.,	.....	.....	.....	8	1,100	1,100	2	.....	10	610	5	2,990	1,157	.....	.....
M. S. Kemmerer and Co.,	.....	6	240	4	600	600	1	.....	10	385	4	3,000	1,000	.....	.....
Pond Creek Coal Co.,	.....	.....	.....	5	660	660	1	.....	5	150	4	3,000	1,000	.....	.....
Black Creek Coal Co.,	.....	.....	.....	6	750	750	.....	.....	8	360	2	475	250	.....	.....
Stauffer and Rowe,	.....	.....	.....	2	60	60	.....	.....	4	40	.....	.....	.....	.....	.....
Hackleberle Coal Co.,	.....	.....	.....	1	45	45	.....	.....	1	30	.....	.....	.....	.....	.....
Thomas R. Reese and Son,	.....	.....	.....	1	90	90	.....	.....	2	60	.....	.....	.....	.....	.....
Totals,	.....	246	6,759	335	57,622	64,361	120	14	3	52,092	119	125,263	64,584	11	22

\*Jeddo tunnel drains.





TABLE 3.—Recapitulation

Names of Operators	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks		All other employes	Total outside
Lehigh Coal and Navigation Co.	Carbon, .....	10	8	20	415	204	136	60	22	298	429	1,603	.....	7	38	148	245	217	7	530	1,182	2,785
G. B. Markle and Co., .....	Luzerne, .....	5	11	2	565	402	101	33	12	72	196	1,389	3	3	42	69	68	38	6	275	504	1,933
Coxe Brothers and Co., Inc., .....	Luzerne, and Carbon, .....	7	12	6	504	38	86	33	18	23	275	1,692	1	6	59	118	31	130	16	360	721	1,723
Lehigh Valley Coal Co., .....	Carbon, and Luzerne, .....	6	.....	14	787	387	78	17	21	.....	389	1,689	.....	3	41	71	130	43	8	408	704	2,403
A. Pardee and Co., .....	Carbon, .....	4	3	4	374	215	77	32	15	41	54	819	.....	2	39	59	18	58	3	278	457	1,276
Miscellaneous companies, .....	Luzerne, and Carbon, .....	18	28	6	1,159	1,031	227	51	41	285	99	2,945	11	15	132	268	335	191	40	1,181	2,173	5,118
Totals, .....	.....	50	62	52	3,704	2,277	705	226	128	720	1,442	9,467	15	36	351	733	827	677	80	3,032	5,751	15,218



TABLE 3.—PART 2.

Names of Operators and Collieries	County	Number of days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Lehigh Coal and Navigation Co. Colliery No. 1, ..... Colliery No. 4, ..... Colliery No. 5, ..... Colliery No. 6, ..... Colliery No. 9, ..... Screen Building, .....	Carbon, ....	19 19 18 18 27	21 19 19 19 29	23 19 22 24 28	22 20 22 22 21	23 22 22 23 27	22 23 23 23 28	22 22 21 22 28	23 24 22 23 28	23 23 21 21 28	22 20 21 21 25	23 21 19 19 19	22 22 20 20 22	266 236 133 254 264 336
G. B. Markle and Co. Jeddo No. 4, and Ebervale, ..... Highland No. 5, ..... Highland Nos. 2 and 6, .....	Luzerne, ....	16 17 18 18	16 17 18 18	18 18 16 18	13 16 16 16	17 18 20 18	16 17 20 16	15 12 16 16	15 16 16 16	10 16 17 17	12 11 13 13	16 16 16 16	16 16 16 17	187 183 203
Coxe Brothers and Co., Inc. Drifton Nos. 1 and 2, ..... Feltz and Buck Mountain, ..... Schenck, ..... Beaver Meadow, ..... Tombleken, ..... Derringer and Gowan, .....	Luzerne, ..... Luzerne, ..... Luzerne, ..... Carbon, ..... Luzerne, ..... Luzerne, .....	18 17 22 22 20	19 14 22 22 21	22 16 24 24 24	20 16 21 21 19	22 17 23 23 23	22 17 23 23 22	20 14 20 20 21	22 16 20 20 22	21 15 21 21 22	21 15 15 21 22	22 14 15 22 22	22 14 14 22 22	252 187 262 281
Lehigh Valley Coal Co. Hazleton No. 1, ..... Hazleton shaft, ..... Spring Brook, .....	Luzerne, ..... Luzerne, ..... Carbon, .....	16 20 21	17 11 12	19 21 21	21 19 19	22 21 21	22 20 21	17 17 16	17 20 16	22 18 18	19 18 18	19 18 17	21 20 18	231 213 217
A. Pardee and Co. Cranberry, ..... East Crystal Ridge, .....	Luzerne, .... Luzerne, .....	20	16	22	20	21	18	17	21	21	21	18	20	236
Pardee Brothers and Co. Lattimer, .....	Luzerne, .....	18	20	21	21	21	23	20	21	21	22	20	21	249
Estate A. S. Van Winkle Coleraine, .....	Carbon, .....	22	24	27	24	26	25	25	27	25	25	25	25	300

†Included in Derringer and Gowan.  
\*Included in Beaver Meadow.



TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan.	5 Steve Krupka, .....	Russian, ....	Laborer, ....	35	M.	1	3	Buck Mt. Strip,	Luzerne, .....	Fatally injured by a rock rolling upon him. Outside.
	7 Peter Yasivitz, .....	American, ...	Pump boy, ...	18	S.	1	1	Hazlegh.	Luzerne, .....	Drowned by rush of water into mine.
	11 Selma Zarlani, .....	Tyrolean, ...	Miner, .....	32	M.	1	1	Hazleton No. 1, ..	Luzerne, .....	Instantly killed by fall of roof in gangway.
	11 Charles Hines, .....	Tyrolean, ....	Laborer, ....	28	S.	.....	.....	Hazleton No. 1, ..	Luzerne, .....	Instantly killed by fall of roof in gangway.
	14 Paul Machaska, .....	Greek, .....	Miner, .....	31	M.	1	4	Lansford No. 5, ..	Carbon, .....	Instantly killed by falling down airway.
	14 Andrew Yancheck, .....	Slavonian, ...	Miner, .....	33	M.	1	5	Lansford No. 5, ..	Carbon, .....	Instantly killed by falling down airway.
	14 Joseph Good, .....	Polish, .....	Laborer, .....	29	S.	.....	.....	Lansford No. 5, ..	Carbon, .....	Instantly killed by fall of coal in gangway.
	16 Joseph Pistick, .....	Slavonian, ...	Miner, .....	38	M.	1	3	Dusky Diamond,	Luzerne, .....	Fatally injured by fall of coal in gangway.
Feb.	6 John Garro, .....	Italian, .....	Engineer, ...	22	S.	.....	.....	Coleraine, .....	Carbon, .....	Instantly killed by being whirled around shaft. Outside.
	15 Renega Poli, .....	Tyrolean, ...	Laborer, ....	24	S.	.....	.....	Nesqueoning Tunnel No. 1,	Carbon, .....	Instantly killed by explosion of dynamite.
March	1 James Piler, .....	American, ...	Mine fore-man,	44	M.	1	5	Lansford No. 5, ..	Carbon, .....	Fatally injured by having his leg crushed between mine locomotive and loaded car.
	6 Andrew Banker, .....	Slavonian, ...	Laborer, ....	36	M.	1	2	Lattimer, .....	Luzerne, .....	Spine fractured; struck by piece of timber. Outside.
	11 George Zlock, .....	Slavonian, ...	Miner, .....	42	M.	1	3	Lansford No. 5, ..	Carbon, .....	Struck by gas from mine locomotive.
	14 Jacob Marsco, .....	Russian, ....	Miner, .....	35	S.	1	1	Cranberry No. 4, ..	Luzerne, .....	Instantly killed by fall of slate.
	18 Lewis Fencerali, .....	Italian, .....	Laborer, ....	27	S.	.....	.....	Lattimer No. 4, ..	Luzerne, .....	Smothered in rice coal pocket in breaker. Outside.
	25 Joseph Babik, .....	Slavonian, ...	Laborer, ....	26	M.	1	1	Lattimer, No. 4,	Luzerne, .....	Instantly killed by fall of coal in breast.
	25 Samuel Derby, .....	American, ...	Miner, .....	44	M.	1	3	Lansford No. 6, ..	Carbon, .....	Suffocated in airway which they were driving to surface, by the blocking of their manway.
	25 Robert Benson, .....	English, .....	Miner, .....	36	M.	1	2	Lansford No. 4, ..	Carbon, .....	Instantly killed; run over by trip of loaded cars. Outside.
April	8 Paul Vstock, .....	Hungarian, ...	Laborer, ....	22	S.	.....	.....	Lansford No. 6, ..	Carbon, .....	Fatally scalded by the bursting of a steam valve. Outside.
	9 Martin Getz, .....	German, .....	Water tender,	46	M.	1	6	Hazleton shaft, ..	Luzerne, .....	Fatally injured by falling down shaft.
	12 Charles Callaghan, .....	American, ...	Patcher, .....	17	S.	.....	.....	Pond Creek, .....	Luzerne, .....	Fatally injured by fall of slate in breast.
	14 George Laszda, .....	Slavonian, ...	Miner, .....	36	M.	1	5	Hazle Mountain, ..	Luzerne, .....	Fatally injured by fall of slate in breast.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident thn Brief
May 6	Uriah Phillips, .....	Welsh, .....	Miner, .....	48	M.	1	1	Hazle Mountain, ..	Luzerne, .....	Fatally injured by fall of coal from face of breast.
10	Toney Putushko, .....	Italian, .....	Laborer, .....	30	M.	1	.....	Hazleton No. 1, ..	Luzerne, .....	Fatally injured by fall of slate in stump heading.
24	Charles Drusdowski, ..	Russian, .....	Miner, .....	42	M.	1	.....	Harwood, .....	Luzerne, .....	Fatally injured by fall of coal from face of pillar.
26	Alex Sernefski, .....	Polish, .....	Miner, .....	24	S.	.....	.....	Highland No. 5, ..	Luzerne, .....	Instantly killed by fall of slate in breast.
June 2	James Crawford, .....	American, ..	Miner, .....	38	M.	1	6	Gowan slope No. 4, ..	Luzerne, .....	Fatally injured by fall of coal in gangway.
July 13	John Kometz, .....	Slavonian, ..	Patcher, .....	19	S.	.....	.....	Highland No. 5, ..	Luzerne, .....	Fatally injured; squeezed between air motor and rib of gangway.
25	Anthony Matalavish, ..	Russian, .....	Miner, .....	25	M.	1	1	Cranberry No. 4, ..	Luzerne, .....	Fatally injured by premature blast.
28	Andrew Yuvetzek, .....	Slavonian, ..	Miner, .....	57	S.	.....	.....	Harwood, .....	Luzerne, .....	Instantly killed by fall of slate.
31	John Prebolic, .....	Hungarian, ..	Laborer, .....	19	S.	.....	.....	Highland No. 5, ..	Luzerne, .....	Fatally injured by fall of coal from pillar.
Aug. 2	Joseph Harwath, .....	Hungarian, ..	Miner, .....	30	M.	1	4	Derringer, .....	Luzerne, .....	Fatally injured by fall of slate in cross heading.
3	Steve Guninski, .....	Russian, .....	Miner, .....	23	S.	.....	.....	Hazleton No. 1, ..	Luzerne, .....	Instantly killed by fall of coal in breast.
14	Harvey McAfee, .....	American, ..	Bottom man, ..	34	M.	1	4	Jeddo No. 4, .....	Luzerne, .....	Instantly killed by runaway cars at bottom of slope.
23	Jacob Smell, .....	Polish, .....	Miner, .....	29	S.	.....	.....	Cranberry No. 1, ..	Luzerne, .....	Fatally injured by fall of coal in breast.
25	George Nelkum, .....	American, ..	Separator attendant, ..	15	S.	.....	.....	Cranberry, .....	Luzerne, .....	Fatally injured; whirled around shaker in breaker. Outside.
27	Elias Holohan, .....	Slavonian, ..	Driver, .....	17	S.	.....	.....	Nesquehoning No. 1, ..	Carbon, .....	Fatally injured; run over by mine car. Outside.
Sept. 1	Thomas Brenk, .....	Slavonian, ..	Hooper tender, .....	17	S.	.....	.....	Hudson Screen Building, .....	Carbon, .....	Instantly killed; whirled around main driving shaft. Outside.
25	Steve Parra, .....	Hungarian, ..	Miner, .....	29	M.	1	2	Beaver Meadow No. 4 slope, ..	Carbon, .....	Fatally injured by falling down his breast manway.
27	Peter Yeager, .....	American, ..	Ohler, .....	21	M.	1	.....	Hazleton shaft, ..	Luzerne, .....	Fatally injured by machinery on breaker. Outside.
28	Keatan Kuzat, .....	Italian, .....	Miner, .....	23	M.	1	2	Lattimer, .....	Luzerne, .....	Fatally injured by a fall of coal in breast.
30	William Rhoda, .....	American, ..	Miner, .....	39	S.	.....	.....	Upper Lehigh, ..	Luzerne, .....	Instantly killed by fall of slate.
Oct. 5	Pasco Prett, .....	Italian, .....	Laborer, .....	47	M.	1	3	Cranberry No. 6, ..	Luzerne, .....	Fatally injured by a piece of slate striking him on head.

Oct.	13	Frank Tyson, .....	American, ..	Bottom man, ..	29	M.	1	Jeddo No. 4, ....	Luzerne, .....	Fatally injured by being struck on the head by a piece of coal which rolled down the slope.
	14	Dom Cortese, .....	Italian, .....	Slatepicker, ..	15	S.	.....	Lattimer No. 3, ..	Luzerne, .....	Fatally injured; head caught between top of car and breaker. Outside.
Dec.	2	George Seiple, .....	American, ..	Miner, .....	30	M.	1	Hazleton shaft, ..	Luzerne, .....	Fatally injured by an explosion of dynamite while in the act of tamping a hole.
	4	John Seraga, .....	Hungarian, ..	Laborer, ....	28	M.	1	Beaver Meadow, ..	Carbon, .....	Instantly killed by an explosion of dynamite while in the act of unloading a rock car. Outside.
	8	Mike Povlik, .....	Greek, .....	Driver, .....	22	S.	.....	Lansford No. 9, ..	Carbon, .....	Fatally injured; run over by ash car. Outside.
	14	John Stiffer, .....	Polish, .....	Miner, .....	38	M.	1	Cranberry, .....	Luzerne, .....	Fatally injured by fall of slate in breast.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 9	George Pongrats, .....	Slavonian, .....	Miner, .....	27	M	Gowan 1 and 3, .....	Luzerne, .....	Leg fractured by being bumped by empty cars.
10	Patrick Cororan, .....	Irish, .....	Miner, .....	39	M	Hazleton shaft, .....	Luzerne, .....	Arm fractured by fall of coal.
13	William McBride, .....	American, .....	Top man, .....	24	S	Coleraine, .....	Carbon, .....	Compound fracture of leg, and hand crushed by falling under cars. Outside.
17	John Sullivan, .....	Italian, .....	Strip miner, ..	44	M	Cranberry, .....	Luzerne, .....	Face struck by an explosion of powder in stripping. Outside.
18	Conrad Sipple, .....	German, .....	Timber cutter, ..	43	M	Ebervale, .....	Luzerne, .....	Body squeezed between log and log on timber bank. Outside.
18	John Sherock, .....	Hungarian, .....	Miner, .....	37	M	Beaver Meadow, ..	Carbon, .....	Three fingers crushed by fall of slate.
21	Mike Golinski, .....	Polish, .....	Miner, .....	32	M	Hazleton shaft, ..	Luzerne, .....	Two toes crushed by fall of coal.
24	George Lashko, .....	Hungarian, .....	Laborer, .....	37	M	Coleraine, .....	Carbon, .....	Leg fractured by a piece of frozen material striking him. Outside.
Feb. 4	David Morgan, .....	Welsh, .....	Miner, .....	54	M	Lansford No. 5, .....	Carbon, .....	Leg fractured by fall of coal.
7	George Russo, .....	Slavonian, .....	Driver, .....	18	S	Coleraine, .....	Carbon, .....	Leg fractured by cars on rock bank. Outside.
7	Joseph Kuntz, .....	Hungarian, .....	Miner, .....	43	S	Jeddo No. 4, .....	Luzerne, .....	Thigh fractured and contusions of back by fall of slate.
9	Andrew Krug, .....	Polish, .....	Miner, .....	29	M	Jeddo No. 4, .....	Luzerne, .....	Skull and arm fractured by fall of coal.
10	Charles Lemoklitz, .....	Hungarian, .....	Miner, .....	24	M	Stockton, .....	Luzerne, .....	Spine injured and left hand cut by flying coal from shot.
13	Mike Balanick, .....	Hungarian, .....	Miner, .....	36	M	Beaver Meadow, ..	Carbon, .....	Leg fractured by flying coal from shot.
14	Eugene Bonner, .....	American, .....	Loco. patcher, ..	29	S	Drifton, .....	Luzerne, .....	Large toe crushed by being run over by car. Outside.
16	Steve Stenko, .....	Hungarian, .....	Laborer, .....	40	M	Coleraine, .....	Carbon, .....	Arm fractured by fall of slate.
16	Dominic Doniano, .....	Italian, .....	Laborer, .....	28	M	Lattimer, .....	Luzerne, .....	Collar bone fractured by being struck by car. Outside.
17	Andrew Lazure, .....	Hungarian, .....	Bottom man, .....	22	M	Beaver Meadow, ..	Carbon, .....	Foot bruised by being run over by car. Outside.
18	Edward Davis, .....	American, .....	Officr, .....	33	S	Eckley, .....	Luzerne, .....	Fingers crushed between bumpers of car. Outside.
20	Andrew Chasaski, .....	Polish, .....	Laborer, .....	40	S	Cranberry No. 5, ..	Luzerne, .....	Leg bruised by piece of coal striking him.
20	Herman Harkey, .....	American, .....	Driver, .....	18	S	Cranberry No. 4, ..	Luzerne, .....	Ankle fractured by wheel of car rubbing against it.
21	Rocco Dalols, .....	Italian, .....	Coal loader, .....	25	M	Lattimer, .....	Luzerne, .....	Contusion of side by being squeezed between cars. Outside.



Feb.	21	Gregliano Marsicano, .....	Italian, .....	Miner, .....	30	M	Lattimer, .....	Luzerne, .....	Head cut by fall of coal.
	22	Joseph Babik, .....	Austrian, .....	Laborer, .....	25	M	Lattimer, .....	Luzerne, .....	Head and hands cut by fall of coal.
	24	Joseph Polkaski, .....	Slavonian, .....	Miner, .....	30	M	Hazleton No. 1, .....	Luzerne, .....	Compound fracture of leg by a collar falling upon him.
March	1	Rich E. Drum, .....	American, .....	Miner, .....	25	S.	Coleraine, .....	Carbon, .....	Shoulder dislocated by a stick of timber striking him.
	10	Nislosky Mickula, .....	Polish, .....	Laborer, .....	32	S.	Buck Mt. strip-ping, .....	Luzerne, .....	Leg bruised and head cut by being struck by a lump of frozen clay on stripping, Outside.
	11	Frank Orbay, .....	Hungarian, .....	Miner, .....	32	M.	Coleraine, .....	Carbon, .....	Collar bone fractured; struck by a piece of coal that rolled down slope.
	13	Alex Kochonsky, .....	Russian, .....	Laborer, .....	25	S.	Harwood, .....	Luzerne, .....	Contusions of back and side by fall of coal in breast.
	15	Neal McMonigal, .....	Irish, .....	Miner, .....	55	M.	Lattimer, .....	Luzerne, .....	Body bruised by fall of coal in breast.
	15	Toney Savage, .....	Hungarian, .....	Slatepicker, .....	15	S.	Spring Brook, .....	Carbon, .....	Arm fractured by falling; while playing during noon hour. Outside.
	16	Mike Vilesko, .....	Polish, .....	Miner, .....	27	S.	Hazleton No. 1, .....	Luzerne, .....	Face and hands burned by explosion of powder.
	25	Steve Bartel, .....	Austrian, .....	Miner, .....	42	M.	Lattimer, .....	Luzerne, .....	Back injured by fall of coal in breast.
	27	Vicola Hauzab, .....	Austrian, .....	Laborer, .....	21	S.	Lattimer, .....	Luzerne, .....	Leg crushed by rock-rolling against him in stripping, Outside.
	30	Peter Hartola, .....	Tyrolean, .....	Miner, .....	23	S.	Hazleton shaft, .....	Luzerne, .....	Skull fractured by flying coal from a shot.
April	5	Mike Homeskie, .....	Hungarian, .....	Miner, .....	35	M.	Harleigh, .....	Luzerne, .....	Arm fractured by flying coal from a shot.
	5	Andrew Panko, .....	Slavonian, .....	Miner, .....	38	M.	Sandy Run, .....	Luzerne, .....	Head cut by fall of slate in breast.
	5	Dominick Fuos, .....	Italian, .....	Laborer, .....	23	M.	Harwood, .....	Luzerne, .....	Knee bruised between bumpers of cars, Outside.
	7	John Stiles, .....	American, .....	Miner, .....	29	M.	Lattimer, .....	Luzerne, .....	Cut above eye by fall of coal in breast.
	11	Alex Rundes, .....	Lithuanian, .....	Miner, .....	26	S.	Cranberry No. 4, .....	Luzerne, .....	Leg fractured by a prop rolling upon him.
	13	Mike Maxwell, .....	Polish, .....	Miner, .....	40	M.	Hazleton shaft, .....	Luzerne, .....	Body contused by rush of coal in breast.
	14	Anthony Bakashinske, .....	Russian, .....	Miner, .....	28	M.	Lattimer, .....	Luzerne, .....	Back injured by fall of coal in breast.
	17	Milton Hill, .....	American, .....	Fireman, .....	35	M.	Beaver Meadow, .....	Carbon, .....	Finger crushed by machinery in boiler house, Outside.
	17	George Bushka, .....	Hungarian, .....	Miner, .....	32	M.	Coleraine, .....	Carbon, .....	Head cut by fall of coal in breast.
	19	Nick Desandola, .....	Italian, .....	Miner, .....	38	S.	Hazle Mountain, .....	Luzerne, .....	Scalp and hands lacerated by returning to what he thought to be a missed hole.
	21	Mike Shekoria, .....	Hungarian, .....	Miner, .....	28	M.	Coleraine, .....	Carbon, .....	Toes crushed; caught between coal and prop at battery.
	24	Harvey Michael, .....	American, .....	Fireman, .....	24	M.	Derringer, .....	Luzerne, .....	Compound fracture of arm by machinery in boiler house, Outside.
May	8	John Deal, .....	German, .....	Miner, .....	46	S.	Pond Creek, .....	Luzerne, .....	Rib fractured by fall of slate in gang-way.
	9	John Hinkle, .....	American, .....	Driver, .....	18	S.	Upper Lehigh, .....	Luzerne, .....	Leg fractured by cars upon which he was riding, becoming derelict.
	11	Mike Shrimko, .....	Slavonian, .....	Miner, .....	22	S.	Hazle Brook, .....	Luzerne, .....	Leg fractured by fall of coal in breast.
	11	George Somburoskie, .....	Polish, .....	Miner, .....	26	S.	Spring Brook, .....	Carbon, .....	Contusion of coal in breast lacerated face by fall of coal in breast.
	31	John Goach, .....	Slavonian, .....	Laborer, .....	27	S.	Hazle Brook, .....	Luzerne, .....	Arm fractured between cars at bottom of slope.
	31	Ludwig Bertoldi, .....	Austrian, .....	Miner, .....	26	S.	Drifton No. 1, .....	Luzerne, .....	Leg burned by dynamite which became ignited in his boot.
June	1	Toney Angelo, .....	Italian, .....	Laborer, .....	29	S.	Lattimer, .....	Luzerne, .....	Leg fractured by plank striking him while tearing down old water tank, Outside.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
June 2	William Gillespie, .....	American, .....	Patcher, .....	17	M.	Hazle Brook, .....	Luzerne, .....	Collar bone fractured by falling from car upon which he was riding.
5	William Ambrumcheck, ..	Polish, .....	Miner, .....	42	M.	Hazleton No. 1, ...	Luzerne, .....	Hands, face and body burned, and sight of one eye destroyed by explosion of dynamite.
17	Anthony Stapauski, .....	Polish, .....	Laborer, .....	28	M.	Buck Mountain, ..	Luzerne, .....	Collar bone fractured by fall of coal in gangway
19	Hugh McGee, .....	Irish, .....	Miner, .....	62	M.	Lattimer, .....	Luzerne, .....	Head and hip injured by fall of coal.
21	John Zeck, .....	Austrian, .....	Miner, .....	42	M.	Lattimer, .....	Luzerne, .....	Head injured by a fall of coal.
27	Mike Holda, .....	Polish, .....	Miner, .....	22	S.	Beaver Brook, .....	Luzerne, .....	Hand blown off by an explosion of dynamite in battery.
July 5	Edward Beacroft, .....	American, .....	Driver, .....	18	S.	Coleraine, .....	Carbon, .....	Leg fractured by falling off the bumper
11	Joseph Saboski, .....	Polish, .....	Laborer, .....	28	M.	Beaver Brook, .....	Luzerne, .....	Head cut by falling coal from shot that blew through pillar
12	Maurice Houser, .....	American, .....	Foreman, .....	40	M.	Buck Mountain, ...	Luzerne, .....	Leg crushed by cars in attempting to get on trip. Outside.
15	Mike Fmanish, .....	Hungarian, .....	Miner, .....	35	M.	Harwood, .....	Luzerne, .....	Ribs fractured by falling into an empty car under chute.
18	John Kislatavish, .....	Polish, .....	Miner, .....	21	S.	Hazleton shaft, ...	Luzerne, .....	Pelvis fractured by being squeezed between car and door frame.
21	Calvin Ferry, .....	American, .....	Office boy, ...	18	S.	Hazleton No. 1, ...	Luzerne, .....	Leg crushed by being run over by a gondola. Outside.
21	Andrew Lesco, .....	Polish, .....	Miner, .....	39	M.	Hazleton shaft, ...	Luzerne, .....	Contused back; caught by a fall of coal while banking.
21	Mike Rashock, .....	Polish, .....	Miner, .....	40	M.	Highland No. 2, ...	Luzerne, .....	Hand blown off by an explosion of dynamite.
27	George Powell, .....	American, .....	Patcher, .....	16	S.	Harwood, .....	Luzerne, .....	Head cut; caught between top of car and collar.
29	Daniel McGee, .....	American, .....	Patcher, .....	17	S.	Upper Lehigh, ...	Luzerne, .....	Collar bone fractured by falling from gondola. Outside.
31	Peter Klucher, .....	Hungarian, .....	Miner, .....	29	M.	Highland No. 5, ...	Luzerne, .....	Hands burned by an explosion of gas.
31	Joseph Derofski, .....	Hungarian, .....	Miner, .....	25	S.	Highland No. 5, ...	Luzerne, .....	Face and hands burned by an explosion of gas.
Aug. 1	Fred Stryneski, .....	Polish, .....	Miner, .....	23	S.	Hazleton shaft, ...	Luzerne, .....	Severely burned by an explosion of powder.

Aug.	2	Mike Patsock, .....	Polish, .....	Laborer, .....	22	M. Pond Creek, .....	Luzerne, .....	Leg injured by fall of coal.
	3	Andrew Mezure, .....	Hungarian, .....	Miner, .....	45	M. Beaver Brook, .....	Luzerne, .....	Leg fractured by fall of slate.
	4	John Luckotash, .....	Polish, .....	Carpenter, .....	25	M. Pond Creek, .....	Luzerne, .....	Leg injured by a falling upon him knocked out by derailed car.
	4	James Harkins, .....	Irish, .....	Miner, .....	59	M. Drifton No. 1, .....	Luzerne, .....	Hip dislocated and head cut by fall of slate in breast.
	11	Frank Ross, .....	Italian, .....	Patcher, .....	17	S. Drifton No. 1 strip-ping, .....	Luzerne, .....	Compound fracture of leg by falling under cars on plane. Outside.
	21	John Street, .....	German, .....	Miner, .....	60	M. E. Crystal Ridge, .....	Luzerne, .....	Leg fractured by fall of slate in breast.
	21	Ritz Harahas, .....	Hungarian, .....	Miner, .....	29	M. Hazleton shaft, .....	Luzerne, .....	Leg fractured by fall of coal in breast.
	26	Mike Bunk, .....	Austrian, .....	Miner, .....	33	M. Hazle Mountain, ..	Luzerne, .....	Body contused and lacerated arm by an explosion of powder.
	28	Joe Caravitch, .....	Polish, .....	Laborer, .....	30	S. Highland No. 2, ..	Luzerne, .....	Contused back by fall of slate.
	28	Frank Conahan, .....	Irish, .....	Miner, .....	60	M. Spring Brook, .....	Carbon, .....	Back contused by fall of slate.
	31	Hugh McMonigal, .....	American, .....	Driver, .....	23	S. Jeddo No. 4, .....	Luzerne, .....	Contusions of abdomen by being squeezed by cars.
	31	Toney Carley, .....	Italian, .....	Miner, .....	34	M. Beaver Meadow, ..	Luzerne, .....	Skull fractured and eye blown out by returning to what he supposed to be a missed shot.
	31	Jacob Barthnetti, .....	Italian, .....	Miner, .....	26	M. Beaver Meadow, ..	Luzerne, .....	Cut about head and bruised about body by returning to what he supposed to be a missed shot.
	31	Joseph Filber, .....	Hungarian, .....	Miner, .....	27	S. Goway Nos. 1 and 2, ..	Luzerne, .....	Fracture of skull and hands and burned face on breast.
	31	Fenezz Fatan, .....	Hungarian, .....	Miner, .....	21	S. Goway Nos. 1 and 3, ..	Luzerne, .....	Cut on breast, face and hands and burned by an explosion of dynamite.
Sept.	5	William Fichter, .....	American, .....	Laborer, .....	29	S. Cranberry No. 5, ..	Luzerne, .....	Back and sides contused by a fall of slate.
	6	John Galeski, .....	Polish, .....	Laborer, .....	20	S. Cranberry No. 1, ..	Luzerne, .....	Ribs fractured by a fall of slate.
	6	William Litcher, .....	English, .....	Laborer, .....	26	M. Upper Lehigh, .....	Luzerne, .....	Cut and bruised by fall of slate.
	18	R. E. Drum, .....	American, .....	Miner, .....	30	S. Coleraine, .....	Carbon, .....	Arm dislocated by a collar falling upon him.
	19	Daniel Gulute, .....	Italian, .....	Laborer, .....	22	S. Lattimer, .....	Luzerne, .....	Leg fractured by being struck by piece of timber. Outside.
	22	Wade Michelofski, .....	Polish, .....	Laborer, .....	24	S. Hazleton No. 1, ..	Luzerne, .....	Rib fractured; struck by flying coal from shot.
	25	Thomas Lawitnka, .....	Hungarian, .....	Miner, .....	37	M. Highland No. 5, ..	Luzerne, .....	Leg fractured by fall of coal.
	27	James O'Donnell, .....	American, .....	Jig tender, ..	14	S. Spring Brook, .....	Carbon, .....	Leg fractured by being caught in drag line. Outside.
Oct.	28	Peter Romanelli, .....	Italian, .....	Laborer, .....	21	S. Lattimer, .....	Luzerne, .....	Head and body injured by fall of slate.
	3	George Olcasick, .....	Hungarian, .....	Miner, .....	28	S. Spring Brook, .....	Carbon, .....	Face and hands burned by an explosion of gas.
	3	Joseph Logeska, .....	Hungarian, .....	Laborer, .....	23	S. Spring Brook, .....	Carbon, .....	Face and hands burned by an explosion of gas.
	3	Stanley Koba, .....	Polish, .....	Miner, .....	27	M. Highland No. 5, ..	Luzerne, .....	Dislocation of spine by fall of slate.
	4	John Carr, .....	Irish, .....	Company man, ..	67	M. Drifton No. 1 strip-ping, ..	Luzerne, .....	Leg fractured by flying coal from shot.
	6	Harry Russel, .....	American, .....	Mail boy, .....	17	S. Hazleton No. 1, ..	Carbon, .....	Leg crushed. Outside.
	9	Andrew Beck, .....	American, .....	Driver, .....	22	M. Coleraine, .....	Luzerne, .....	Low crusher run over by gondola between about kidneys by being squeezed between mule and car.
	11	Joseph Lashishko, .....	Hungarian, .....	Miner, .....	42	M. Beaver Brook, .....	Luzerne, .....	Head cut and leg injured by fall of slate.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Oct. 13	Harry Yakabofski, .....	Austrian, .....	Miner, .....	24	S.	Hazle Mountain, ..	Luzerne, .....	Leg injured by flying coal from pre- ture blast.
14	Martin Tomoshefski, .....	Austrian, .....	Miner, .....	23	S.	Hazle Mountain, ..	Luzerne, .....	Head injured by flying coal from pre- ture blast.
19	John Brill, .....	German, .....	Miner, .....	36	M.	E. Crystal Ridge, ..	Luzerne, .....	Back and side contused by fall of coal.
20	Rudolf Retzlik, .....	Austrian, .....	Miner, .....	38	M.	Cranberry No. 4, ...	Luzerne, .....	Face and hands burned by an explosion of gas.
20	William Mealing, .....	English, .....	Miner, .....	59	M.	Upper Lehigh, .....	Luzerne, .....	Arm fractured by slipping on slope rol- ler.
27	Jacob Gietsky, .....	Hungarian, .....	Miner, .....	38	M.	Hazle Mount in, ..	Luzerne, .....	Both hands blown off by an explosion of dynamite.
Nov. 1	Jacob Szudy, .....	Polish, .....	Jack man, ....	35	M.	Harwood stripping,	Luzerne, .....	Leg fractured by rock rolling upon him in stripping. Outside.
3	Charles Drumbheller, ....	American, .....	Carpenter, ....	21	S.	Lattimer, .....	Luzerne, .....	Two fingers taken off by circular saw in shop. Outside.
7	Cresenzo Moderli, .....	Italian, .....	Laborer, .....	21	S.	Drifton No. 1 stripping, .....	Luzerne, .....	Leg fractured by lump of coal rolling against him in stripping. Outside.
13	Mike Wartier, .....	Italian, .....	Miner, .....	27	S.	Hazleton No. 1, ..	Luzerne, .....	Face and hands burned by an explosion on breaker. Outside.
14	James Penn, .....	Italian, .....	Roll tender, ...	17	S.	Lattimer, .....	Luzerne, .....	Arm smashed by having it caught in rolls on breaker. Outside.
14	Joseph Kusnerjek, .....	Hungarian, ....	Jig runner, ...	17	S.	Upper Lehigh, ....	Luzerne, .....	Leg crushed by having it caught in rolls on breaker.
17	Charles Euscavish, .....	Lithuanian, ....	Laborer, .....	42	S.	Hazle Mountain, ..	Luzerne, .....	Knee dislocated and arm injured by fall of coal.
18	Arthur Hatch, .....	American, .....	Surveyor, .....	27	S.	Coleraine, .....	Carbon, .....	Face and neck burned by an explosion of gas.
20	George Zarnack, .....	Polish, .....	Miner, .....	29	M.	Hazleton shaft, ...	Luzerne, .....	Face and hands burned by an explosion of gas.
22	John Francisko, .....	Polish, .....	Laborer, .....	40	M.	Highland No. 2, ...	Luzerne, .....	Concussion of brain and lacerated scalp by falling down slope.
23	John Komlos, .....	Hungarian, ....	Miner, .....	45	M.	Spring Brook, .....	Carbon, .....	Spine fractured by fall of slate in breast.
24	Peter Gallagher, .....	Irish, .....	Miner, .....	46	M.	Pond Creek, .....	Luzerne, .....	Arm fractured and hand lacerated by fall of coal.
Dec. 1	Thomas Evans, .....	Welsh, .....	Miner, .....	55	M.	Upper Lehigh, ....	Luzerne, .....	Leg lacerated by flying coal from shot.

Dec.	2	Thomas Fline, .....	Austrian, .....	Miner, .....	24	M.	Hazleton shaft, ...	Luzerne, .....	Hand blown off by explosion of dynamite while charging a hole.
	2	Blaze P'sah, .....	Polish, .....	Miner, .....	26	S.	Hazleton No. 1, ..	Luzerne, .....	Hand and body lacerated by a premature explosion of shot.
	4	Joseph Sipko, .....	Polish, .....	Laborer, .....	35	S.	Pond Creek, .....	Luzerne, .....	Leg fractured by car striking him. Out-side.
	8*	John Meshinko, .....	Slavonian, .....	Laborer, .....	48	M.	E. Crystal Ridge, ..	Luzerne, .....	Leg fractured by fall of coal.
	13	Anthony Murway, .....	Austrian, .....	Miner, .....	35	M.	Hazleton No. 1, ..	Luzerne, .....	Injured about lower part of body and leg by fall of slate.
	22	John Brogan, .....	American, .....	Miner, .....	27	M.	Upper Lehigh, ....	Luzerne, .....	Leg fractured by fall of coal.
	23	Condy Johnson, .....	American, .....	Loco patcher, ..	22	S.	Ebervale, .....	Luzerne, .....	Leg fractured and hand crushed by falling under cars. Outside.
	23	Nicola Krish, .....	Italian, .....	Laborer, .....	56	M.	Harwood stripping, ..	Luzerne, .....	Ankle sprained and slight contusions of body by mule falling upon him. Out-side.



## FATAL ACCIDENTS

## By Falls of Coal, Slate and Roof

Dusky Diamond colliery, January 16, Joseph Fistick, Slavonian, miner, employed by Thomas R. Reese and Son, was fatally injured by a fall of coal. He had fired a shot in the bottom coal, and when he returned, he began picking the loose coal in the bottom without sounding the top coal. While in the act, some of the top coal fell on him, fracturing his thigh and pelvis. He died next day in the Hazleton Hospital.

Lattimer, Pardee Brothers and Company, March 25, Joseph Babik, Slavonian laborer, met instant death by a fall of coal. John Kosovich, his miner, had fired a shot displacing two sets of timber. He then allowed his two laborers to go up into the place instead of going himself. While in the act of examining the top, they noticed the coal, which had been resting on the timber, was on a move and ready to fall. The one laborer succeeded in getting to a place of safety. Babik was not so fortunate. The mass of coal fell upon him, killing him instantly.

No. 1 slope, Hazle Mountain Coal Company, May 6, Uriah Philips, miner, was fatally injured by a fall of coal from the face of breast. He and his partner had fired a shot in face of breast and returned, and he was in the act of barring loose coal from the bottom bench, when without warning a bench of coal fell from about middle of vein, striking him upon the back, injuring him so severely that he died at his home a few hours after the accident. The unseen slip was no doubt responsible for this accident.

Harwood No. 10 slope, Calvin Pardee and Company, May 24, Charles Drusdowski, Russian miner, was fatally injured by a fall of coal while robbing pillars. It is supposed that he was barring loose coal from the bottom bench, when a piece broke off even with his face, on account of the squeeze on pillar, and fell on him, catching him in a stooping position. He died in the Hazleton Hospital the same evening.

Slope No. 4, Gowan, Coxe Brothers and Company, June 2, James Crawford, miner, was fatally injured. He, with two laborers, Henry Hoffman and John Auguston, were re-opening No. 22 East gangway. Crawford was using a bar to trim down some loose coal inside the timber, while the two laborers were loading a car. He told them to stop loading, so that he could hear if anything was working or about to fall. Almost at the same time a fall took place, covering him up. The first fall did not kill him and he called for help. The laborers went at once to get help. Mine foreman, Thomas Morgans, and assistant foreman, John Krings, with others, came to his rescue. From under the fall Crawford was directing them where they would find him. When they had almost reached him, another fall took place, which caused the men to flee for their own safety. This second fall evidently crushed out his life as they could get no further answer from him.

Highland No. 5, G. B. Markle and Company, July 31, John Prebolic, was fatally injured by a fall from side of pillar and died the next day at the Hazleton Hospital. John Zemany, his miner, left the hole



they were drilling and went to talk with Mr. Holland, the mine foreman. Prebolic had been drilling about one minute, when a piece of coal that hung out over him broke off, falling upon him and crushing him against the pillar. The miner stated that he had sounded the piece before he started to drill the hole and thought it safe.

No. 1 slope, Lehigh Valley Coal Company, Hazleton, August 3, Steve Guginsky, Russian miner, was instantly killed by a fall of coal. He was working breast No. 38 in Buck Mountain vein, seventh level, West gangway. He had mined out the bottom and fired a shot in the top bench, which failed to bring it down. The coal was working, but he thought there was no danger, nor was there any as far as the top rock was concerned, as that was perfectly safe, but in barring down the loose coal he failed to stand in a safe place and it fell upon him.

Cranberry colliery, A. Pardee and Company, March 14, Jacob Marsco, Russian miner, was instantly killed by a fall of slate in a breast. He had fired a shot in the bottom bench of vein and without taking the proper precaution in examining his place, he went under it, when a large piece of slate fell upon him.

No. 1 slope of the Hazle Mountain, April 14, George Lasoda, Slavonian miner, was fatally injured by a fall of slate. His laborer stated that Lasoda had sounded his top and trimmed down what he considered unsafe before starting to work in the morning. A V-shaped piece of slate fell from the top, striking him on the head, fracturing his skull.

Hazleton No. 1, Lehigh Valley Coal Company, May 10, Tony Putuishko, an Italian laborer, was fatally injured by a fall of slate. His miner had warned him not to go under the piece of slate he was going to blow down. Putuishko was, therefore, responsible for his own death.

Highland No. 5, G. B. Markle and Company, May 26, Alex Sernefski, a Polish miner, met instant death by a fall of slate. His partner had called his attention to the top, telling him that it was bad. Sernefski said he would go in and bar it down, and the top slate fell on him, killing him instantly. The Buck Mountain vein usually carries a good top, but at this point, a slate top had come in on top of vein, and the men knowing it to be bad, should have taken it down or put props under it.

Harwood slope No. 4, Calvin Pardee and Company, July 28, Andrew Yuvetzek, a Slavonian miner, was instantly killed by a fall of slate. He and his partner, Joseph Mulson, were engaged in taking out pillars in the Gama vein counter gangway. They had fired a shot on side of gangway, and without waiting for the smoke to clear, Yuvetzek went back against the protest of his partner. The vein carries a clod from eight inches to a foot thick. This clod had been undermined for some distance, and as soon as he arrived, where the shot was fired, a piece of clod fell on him, with result as above stated.

Derringer, Coxe Bros. and Company, Inc., August 2, Joseph Harwath was almost instantly killed by a fall of slate in a cross-cut. He and John Shofrauko, his partner, had fired a shot in the cross-cut. Harwath said that he would go into heading to rap to Shofrauko, who was going up into the breast. He was found under a

fall of slate, which they both knew to be unsafe, and which Shofranko said that Harwath should watch in going into the heading.

Cranberry slope No. 1, A. Pardee and Company, August 23, Jacob Smell, Polish miner, was almost instantly killed by a fall of slate in the Parlor vein. The seam of coal where this man was killed is only four feet six inches thick, and it seems impossible that a person would be so careless as to be caught under a fall in a seam of that thickness. He was working out loose coal from the bottom bench, when a piece from the top, a mixture of bone and slate fell, striking him upon the head.

Lattimer, Pardee Brothers and Company, September 28, Kaetan Kuzat, Italian miner, was fatally injured by a fall of slate in breast. He had mined the bottom bench ahead for some distance, and was blasting up bottom rock to put the road close to face, before blowing down the top coal. The bottom rock had been blasted up to the edge of where the top coal was standing. They did not think it necessary to examine this edge, as they had not had a shot in it for several days, and while in the act of cleaning up the rock, which the shot in the bottom had blown, some slate and coal fell from the edge. The accident was due to carelessness.

Upper Lehigh, September 30, William Rhoda, American miner, was instantly killed by a fall of slate. He was working in No. 2 shaft, small seam, about two feet thick, in taking out pillars. The piece of rock that fell on him appeared to be in place, and showed no sign of having been disturbed or loose. He was under this piece picking out loose coal when the whole mass fell upon him.

Cranberry slope No. 6, A. Pardee and Company, October 5, Pasco Prett, Italian, laborer, was fatally injured by a fall of slate in the East Wharton gangway. He was assisting his miner, Joseph Kapish 2d, in preparing for a set of timber. The miner stated that he had trimmed down all loose rock from the top before starting to blast bottom rock to place the timber, but it seems that a small piece was overlooked, which fell striking Prett on the head, fracturing his skull.

Cranberry No. 1, A. Pardee and Company, December 14, John Stiffer, Polish, miner, had fired a shot in his breast. After waiting some time, he returned to the face and began barring some of the loose coal, when a mass of top slate fell upon him, inflicting injuries from which he died. The thickness of the seam, the Parlor, was three feet four inches in the breast he was working, and that any one should be injured in a seam of that thickness, shows clearly the carelessness of the victim and his partner. The foreman had instructed them to stand props under this bad piece of slate, which they promised to do.

Hazleton No. 1 colliery of the Lehigh Valley Coal Company, January 11, Selma Zariana, Tyrolean miner, and his laborer, Charles Hines, also a Tyrolean, were instantly killed. The face of the gangway was quite a distance inside of timber. The miner was in the face shoveling coal back to his other laborer, who was throwing it into the car. Hines was shoveling coal in the car also, but was standing nearer to Zariana. A piece of slate fell, killing them both. Zariana was responsible for this accident, as he knew the roof to be bad, and instead of loading coal, should have stood timber under the bad rock or taken it down. The coroner's jury so decided.

## By Mine Cars, Inside

Lansford No. 5, Lehigh Coal and Navigation Company, March 1, James Filer, mine foreman, fatally injured. He was riding out the West 2d lift Red Ash gangway, on a mine locomotive. The locomotive became derailed and the first car of the trip mounted the locomotive, pinning his leg between the car and fire box, where he was held fast until the trip could be pulled back, with his leg roasting all this time. His leg not yielding to treatment, he was removed to the Hospital, where his leg was amputated. He died shortly afterwards.

Highland No. 5, G. B. Markle and Company, July 13, John Kometz, a young Slavonian patcher on air motor, was poling a train of cars down the turnout at the bottom of the slope. The engineer of motor told him to sand the rails. He stood on the bumpers of the motor to do so, and leaned out too far and was caught between motor and rib, causing internal injuries, from which he died later in the day at the Hazleton Hospital.

Slope No. 4 Jeddo, G. B. Markle and Company, August 14. Harvey McAfee, hitcher, at the bottom of the slope was killed instantly. He went up along the slope a short distance to fix a pair of spring latches. They had just sent up four cars. Three of them were to be taken off on the bridge, or surface landing. When the cars were up in the slope, and at a point where the grade increases, the coupling between the first and second car broke, and the three cars dashed to the bottom. McAfee, who had turned to come down the slope, heard them coming, but, instead of going into either side hole for safety, ran straight out on the turnout, and was caught by the runaway cars. If extra heavy couplings had been used this accident would not have occurred.

## By Suffocation, Inside

Chute No. 151, East Red Ash, 2d level gangway of No. 5 shaft, Lehigh Coal and Navigation Company, March 11, George Zlock, Slavonian, miner, lost his life in a very peculiar manner. A mine locomotive runs into this gangway, and on the above date there was a new engineer on it. The locomotive in pulling the trip into the workings became stalled directly under the chute where Zlock was working. He had occasion to come down to the bottom of the chute, when he encountered the sulphur from the locomotive, the sulphur being driven up his chute by the blower, and instead of going back up the chute, he tried to reach the gangway, when he was overcome by the sulphur.

Lansford No. 4, Lehigh Coal and Navigation Company, March 25, Samuel Derby, American, and Robert Benson, English, were suffocated. They, with four others, were driving a new outlet on the crack seam, working three shifts, two men on a shift. These two men started to work at seven o'clock in the morning of above date, and were supposed to work until three o'clock in the afternoon, when they would be changed by another shift. When the three o'clock shift arrived at the bottom of the outlet, they were surprised to see that the men of the morning shift had not yet come down. After waiting for some time at the bottom of the hole, and seeing



no sign of the men coming, they rapped on the manway, receiving no reply. Mr. Reeves, the mine foreman was notified. When he arrived on the scene, he told the men to go up the outside manway, which was the regular traveled manway to see what they could learn. They proceeded up the manway for a long distance, when they came to a place where it was locked. They then came back and went up the inside manway, up around the face of the outlet, where they found some of their tools. They examined the face and found it trimmed carefully after the shots, but the men were not up at the face. They then went down the outside manway some distance, where they had a safety hole driven in the west pillar. Here they found one of the men sitting upon some plank, which had been placed across the manway, dead. Some distance below this point, the other man was found also dead. It is supposed that when they fired the shots, some large chunks of coal went down the outside manway, partly blocking it, and when they went up and trimmed the loose material off it fell upon the other material in the manway, completely blocking it and cutting off the ventilation. The ventilation in the mine was good, and the accident would not have happened had not the manway become blocked.

#### By Explosions of Powder and Dynamite

Nesquehoning Tunnel No. 1, Lehigh Coal and Navigation Company, February 15, Renega Poli, a Tyrolean laborer, was instantly killed by the explosion of a box of dynamite. He was employed in a tunnel and had asked the chargeman for the key of the box to go and put a cotton in his lamp. He had not been away long, when the explosion occurred. It is supposed that a spark from his lamp fell into the caps, which exploded them, causing the powder to explode, with the result as above stated.

Slope No. 3 of the Hazleton shaft colliery of the Lehigh Valley Coal Company, December 2, George Seiple, American miner, was fatally injured. He was in the act of tamping a shot containing dynamite with a steel drill, when the charge exploded, crushing his skull. His partner had his right hand blown off. Had these men obeyed the rules of manufacturers of dynamite, and used a wooden tamper, this accident would not have occurred. It is a rule, however, among miners, if the coal is strong, to put dynamite in the bottom of a cartridge of black powder to get better results. While it may give better results, it certainly is a very dangerous practice.

#### By Blasts, Inside

Cranberry No. 4, A. Pardee and Company, July 26, Anthony Matavish, Russian miner, was fatally injured by a blast. He had ignited the squib, and attempted to get to a place of safety, but before he could do so, the shot went off, and he was caught by flying coal, injuring him so badly that he died about one hour after the accident at the Hazleton Hospital. Evidently he shortened the match on the squib, and paid the penalty with his life.

### By Falling into Shafts

Pond Creek Coal Company shaft, April 13, Charles Callaghan, American, patcher, was fatally injured by falling down the shaft from the counter level to the bottom, a distance of forty-eight feet. He, with Andrew Bradley, the driver had come from the bottom vein to the top vein to change some cars for the miners. They had been up for about three-quarters of an hour, when they started to return to the bottom vein, Callaghan leading. When they arrived at the shaft, Callaghan opened the gate, and thinking the cage was there walked into the shaft, falling to the bottom. He died in the Hazleton Hospital the next morning.

### By Falling into Slopes, Breasts, etc.

Lansford No. 5, Lehigh Coal and Navigation Company, January 14, Paul Macheska, Greek, miner, Andrew Yancheck, Slavonian, miner, and Joseph Good, Polish, laborer, were instantly killed. Mr. Filer, the mine foreman, had sent a Mr. Hemminger, a practical man, in with them to instruct them how to erect the platform, there being a very steep pitch on the outlet. When Mr. Hemminger began to instruct them, Paul Macheska made reply that he (Hemminger) thought that they did not know anything. He then left them to construct the platform in their own way. This they did by placing poles from one old leg across to the other old leg of the decayed timber, and while in the act of lifting one of the new legs into place, the platform gave way under them, precipitating them to the bottom of the outlet, a distance of about three hundred feet, all three were dead when picked up. This accident can be attributed to the ignorance of the victims, as they should have taken the advice of Mr. Hemminger and placed the poles of the platform from the bottom rock to the top rock, instead of trusting to the old timber.

Slope No. 4, Beaver Meadow, Coxe Brothers and Company, Inc., September 25. Steve Parra, Hungarian, miner, was killed by falling down the manway of his breast. At about 10.15 A. M., mine foreman Henry Fox was making his rounds in gangway No. 13 west, and came to Parra's breast. While going through the crosscut, he found a cap upon which was a lighted mine lamp. He went to the face of the breast and not finding Parra there, went down the breast into the chute and found him lying in the chute unconscious. Upon the testimony of the men working the next breast outside of him, Parra had fired a shot in his breast while they were tamping two shots in their own breast. These two shots were fired, and it is probable that to avoid the smoke from these shots, which would come through this crosscut, Parra attempted to get into the manway, and slipped, falling to the bottom.

### Miscellaneous, Inside.

Harleigh mine of the Black Creek Coal Company, January 7, Peter Yesavitz, American pump boy, was drowned at the bottom of the slope. For a few days previous to the night of the accident, a general thaw had taken place, which caused the streams to rise to an unusual height. The ice coming down the Big Black Creek, which

runs nearly in a western course, and the ice in the Lattimer Creek, which runs nearly south, became gorged in the junction, causing the water to rise high enough to pour into an abandoned airway, and to run back along the gangway and fill the lower level of the slope. The boy who was at the pump, evidently became confused (being in the mine alone), and instead of going up a pump way, which was straight up to the surface, went out to the slope to see what was the matter, and was caught in the rush and drowned. His body was recovered about a week after the accident.

Jeddo slope No. 4, G. B. Markle and Company, October 13, Frank Tyson, the bottom man, was fatally injured. He had gone up on the slope to clean a pair of latches, while the cars were running in the slope, and while in the act of cleaning them, was struck on the head by a piece of coal which rolled down the slope. His skull was fractured and he died on the 15th at the Hazleton Hospital. He made a mistake in going up on the slope, while the cars were running. He should have gone up before giving the signal to the engineer to hoist.

#### By Cars, Outside

Lansford No. 6, Lehigh Coal and Navigation Company, April 8, Paul Vetoek, Hungarian, outside laborer, was instantly killed by being run over by a trip of loaded gondolas, which was being taken out of breaker siding. His intention was to ride down to a point where he could cross the creek to go to his home. When the train upon which he was riding bumped into the other train, he was thrown off onto the track, the cars upon which he had been riding passed over him.

Nesquehoning colliery No. 1, Lehigh Coal and Navigation Company, August 27, Elias Holohan, Slavonian, driver, was run over by a car and died from his injuries at the Fountain Springs Hospital, Ashland, two days after. He was hauling a car of screenings from the top of refuse plane, when he slipped upon the rail and fell beneath the car, which ran over his leg. This was purely accidental.

Lattimer breaker No. 3, Pardee Brothers and Company, October 14, Donnich Cortese, Italian, slate picker on the breaker, was fatally injured. He, with several other boys, pushed a mine car up under the breaker and then got on the front end to ride down. When the front end reached the edge of the breaker, where the cross beam is quite low, his head was caught between the beam and the top of the car, causing a fracture of the skull, from which he died. This accident occurred before seven o'clock A. M., before starting time of breaker.

No. 9 colliery, Lansford, Lehigh Coal and Navigation Company, December 8, Mike Poylik, Greek, driver, was fatally injured. He was in the act of hauling from the boiler house two loaded ash cars. When the cars reached the top of the grade, he attempted to unhitch his mules and fell under the cars, receiving such injuries that he died shortly after. It was purely accidental.

#### By Machinery, Outside

Coleraine breaker of the Estate of A. S. Van Wickle, February 6, John Garro, Italian, Engineer, was instantly killed by being wound around the crank shaft of an engine. He had sent a boy to get a



belt coupling to repair the belt, and during the absence of the boy, it seems that he tried to get the belt off the engine, and in some manner was caught. When the boy returned, he immediately stopped the engine. This accident was due to the recklessness of the victim, as he should have stopped the machinery to repair the belt.

Lehigh Valley, Hazleton shaft colliery, April 9, Martin Getz, water tender was killed in the boiler house. Boilers No. 8 and 9 had been ordered out of service on Saturday the 8th for repairs, and were blown out for this purpose. The repairs having been completed by Sunday evening, the fire was started under the No. 8 boiler at about 6:30. At 7:20, Getz, proceeded to connect it onto the main steam pipe line. When, from some unknown cause, the valve burst, scalding him so badly that when the steam was shut off and an investigation made, he was found dead between the No. 8 boiler and the economizer. The matter was referred to a coroner's inquest, and a verdict of accidental death rendered.

Cranberry of A. Pardee and Company, George Neikum, American, separator attendant, was fatally injured by being whirled around one of the shafts driving the machinery, and found on the floor about twelve feet below, where he had fallen when he became released from the shafting. His duties were to attend the separator, and here he was perfectly safe. But for some unknown reason, he had climbed up to a shaker, which is located away out of reach and about twelve feet above where he should have been, and was caught as above stated. It was said by the foreman that the boy was cautioned several times not to go where he had no business to go. My instructions to the foreman are, that if the boys will not desist in going from their place of duty, to discharge them.

Hanto screen building, Lehigh Coal and Navigation Company, September 1, Thomas Breuk, Slavonian, employed as a hopper tender, was killed while crossing over the main driving shaft in rear of screen building, his clothing became caught in some manner, and he was whirled around. His head striking upon the floor attracted the attention of some of the employes, who had the machinery stopped. When taken off, life was extinct. This boy also was away from his place of work, and had no business whatever where he met his death.

Hazleton shaft breaker of the Lehigh Valley Coal Company, September 27, Peter Yeager, American, breaker oiler, was fatally injured. His duties called him to oil a journal which is on the mud screen gearing, and was only supposed to be oiled when the machinery was not in motion in the morning before starting time and at the noon hour. It is supposed that he forgot this part of the machinery while oiling at the dinner hour, and to avoid stopping the machinery again, attempted to oil it while in motion. Was caught on the driving shaft, and so seriously injured that he died shortly after reaching the Hazleton Hospital.

#### By Suffocation, Outside

Lattimer breaker, Pardee Brothers and Company, March 18, Louis Fencerrail, Italian, outside laborer, was suffocated in the rice coal pocket. The pocket became blocked, and he went to shovel back coal. The loader, when he started to load, gave the usual warning

signal several times by drawing a little coal out and then closing the gate. The loader stated that he gave Fencerail ample time to get out of the pocket. This was corroborated by other witnesses. An inquest was called and the jury rendered a verdict of accidental death.

### Miscellaneous, Outside

Stripping operations of Charles Dick and Company, January 5, Steve Krupka, stripping laborer, was almost instantly killed by a stone rolling down the bank, crushing his skull. He, with other men, was in act of chaining a large stone for steam shovel to lift into a car, when a small stone rolled down the bank. The men all ran to a place of safety. In the attempt to get away Krupka stumbled and fell, striking his head against a stone, which evidently stunned him, as he made no effort to get up. An instant later, a large stone rolled down and struck him on the head, fracturing his skull, death resulting in about one hour after the accident. This accident was unavoidable.

Lattimer, Pardee Brothers and Company, March 6, Andrew Banker, Slavonian, outside company laborer, was fatally injured. He with several others was engaged in unloading a car of sawed lumber, and while one of the men was taking the standards from the side of the car, the lumber started to slide, one of the pieces striking Banker on the back. He was immediately removed to the Hazleton Hospital, where they reported his spine fractured. He died March 25.

Beaver Meadow colliery of Coxe Brothers and Company, Inc., December 4, John Seraga, Hungarian, outside laborer, was instantly killed by an explosion of dynamite. He was engaged in unloading a car of tunnel rock on the dump. After all loose rock was out of the car, there remained some stuck to the bottom. To remove or loosen what remained, he got up on the side of the car, took a pick and sunk it into the rock to start it, when the explosion occurred. The car contained rock from the drainage tunnel in No. 4 slope, and it is supposed that a stick of dynamite, containing an exploder had been loaded into the car unknown to the tunnel men, and Seraga's pick struck the exploder, causing the explosion.

## IMPROVEMENTS

### LEHIGH COAL AND NAVIGATION COMPANY

Colliery No. 1.—A 600 H. P. battery of Stirling water-tube boilers is being added to the breaker boiler plant and will shortly be put in operation.

Colliery No. 4.—1,200 horse power of Stirling water-tube boilers has been added to the colliery's boiler plant.

Colliery No. 5.—A clutch gearing has been placed on the No. 5 shaft hoisting engines, and coal is now being hoisted from the new third level, as well as from the old second level. A new 21 foot fan has been erected to improve the ventilation.

Colliery No. 9.—The new shaft level is now in operation. A 24 foot fan has been erected to improve the ventilation,

## G. B. MARKLE AND COMPANY

## Jeddo No. 4

Rock pump house driven at Tunnel "B" level, Wharton bottom.

Two single Cameron-Goyne pumps removed and a Jeansville compound condensing pump, 22x39x14x36 inches, placed at Wharton bottom.

Four new jigs installed.

Two vibrating shakers taken out and two rolling shakers installed.

New rock chute built to handle rock from mines.

New boiler house built to replace one destroyed by fire.

Plane from West Gangway "D," Slope "A," to an upper level driven.

Two oil tank cars put in service to supply car oil for mines.

Put in one set of steel steamboat rollers.

New Barley pocket put in west side of breaker; Oakdale 1st, South Side Water Works.

Installed new 100 H. P. Erie City boiler.

Removed 10x14x12 inch Rand air compressor.

Installed 12x14x14 inch Ingersoll-Sergeant air compressor.

## Highland No. 5

Extended pea coal line 30 feet.

Built addition to boiler house.

Put in new barley pocket.

Eight inch bore hole, 190 feet deep, from surface to Slope "A," for rope hole.

Two bore holes from West Gangway "C" to 2nd Lift Pink Ash, to level of 1,222 feet, to drain 3rd Lift, in addition to the four holes reported for 1904.

Took out fifteen cylinder boilers.

Installed four 300 H. P. Babcock and Wilcox boilers.

Changed 250 H. P. Cahall boiler from a waste heat to a direct fired boiler.

Extended plane roof 60 feet.

Installed one new jig.

Two oil tank cars put in service to carry car oil inside the mines.

Lowered tracks to load large cars under breaker.

Built new barley pocket on west side of breaker.

## Highland No. 6

Drove airway to surface 250 feet long, connecting with shaft 28x8x8 feet, with concrete wall.

Put in one 10-foot Crawford and M-Crimmon mine fan.

New 4 inch steam line from boiler house to fan.

Three-inch steam line down airway to pumps.

New coal trestle built at boiler house.

Traveling way opened to surface.

## Highland No. 2

Slope "E" in Wharton vein, second basin, begun.

Abandoned stripping "E."

Installed two new jigs.

Two oil tank cars put in service to carry car oil inside the mines.

Put in three fire hydrants for better protection of breaker and surrounding buildings against fire.

Removed 10x12 inch hoisting engine from slope "B" and put in service at Slope "E."

No. 10 Cameron-Goyne pump put in Slope "B."

One hundred H. P. E. C. boiler taken out of Stripping "E" and installed at Highland No. 1.

Five-inch steam line from Highland No. 1 boiler house to Highland No. 2, Slope "E."

#### Ebervale

Built a flume from north side of Stripping "O" to the canal.

#### Jeddo

New oil house built.

Built addition of 60x36 feet to Jeddo stables for wagon shelter.

New 12x12 foot fire hose house built and equipped.

### COXE BROTHERS AND COMPANY, INCORPORATED

#### Drifton Colliery

No. 1 Slope.—Work in Lattimer has been continued during the year with 3 shovels; 294,479 yards have been removed, making the total yardage removed, in connection with these strippings, 1,849,223 yards. Mining to a limited extent has been carried on during the year, about 75,000 tons of coal having been removed.

Inside work at Drifton slope has been carried on principally in Wharton vein.

Drifton Slope No. 2.—The gangways have been continued in the bottom split of the Buck Mountain vein, which varies from  $2\frac{1}{2}$  to 3 feet of clean coal. The southwest gangway has reached the boundary pillar arranged for between Coxe Brothers and Company and the Pardee interests. The tunnel driven within 100 yards of the Lattimer boundary line, mentioned in last year's report, has been continued, but has not penetrated any workable seam up to this date.

The new pump furnished by the Laidlaw-Dunn-Gordon Company, Cincinnati, Ohio, has been started and is working satisfactorily.

Eckley Colliery.—Stripping the south basin of the Eckley slope No. 1 has been completed during the year, 40,000 yards having been removed up to July. The total yardage removed amounted to 1,213,117 yards.

A new stripping has been started over the so-called slope No. 6 old workings of the old Buck Mountain Coal Company. Two shovels are in operation, and 92,689 yards removed.

The stripping in East Spoon of Buck Mountain Slope No. 1 has been continued, 196,704 yards having been removed during the year. The total yardage removed to date is 737,030 yards.

Other strippings were started along the north crop of Slope No. 11, eastward. The first level started of Slope No. 11 proved a large



territory of coal unworked, and stripping this ground was considered the most economical operation. 27,266 yards have been removed during 1905. Slope No. 11 has been continued through rock and disturbed ground for about 260 feet and has reached the old bottom lift of the Slope No. 2 on the North side of the basin. It will be continued in coal for 350 feet to the bottom of the basin.

Beaver Meadow Colliery—114,790 yards have been removed in the old Greenfield stripping, making a total of 775,459 yards.

The coal is mined continuously as the levels are formed by the shovels, so that the coal on the higher levels is worked before the shovel starts on the second level.

A local upheaval was met at the west end of the present excavation. The stripping will be extended westward, but the Eastern part of the basin will practically be cleaned out by the middle of 1906.

During the latter half of 1905 coal was taken from the North Temperance strippings, which had been partly completed three years ago. The drainage tunnel mentioned in last year's report, starting from the Gamma vein in Slope No. 4 and extending across measures into slope No. 2, south basin workings, has advanced 1,306 feet during the year and will tap the Wharton by the middle of February, 1906. This will relieve the Beaver Meadow colliery of all pumping for mining purposes; it will only pump to the breaker for the purpose of washing the coal.

Stockton Slope.—Residual mining has been continued in the Wharton, Gamma and Primrose veins above water level.

Tomhicken Colliery.—Mining was continued on water level. Slope No. 8 located in the middle basin of the East slope workings has been continued. It will reach the top split of the Mammoth vein, within 80 feet of its present face, and will be continued through the dividing rock to the bottom split of the Mammoth vein and on to the Wharton for about a distance of 500 feet from the present face.

Derringer-Gowan Colliery.—There were no special improvements made. The gangways were continued, and the regular mining carried on.

#### LEHIGH VALLEY COAL COMPANY

Hazleton Shaft Colliery—Inside.—A tunnel driven on 2nd level of shaft from Primrose vein, north dip, to Primrose vein south dip, distance 450 feet.

Stockton No. 2 Slope.—Tunnel 8x12 feet driven from Primrose vein, south dip, to Orchard vein, north dip, distance 1,190 feet.

Hazleton Shaft Colliery—Outside.—A fresh water pipe line, 6 inches in diameter and 5,300 feet long, was built from Stockton reservoir to Hazleton shaft boiler house.

Electric haulage system installed, operated by an 18x20 inch McEwen 275 H. P. engine, D. C. to 175 K. W. Westinghouse dynamo. Three motors are in use.

Spring Brook Colliery.—A rock slope was driven from Buck Mountain to Lykens Valley veins, 100 feet long. Size of slope 8x14 feet.

Spring Mountain Colliery.—A tunnel on No. 4 slope level, 139 feet long, from Mammoth to Wharton veins, size 8x12 feet.

A slope was sunk on Buck Mountain vein from crop to level of No. 4 slope bottoms; 540 feet long, 8 feet high and 12 feet wide.

A. PARDEE AND COMPANY

Cranberry Colliery

A new steel boiler house has been erected at Cranberry No. 1. The building is 182x60 feet. The roof is supported by steel trusses, 60 feet span, about 23 feet apart. The north side of the building rests on the retaining wall described in the last report, and the south side is supported on a low foundation wall. The iron work was furnished by the Allentown Rolling Mills and erected by the R. T. and C. D. Stewart Contracting Company of Easton, Pa. The building is covered with corrugated iron and makes an absolutely fire proof structure.

A new slope, Cranberry No. 6, has recently been put in operation. This slope opens the north basin and is located on the north side of the breaker. From the mouth of the slope, a trestle, four hundred feet long and twenty feet wide, connects with the tracks at the foot of the breaker plane. This trestle is double tracked, forming the turnout at the head of the slope.

A fourteen foot bore hole has been sunk in the center of the No. C basin, through which the water is pumped to the surface.

At the foot of the inside Wharton slope No. 3, a pump house has been excavated 26x70 feet. The parting rock between the Wharton and Parlor veins was taken out, making the height about thirty feet. In this new pump house, a Scranton compound condensing pump, 28x52x16x48 inches, is being installed. This pump will raise the water to the surface through a fourteen inch cased and cemented bore-hole. As some of this water is at times needed for wash water at the breaker, a connection with the column line is made where the bore-hole passes through the Mammoth vein. From here it runs along the gangway to the bottom of the main slope. Steam for this pump is furnished from the main boiler plant through a line about thirty-five hundred feet long. This line is erected on three-inch wrought pipe posts, fitted with a swinging hanger, the posts being set in concrete, three feet in the ground. The expansion of this line is taken up by elbow expansions every three hundred feet. The line is eight inch pipe from the boiler house to the bore-hole, a distance of three thousand feet. At this point it enters at the bottom of a thirty-four inch vertical cylinder, nine feet high. From the top of the cylinder, two six-inch lines are taken; one to the hoisting engines; the other down the bore-hole to the pump. These lines are covered with two layers of asbestos hair and one layer of hair felt. The layers are separated by rosin sized paper, and the outside is covered with standard tar and asbestos roofing. The vertical cylinder separates the water from the steam and has a tilting trap connected at the bottom, through which the water passes out. The cylinder is enclosed with brick.

PARDEE BROTHERS AND COMPANY

Lattimer

Installed two new Heine safety boilers, 260 H. P. each, at Central boiler plant near No. 4 breaker, making a total capacity of 2,080 H. P.



Built a conveyor line about 300 feet centres at No. 4 breaker, to be used to stock rice and barley coal.

Built a new locomotive house, size 24x130 feet, covering same with galvanized steel. All the locomotives of this company are now housed in this building.

Built two conveyor lines at No. 3 breaker to convey the boney coal from the rolls to the top of the breaker, doing away with a set of elevators.

Erected a new fan house and fan, with direct connected engine, on the Gamma vein at No. 4 slope.

Erected a new fan house and fan, with direct connected engine, on the Gamma vein at No. 8 slope.

Installed a new pair of 17x24 double hoisting engines, and erected a dump house to dump coal and rock, to be used in connection with a gunboat at No. 11 Primrose slope.

Sank slope in Gamma vein on north side of No. 2 basin to present level of No. 2 East Gamma gangway. This slope will be continued to the basin, to be used for hoisting coal, rock and handling all mine timber used in the lower levels of Nos. 1 and 2 slopes.

Built a new reservoir near the No. 1 and No. 2 artesian wells, holding 1,125,000 gallons of water.

Re-arranged system of fresh water supply and piped all of the wells, to pump them by compressed air from Central Power Plant near No. 4 breaker, and discontinued the use of the old style walking-beam and engines formerly used for pumping the wells. At each well a tower and tank was erected, and the air lift, valves, etc., were enclosed in a building of galvanized iron erected in the tower.

Erected a cutting-off saw mill near No. 3 breaker, to saw to size all timber used inside. This mill has reduced to a few men the force necessary to get out the mine timber used at this operation.

A fire pump and hose house has been built near the stables and connected to the 6 inch water main, to be used in case of fire at the eastern end of this property.

Primrose slope No. 11 has been sunk on the north dip a distance of 220 feet to the basin. An airway has been driven up on the south dip to the surface, on which a fan will be placed in the near future.

Slope No. 13 has been driven from the East Gamma counter slope No. 9 through top rock of the Gamma into Orphan's Home coal stripping of the Mammoth vein, to hoist Gamma coal to the surface in place of reloading it in slope No. 9.

Tunnel No. 24 has been driven from East Gamma gangway slope No. 13 to Mammoth vein, a distance of 50 feet for the purpose of robbing Mammoth vein on same level and taking it up by way of slope No. 13.

Tunnel No. 27 has been driven on the north dip of the anticlinal between No. 3 and No. 8 Mammoth basins, a distance of 13 feet into the Gamma vein.

Tunnel No. 25 from East Gamma gangway No. 2 west end to Buck Mountain vein going north, a distance of 117 feet to open up Buck Mountain vein.

Tunnel No. 22, continued from north dip to south dip of Gamma vein at No. 1, 2nd counter, has been driven a distance of 288 feet to open up Gamma vein in No. 4 basin.

Slope No. 14 in Mammoth vein, started from No. 1, 2nd counter

coal stripping, went northeast on a dip of about 25 degrees to a distance of 254 feet to rob the Mammoth vein.

Shaft basin slope has been opened up and driven a distance of 136 feet in the solid, making a total distance of 166 feet on a dip of about 18 degrees or 19 degrees going east, proving Buck Mountain vein.

Slope No. 10 has been continued to a distance of 124 feet from the level of No. 9 slope at West Mammoth south dip to the level of slopes 5 and 6, for the purpose of connecting it with No. 9 slope.

Slope No. 12 has been opened up through the West Gamma south dip to the level of slope No. 9, for the purpose of sinking from there deeper into the basin of Gamma vein; also for the purpose of hoisting rock and lowering timber, which will aid slope No. 9.

Tunnel No. 26 has been driven a distance of 48 feet from West Mammoth gangway slope No. 2, to Gamma vein, opposite slope No. 12, for the purpose of connecting with slope No. 12.

A small rock tunnel has been driven from No. 2 West Gamma into the Mammoth vein, for the purpose of lowering Milnesville water, which was 20 feet above the Gamma gangway. The total distance of said tunnel is 37 feet and was driven south on the south dip.

#### CALVIN PARDEE AND COMPANY

##### Harwood Colliery

Sank two inside slopes in No. 4 basin, one to the basin in the Gamma vein and the other to the basin in the Buck Mountain vein.

Drove tunnel in No. 5 slope from Gamma to Parlor vein.

Commenced stripping operations on the south outcrop of the Wharton vein east of the breaker. This stripping is 1,345 feet long and about 90 feet wide.

#### UPPER LEHIGH COAL COMPANY

##### Upper Lehigh Colliery

One set of manganese steel rolls has been placed in breaker, one traveling platform and two new shakers installed.

No. 3 slope on the East End was abandoned and a new slope three hundred and eighty-five feet in depth was sunk in the small underlying seam about four hundred feet west of the old slope, which was in the Buck Mountain seam. From this slope, gangways have been opened east and west. In No. 1 slope a tunnel was driven from Buck Mountain seam into the first underlying seam and gangways opened east and west. The tunnel was continued into the second underlying seam, a distance of forty feet. A new opening was made twenty-seven hundred feet west of the present shaft slope, and short gangways driven east and west.

A new engine house, boiler house and tippie were erected. The tippie contains pockets for coal and rock.

#### BLACK CREEK COAL COMPANY

##### Harleigh Colliery

Three buildings erected: Pump house, 18x14; blacksmith shop, 42x24; boiler house, 80x43.

A tunnel was driven 147 feet from the Wharton to the Gamma vein and continued 93 feet from the Gamma to the Buck Mountain vein.

A pump way was driven to the surface from south pitch of Wharton vein.

An airway was driven to the surface from Gamma vein.

A mule way and steam way were driven from north pitch of Wharton vein.

Two hundred and fifty feet scraper line from breaker to boiler house.

Four jigs and automatic feed installed in breaker.

Six hundred 6 inch line erected.

Four 125 H. P. return tubular boilers added to boiler plant.

One 10½x8x16 Cameron pump for supplying breaker with water.

A ditch, 1,200 feet x 10x4 feet, and also a canal 400 feet x 30x6 feet, were excavated, and a large dam built, which changes the course of the Big Black Creek. This gives better drainage to the colliery and also serves as a prevention of flooding the mines.

#### Harwood Colliery and Cranberry Colliery Dam

Having learned of an encroachment in the Parlor vein workings by Messrs. Calvin Pardee and Company, owners of the Harwood colliery, upon the Cranberry property, operated by Messrs. A. Pardee and Company, which was discovered in August, 1901, when the West gangway at head of No. 2 plane from Cranberry broke into said trespass, and that a concrete dam had subsequently been built in the opening near the boundary line between the properties, I deemed it advisable while the dam and the adjacent workings were yet accessible to have a board of arbitrators appointed to make an investigation and to determine the question whether the dam as built and taken in connection with the surrounding strata would be a sufficient barrier for the protection of either mine in case of fire or water in the other. I therefore notified each of the adjoining owners to appoint an arbitrator.

Messrs. Calvin Pardee and Company named Wm. A. Cochran, of Pottsville, as their arbitrator; Messrs. A. Pardee and Company appointed their mining engineer, J. E. Anderson, and the Mine Inspector named Mr. T. D. Jones, of Hazleton, to represent him.

The arbitrators met in the Mine Inspector's office on June 30, 1905, to discuss the questions before them, at which meeting Messrs. C. J. Creveling, mining engineer for Calvin Pardee and Company, J. E. Altmiller, engineer for the Cranberry Improvement Company, lessors of Cranberry property, and David J. Roderick, Mine Inspector, were present; and, after much discussion and the examination of maps the board adjourned to meet again on July 5, 1905, at Harwood, to visit and examine the scene and construction of the dam. On that date there were present Messrs. Wm. A. Cochran, J. E. Anderson, T. D. Jones, A. W. Drake, C. J. Creveling, Thomas Hale, Robert Fagan, S. C. Fagan, Harry Hawk, George Ermold, Conrad Miller and D. J. Roderick, the entire party entering the mine through the man-way on north outcrop of Parlor vein from face of breast No. 58. On the way down this breast, at about 30 feet vertical above the dam, a crack was found in the bottom rock, extending

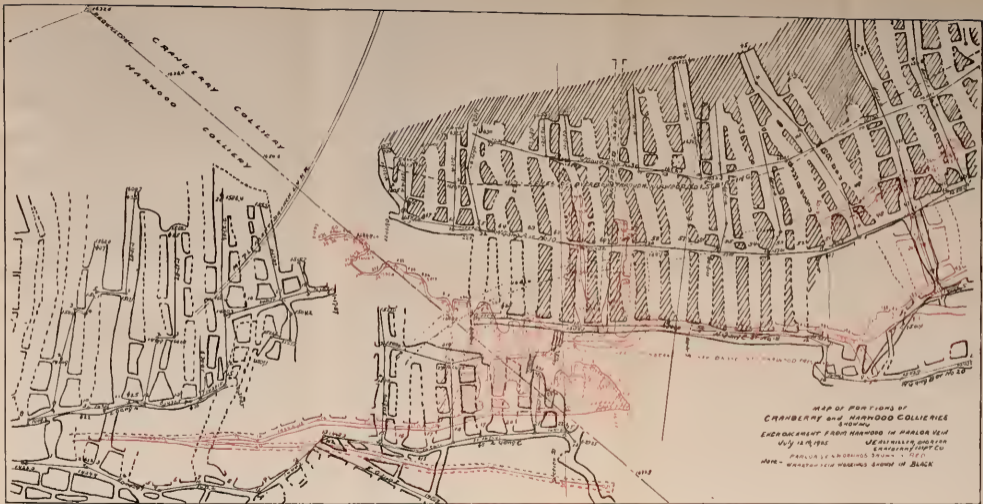
across the breast and into the pillar on the west side. This crack was presumed to have been caused by the caving-in of the Wharton vein workings underlying, which were said to be robbed out in that vicinity, the thickness of rock and slate intervening between the Wharton (the underlying vein) and the Parlor vein being about forty feet. Thence the party traveled down to where the dam had been built, and into the dam through a man-hole that had been placed in both walls, and also into Harwood workings west of the dam. And after examining conditions on Harwood side in every particular, it was decided to meet again at the Mine Inspector's office July 8 to take testimony.

At this meeting Mr. T. D. Jones was chosen Chairman and conducted the examination.

Mr. Benjamin Reese, inside foreman at No. 5 Cranberry colliery, for A. Pardee and Company, was the first witness called and testified in part, as follows: He was the mine foreman at the time the first mining was being done in the Wharton vein on Cranberry side of the boundary line. Drove the gangways as far as the surveyors allowed them to go. Breasts were driven on 48-foot centres, or 8-yard breasts and 8-yard pillar, he thought, and were driven through from West gangway "C" to the gangway above. The distance being too great, the lift was then cut off by counter-gangways. Vein was from six to eight feet in thickness, with pitch of from 28 to 30 degrees. The breasts were not of regular width all the way on account of the top being so poor that it had to be double-timbered in order to hold it. The character of the top was shelly-like. He said there was a breast driven up in the face of West gangway "C," on course of 7 to 10 degrees west, and that this breast went through to the upper gangway. He had not been there for about sixteen years and knew nothing about the construction of the dam. The robbing of pillars was done by his successor, Mr. Thomas Hale.

Thomas Hale testified, in part, as follows: "Am Assistant General Mine Foreman and have held that position about eighteen months. Prior to that was mine foreman and was foreman at the time the robbing was done in Wharton vein in the vicinity of the dam." He did not remember when he began to rob. "One pillar, if not two, was left in next to the line breasts in West gangway "C," but from there out we took everything we could get. Did not leave more than about five per cent. of the coal behind and the top rock caved. Did not notice any caving of the rock between the Wharton and the Parlor veins directly in the line, and did not see that crack near where the dam is until last Wednesday. Had no special instructions in regard to manner of robbing, but always notified the Mine Inspector. Was there at the time the gangway in Parlor vein from Cranberry holed into Harwood workings and found it about as it now is. Could get down in the Parlor workings to the level below where we broke into Harwood." He believed the rock was broken down between the Parlor and Wharton veins, but could not say if that was the case under the dam. The rock was broken in the bottom of the Parlor breasts and he thought the breasts they robbed in the Wharton vein were caved up to the Parlor. He believed that the condition of the intervening strata was such that the placing of the dam where it is would not prevent the water from coming into Cranberry. He had noticed the subsiding of the bottom of the





MAP OF PORTIONS OF  
 CRANBERRY and HARWOOD COLLIERIES  
 ENDEAVOUR FROM HARWOOD IN HAROLD VILL  
 8 ROAD  
 July 12, 1905  
 JEAN MILLER, GEORGE  
 CRANBERRY, J. M. T. C.  
 PARLOR LEAD WORKING SHOWN IN RED  
 WATER TABLE WORKING SHOWN IN BLACK





Parlor vein before the examination of July 5. A breast miner had told him that it was "all loose under him," and he noticed air coming up through a crack in the rock higher up in the breast. He had done no mining between the face of gangway "C," along the barrier pillar line, up to gangway "A." That breast from gangway "C" to gangway "A" had been driven when he went there, and there was no robbing done in that breast. Did not know of any counter-gangways between gangways "C" and "A."

Robert Fagan, General Inside Foreman at Harwood, testified, in part, as follows: "Have been at Harwood about fifteen years and was there when the gangway in Parlor vein was driven over the line, but did not know we had worked over the line until the day after Cranberry holed into Harwood. We stopped the gangway, because we expected we were on the boundary line and no one suspected we had driven over the line, as we were very careful, and our instructions were very explicit in regard to the line. I noticed the crack in the bottom rock between the Parlor and the Wharton vein the other day when we examined the dam, but, before that time there were no depressions or cracks in sight, as far as I know. We discovered no cracks except a water-crack in the bottom, which we followed down until it cut clean out and we were sure there was nothing that we could call a crack. In the construction of the dam, I cut the hitches, top and bottom, and went from two to three feet into the solid on the upper side. Was present at the test of the dam and found it leaked on the Cranberry side through the vein in a few places, which would be expected under that pressure. Did not observe any leakage around the dam." In reply to the question: "What would be the result if the Harwood mine is filled with water, will the water come into Cranberry through the Wharton, from what you know of the condition of the rock between the Wharton and the Parlor?" Mr. Fagan said: "The water coming from Harwood side when coming against the inside wall of the dam will throw it further west." Q. "Would the water percolate there?" A. "No, sir." Q. "You do not believe it could if the bottom rock is broken?" A. "I do not believe the bottom rock is broken." Mr. Fagan further stated that the pillars of the vein that he drove over the line had all been robbed back. He said Mr. William was the mining engineer at the time and the encroachment was due to an error in the survey. Q. "From what you know do you consider the dam effective, taking into consideration the broken condition of the strata separating the Wharton and the Parlor veins?" A. "As we go west of the dam we find the bottom to be all right." Q. "Did you find any leakages on the Harwood side?" A. "We discovered some in the Parlor, not to a great extent." Q. "Did you discover leakages on the Cranberry side?" A. "Yes, sir; in the Parlor, through the coal." Q. "Did you do anything to the dam after you discovered leakages?" A. "There was nothing we could do to stop them." Q. "Do you think that the leakage in the pillar where the dam is set was caused by the settling of the strata and the coal in the subsidence of the strata between the Wharton and the Parlor?" A. "I could hardly say. Think it was caused by the pressure of the water on that pillar." Q. "What is the pressure against that dam?" A. "Forty-eight pounds per square inch has been obtained by test." Q. "Do you think if there had not been any subsidence at all of this strata, would that water

leak through?" A. "I should judge that it would after being mined the way it is." Q. "Then you think that the water is coming through the natural seams in the coal, or through cracks caused by subsidence?" A. "The water that came through was due more to shocks from blasting the rock in the gangway and the blasting of the coal."

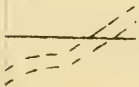
(Question by Mine Inspector, David J. Roderick): "I noticed when I was there the first time that you were only cutting hitches for two walls; the other day I noticed that there is a wall put on the north side of the dam between the two walls. What was the object of that?"

A. (By C. J. Creveling, mining engineer for Calvin Pardee and Company): "In the first place there were two or three props placed against the pillars between the dams on the north end. Back of these props they placed lagging to prevent pillars from chipping off. When we closed up the man-head in dams and filled the space between the dams with water, as the water rose up in the 6-inch water hole the leakage was perceptible on the east side of the pillar of breast No. 58 or the line breast driven up to the surface by A. Pardee and Company. We considered this leak due to the head of water and the constant increased pressure and the narrowness of the pillar between the west side of breast No. 58 and the west side of our eastern dam causing the water to go up through the seams in the coal and percolate through the pillar, running down chute of breast No. 58 into the gangway. In order to stop this leakage we, on October 6, 1904, had an interview with Mr. Frank Pardee, General Superintendent for A. Pardee and Company, in reference to his letter of July 22. We told him we thought we could make the dams water-tight provided we cemented the face of the coal on the north end of the dam. He said that if we could do this, it would be satisfactory to him."

Mr. Creveling said further: "There was a test made after this cementing was done and there was very little leakage; that is, it was more perceptible on the Harwood side near the north end of the dam." He said Mr. Robert Fagan, John Beach and Larry Gillespie were present at this test after the end wall was put in. They had a gauge on at that time which showed a pressure of 48 pounds per square inch, while the greatest pressure that would come against the dam in case Harwood filled with water would be 25.6 pounds, or a head of 59 feet. The test would merely show the stability of the strata at that particular point—between the two walls of the dam.

When asked if the test would show the condition of the strata north, south, west or east of the dam, Mr. Creveling replied: "No, sir. The map shows on the east the Wharton as being solid, and, in fact the same on the south and west. On the north—these dams being placed merely for test and not necessarily for strength to resist pressure from the head of Harwood water—admitting that the west wall of the dam is three or four feet south of the West gangway C in the Wharton vein, our eastern wall, according to surveys, is six feet south of the south side of West gangway C, and this wall alone would be sufficiently strong to resist all pressure from Harwood, notwithstanding the western wall was over West gangway C. Q. "Who drew up the plan of dams?" A. "They were drawn up by me. The idea was suggested by Mr. Frank Pardee,

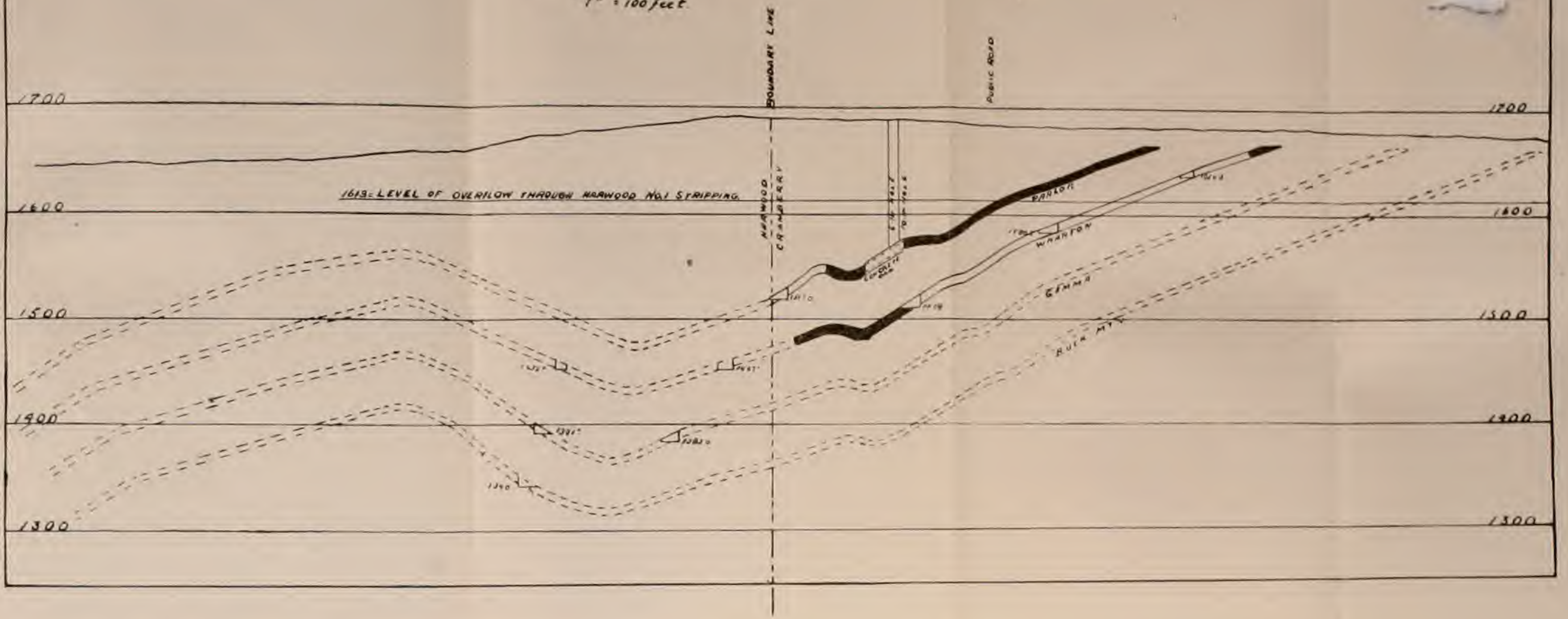
PUBLIC ROAD





SECTION B

THROUGH DAM IN HARWOOD ENCROACHMENT  
Bearing N 8° W. →  
1" = 100 feet.



General Superintendent. Q. "Admitting that the dam in itself is all right, do you think that the water will come from Harwood to Cranberry owing to the condition of the intervening strata?" A. "Not unless the cracks extend west of the dam." Q. "Do you know of any cracks extending west of the dam?" A. No, sir; I looked over the ground very carefully." Q. "Do you know of the condition of the Wharton under and in the vicinity of the dam?" A. "I believe I was on one of those surveys, but have no distinct recollection of the condition of the vein." Question (by J. E. Altmiller): "Were these plans you drew followed in building the dam?" A. "The 6-inch water hole was put down first and this was checked by J. E. Altmiller, engineer for the Cranberry Improvement Company. He very kindly gave us his traverse of the location as a check. Subsequently we put down the two 10-inch holes in the north ends of the walls and delayed the progress of the hitches northward until the holes reached the bottom of the Parlor vein. We then extended our hitches until we came to the 10-inch bore hole and stopped so that the location of the 10-inch hole would be the exact location of the north end of our wall." Q. "How would the compressed air get in the upper end of the western wall if the bore hole was at the extreme end of the hitch?" A. "In answer, I would ask Mr. Altmiller how he knows there was any compressed air there; that is, north of the wall. The compression, of course, of the air occurred as our forms of the wall were filled with cement and as the cement moved northward there was bound to be a compression of air whether the end of the dam extended north of the borehole or not." A. (By Mr. Altmiller): "I gathered my information from the conversation with J. E. Anderson, engineer for A. Pardee and Company, who said he had suggested a plan for the removal of this compressed air, but I believe this was not carried out." A. (By Mr. Creveling): "This conversation with Mr. Anderson in relation to the release of the compressed air was carried out as far as the inside of the wall was concerned, that would be the air compressed by the water. Mr. Anderson and myself, at the dam, suggested that we take a  $\frac{3}{4}$ -inch pipe and put it up at the highest point at the top rock between the dam and bend it so as to go to our 6-inch water hole, and, in order to prevent the water from coming down the pipe we put on two elbows turning the end of the pipe down the 6-inch hole, which should certainly have released all the compressed air between the walls."

Q. (By T. D. Jones): "After the final test was made was there any leakage on the Cranberry side." A. "There was a slight leakage." Q. "Was there any leakage on Harwood side?" A. "There was; in the top clod." Q. "Which side leaked the more?" A. "The leakage was more on the Harwood side."

Mr. J. E. Altmiller, engineer for the Cranberry Improvement Company testified in part, as follows: "Am resident engineer for the landowners of Cranberry colliery and made the surveys and maps of the colliery for them. We follow up our surveys closely, especially in approaching boundary lines. Those in the Wharton vein were not brought up before they were robbed because at that time Mr. Thomas S. McNair was resident engineer for the Lehigh Valley Railroad Company, and he made only such surveys as requested by the Superintendent of the colliery. We now make surveys of adjoining collieries where their workings approach our boundaries,



and have been doing so for two years or more. Was in charge of surveys for the land-owners, as assistant engineer, at the time the Harwood people went over the line, but we did not then as a rule survey adjoining collieries. I learned of the trespass August 29, 1901, when one of my men reported it after an inspection of the Cranberry workings. It possibly was discovered the day before, August 28, when I believe Cranberry holed into it." Q. "What do you know about this dam?" A. "I know very little. Saw it after completion and was told during the progress of the work that I was to be invited to be present when the tests were made, but never received any notification of these tests." Q. Do you believe that this dam would be the means of keeping the water from coming into Cranberry in case the Harwood colliery was abandoned and drowned out?" A. I do not." Q. What is your reason?" A. "On account of the cracked and depressed condition of the intervening strata between the Parlor and the underlying Wharton vein in the vicinity of the dam and also from the fact that there is leakage at the upper ends of both walls." Q. "Have you been down to examine the dam and the conditions surrounding?" A. "Yes, sir; I have been down two or three times. The last time in company with Mr. Anderson, at the request of Mr. F. Pardee, General Superintendent, to note the condition as to whether there was any water near the dams, with the understanding that after the space between the walls had been filled with water, we were to go in again to note whether there had been any leakage. That has not yet been done. My instructions from the Cranberry Improvement Company are to see that a dam will be placed there which will be absolutely water-tight, capable of withstanding the maximum pressure, and that it has been built upon a solid foundation to secure permanency." Q. (By Wm. A. Cochran): "Did you approve of the building of the dam in its present location." A. "I thought that the plan was worthy of a trial, but that it would be necessary to open into the Wharton to see what condition that was in." Q. "Suppose after going into the Wharton vein it was found to be badly fallen and the whole area under the encroachment was badly cracked, then how and where would you build a dam to fulfil the requirements?" A. "In connection with the present dam in the Parlor vein, if that could be made water-tight, I would build a dam in the Wharton vein from the lower side of West gangway C up to drainage level, some distance east, say fifty to one hundred feet, of the location of the dam in the Parlor vein, then slush the Wharton area from the Wharton dam west, which I think would silt up the cracks and sustain the intervening strata." Q. "Is there not a question as to whether this filling of the Wharton vein with silt would be effective in view of the falls of top rock, that is, it would be doubtful, unless you are able to examine the area proposed to be filled with silt." A. "That could be overcome by taking out the rock where there is any likelihood of its damming and preventing the culm from filling every space and crevice." Q. "Assuming that the Wharton vein would be filled with silt as you proposed and the strata between the two veins still being broken, would not the water still have means of passing from the Harwood to the Cranberry workings through the broken strata?" A. "If the silt had not filled up these cracks, which fact could be determined when the water come through into the Parlor, the cracks



could then be cut out and filled with cement from the top until this cement would meet the main body of the silt and overflow the cracks. In the event of cracks parallel with the stratification, which could not be reached by the cement, it would be necessary to cut through the rock from the Parlor vein down to the Wharton and build a dam solid from bottom of the Wharton to the top of the Parlor vein."

Mr. A. W. Drake, Superintendent for Calvin Pardee and Company, testified, in part, as follows: "My instructions to our engineers were to make duplicate surveys of workings approaching boundary lines. This encroachment was the result of a mistake of our engineer in his calculations in the office and his failure to carry out instructions as to duplicate surveys. Thomas J. Williams was the engineer in charge at the time. His corps made the surveys and Mr. Williams the calculations and did the plotting. We were not aware that we had driven over the line, and after the encroachment was discovered Mr. Williams maintained that his survey was correct. After the discovery A. Pardee and Company put men to work cleaning out the debris from the face of the breasts and pillars to note the extent of the trespass. A number of different plans were suggested by A. Pardee and Company and the Cranberry Improvement Company, by Mr. Altmiller, but nothing finally was decided upon until March 16, 1904, when Mr. Frank Pardee suggested the dams as have been constructed by us, and on March 23 he showed me a letter from the Cranberry Improvement Company approving of this plan of closing up the trespass. The dams were erected and first tested on June 20, 1904. July 12, 1904, the dams were inspected by Mr. Anderson and Mr. Creveling and at the suggestion of Mr. Anderson the space between the dams was filled with water and allowed to remain until July 19, 1904, when Mr. Anderson and Mr. Creveling again went into the dams and found the water had lowered by that time two and one-half inches. On June 28, 1904, dams were tested, showing a pressure of 32 pounds per square inch, showing water to be at an elevation of 1627.7, or 73.7 feet in hole. The greatest head that will ever be brought against these dams is 59 feet. This was before north end of dam was cemented in accordance with arrangement made with Mr. Frank Pardee, October 6, 1904."

Q. "Admitting that the dam would be all right, do you think the water would come into Cranberry owing to the condition of the intervening strata?" A. "I would say no, for the reasons given before and providing there were no cracks in the bottom of the dam, and none have been discovered up to this time, and we believe we have good reasons to think none exist."

Wm. A. Cochran to J. E. Altmiller, Engineer: Q. "Did you see any cracks in the Parlor vein breasts just west of the dam?" A. "There was a depression in the bottom rock which I would not say positively was caused by settling, about 100 feet west of the dam, and I also found a crack about 20 feet west of the dam in the bottom bone which would admit a knife blade, and from the fact that the large crack found in breast No. 58 and examined by the arbitrators July 5 showed only a sufficient width to admit a key in the bone, but when the bone was cut away it showed a very large crack, I fear the same condition would be disclosed by following the crack referred to."

T. D. Jones to Robert Fagan, Foreman: Q. "What is your experience in working the Wharton and Parlor veins, as to what effect the working of the Wharton has on the Parlor vein?" A. "My experience in working the entire vein has been that we could almost locate the pillars left in the Wharton. We found depressions or places where the Parlor is sunk away from the top and where the pillars were left in the Wharton, the Parlor is solid. In many cases we have to furnish the miners with dynamite to work the Parlor coal where the Wharton pillars were left under. Where the Wharton has been worked from under the Parlor vein we find the parlor loose and easier mined. The intervening rock falls down into the Wharton."

The arbitrators, Messrs. Wm. A. Cochran for Calvin Pardee and Company, J. E. Anderson for A. Pardee and Company, and T. D. Jones for the Inspector of Mines, after careful inspection of the dam and its surroundings, examination of the maps and sections, and proper consideration of the testimony of the witnesses called, viz.: Messrs. Benjamin Reese, Mine Foreman for A. Pardee and Company at the time the Wharton vein was developed in that part of Cranberry, Thomas Hale, Assistant General Inside Superintendent for A. Pardee and Company, and Mine Foreman when the Wharton vein was robbed in that section; Robert Fagan, General Inside Superintendent for Calvin Pardee and Company, in charge of Harwood mines when the Parlor vein encroachment was made and the workings robbed back; C. J. Creveling, Mining Engineer for Calvin Pardee and Company, under whose directions the present dam was constructed; A. W. Drake, General Superintendent for Calvin Pardee and Company and J. E. Altmiller, Engineer for the Cranberry Improvement Company, landowners of the Cranberry property (copy of which testimony is made part hereof), beg to submit the following report:

It seems that the dam is placed where Cranberry holed into the encroachment from Harwood colliery. As to the construction of the dam and the manner in which it has been built, we are of the opinion that the dam is of little use toward keeping the water from coming into the Cranberry colliery, owing to the condition of the intervening strata between the Wharton and the Parlor veins, in the latter vein of which the dam is constructed.

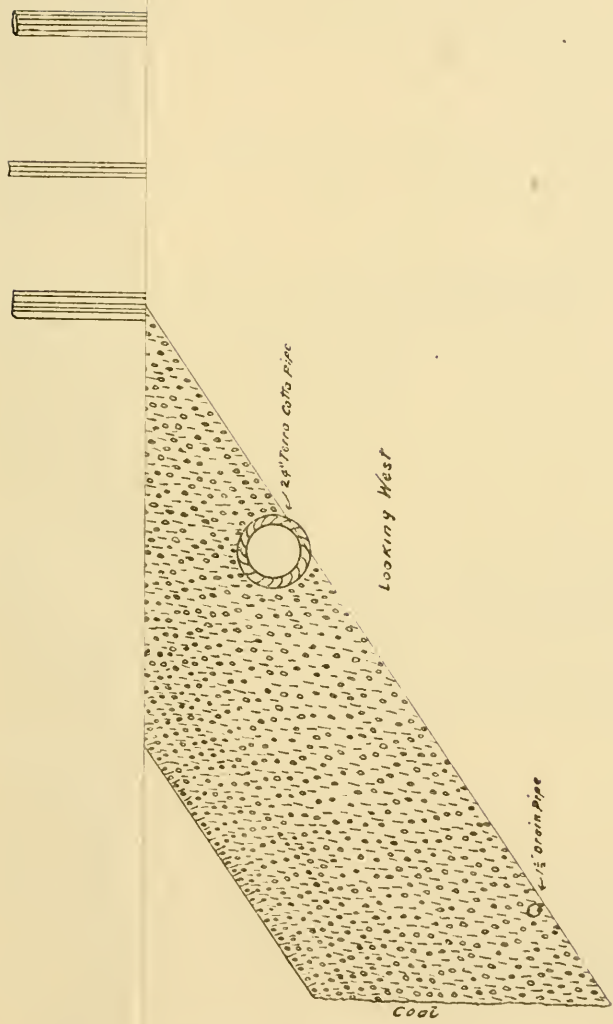
This dam is placed about 100 feet east of the boundary line at the face of West gangway "A," or No. 26, Parlor vein, and apparently on a solid foundation, with the exception of the north corner which is a few feet over the Wharton gangway.

The test made of the dam, in our opinion, only goes so far as to prove the stability of the dam itself, but it does not prove that the water will not come into Cranberry, as it only closes up the gap where the entrance was made from Cranberry into Harwood colliery. The test made of the dam is nothing more or less than a test, as it were, of water inserted in a bottle, on account of being surrounded on all sides by walls.

The north end of the dam, in our opinion, should not have been plastered up in order to prove the efficiency of the dam and the surroundings.

To determine or suggest a remedy to prevent the water from coming into Cranberry, from Harwood colliery, is a very difficult

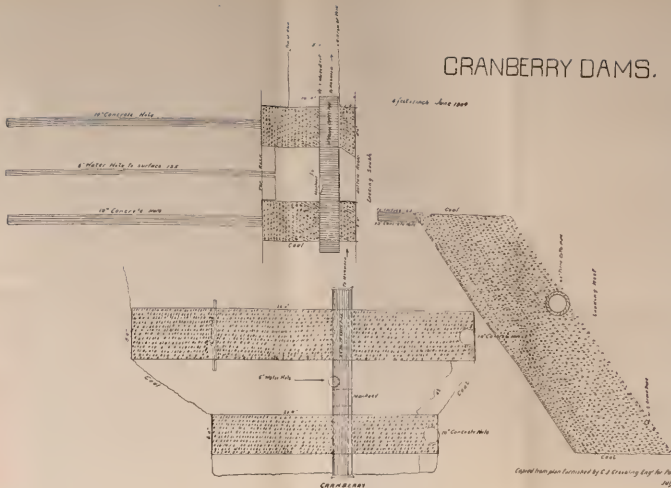
# BERRY DAMS.



...ved from plan furnished by C. J. Creveling Eng<sup>r</sup> for Pardee Sons & Co.  
July 7, 1904.

# CRANBERRY DAMS.

4 feet from June 1900



Copied from plan furnished by C. J. Crossing Eng'g for Parker Sun & Co  
July 7 1900

proposition, owing to the condition of things as found by our examination in and around the vicinity of the dam. We noticed quite a large crack in the bottom rock of the Parlor vein, in which the dam is constructed, about thirty (30) feet vertically above the dam, which was caused by the working out or robbing of the Wharton vein underlying the Parlor vein. Mr. Hale, who was inside foreman at the time this portion of the Wharton vein was robbed, states that there is no more than five to ten per cent. of the solid contents of the Wharton vein left unmined in that vicinity. This crack extends across the breasts in the Parlor vein and into the pillar to the west. How far it extends into the pillar we cannot tell, but owing to the Wharton vein having been robbed out (and referring to statement of Mr. Hale in regard to the complete robbing of it), it is supposed that the intervening strata dividing the two veins is more or less in a damaged condition. Hence, the most practicable method in our opinion to remedy the damaged condition of the dividing rock would be, to sink a slope down in the Wharton vein, say about the size of a gangway, with a man-way on the east side, constructed of centre-props and plank, all the way down to the level of West gangway "C" (No. 18) and then seal this space with coal-dirt or other material as may be deemed most suitable, to an elevation where the water would not interfere with Cranberry. After this is accomplished, then do the same thing with the breast outside of the dam in the Parlor vein; but, before doing so, it would be advisable to fill the cracks in the bottom of the Parlor vein, outside the dam, with cement, wherever found; and in the meantime build a dam outside of the second breast in the Parlor vein, with props and plank, to prevent the filling material from extending too far out and to lessen the quantity. Of course, this plan would involve an outlay of considerable money; but, as we understand it, we are not to take into consideration the question of expense, but to recommend an efficient dam, having in mind its surroundings, in order to prevent the water from getting into Cranberry colliery from Harwood colliery; so that the parties interested may work harmoniously toward building a permanent structure.

Suggestions have been given that possibly even with this method the water will find its way through the dividing rock of the two veins, but we think that the cementing of the cracks in the breasts in the Parlor vein, after the Wharton vein is filled with coal-dirt, is the most practicable method.

Witnesses have testified that if the bottom rock inside of the dam is intact they would be satisfied that the water could not come into Cranberry, but, owing to the large cracks in the bottom rock having been discovered along the rib of the Parlor vein inside the dam, since our inspection, it is evident that the dam is of no use.

We would suggest leaving pillars in the Gamma and Buck Mountain veins for a distance of two hundred (200) feet east and west of the proposed dam.

(Signed) WM. A. COCHRAN, for Calvin Pardee and Company.

J. E. ANDERSON, for A. Pardee and Company.

T. D. JONES, for Inspector of Mines.

Hazleton, Pa., August 12, 1905.



### Mine Foremen's Examinations

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in the Y. M. C. A. Building, Hazleton, May 8 and 9.

The Board of Examiners was: David J. Roderick, Inspector, E. L. Bullock, Superintendent, Fred Henry and Fred Young, miners.

The following persons were recommended for certificates.

#### Mine Foremen

William Penn Griffith, John W. Borneisen, William B. Cunning, John L. Richards, Peter Zillig, William E. Stickler, James Conners, John E. Shinton, William R. Jeffrey, Timothy Ryan, Edward Doggett, Elmer Evans, James D. Griffith, Patrick J. Conahan, William Dunkerly, William Harlor, William J. Gilbert.

#### Assistant Mine Foremen

William Davis, Odgen M. White, John Beacroft, John Chisnell, William Mace, August Miller, Conrad Helwig, Joseph Petrill.



# Tenth District

SCHUYLKILL COUNTY

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Shenandoah, Pa., February 20, 1906.

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

Sir: I have the honor of transmitting to you my annual report as Inspector of Mines for the Tenth Anthracite District, for the year ending December 31, 1905.

The production of coal shows an increase of 72,518 tons over the preceding year, and yet there was, I am pleased to state, a decrease of 11 in the number of fatal accidents.

Respectfully submitted,

A. B. LAMB,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	31
Number of mines, .....	21
Number of mines in operation, .....	20
Number of tons of coal shipped to market, .....	3,645,548
Number of tons used at mines for steam and heat, .....	422,004
Number of tons sold to local trade and used by employes, .....	64,463
Number of tons produced, .....	4,132,015
Number of persons employed inside of mines, .....	6,138
Number of persons employed outside, .....	3,924
Number of fatal accidents inside of mines, .....	19
Number of fatal accidents outside, .....	8
Number of non-fatal accidents inside of mines, .....	51
Number of non-fatal accidents outside, .....	11
Number of tons of coal produced per fatal accident inside, .....	217,474
Number of persons employed per fatal accident inside, ..	323
Number of persons employed per fatal accident outside, ..	490
Number of persons employed per non-fatal accident inside, ..	120
Number of persons employed per non-fatal accident outside, .....	357
Number of wives made widows, .....	12
Number of children orphaned, .....	27
Number of steam locomotives used inside of mines, .....	1
Number of steam locomotives used outside, .....	23
Number of compressed air locomotives used inside, .....	4
Number of fans in use, .....	29
Number of gaseous mines in operation, .....	16
Number of non-gaseous mines in operation, .....	4
Number of old mines abandoned, .....	1

TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,.....	2,396,642
Lehigh Valley Coal Company, .....	871,546
Susquehanna Coal Company, .....	277,027
Brookwood Coal Company, .....	103,514
Thomas Colliery Company, .....	106,690
Cambridge Coal Company, .....	81,235
Gerber and Seaman, .....	64,308
W. R. McTurk Coal Company, .....	118,382
Brighton Coal Company, .....	78,887
Raven Run Coal Company, .....	23,832
H. H. Smith and Company, .....	9,952
Total, .....	<u><u>4,132,015</u></u>

## Production by Counties

Schuylkill, .....	<u><u>4,132,015</u></u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	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.	12	7	19	27	8	35	199,720	88,764	4,038	2,446	6,484	336	319	150	306	
Lehigh Valley Coal Co.	6	6	12	12	1	13	35,258	12,629	1,228	698	1,836	204	162	608		
Susquehanna Coal Co.	1	1	2	1	1	2	30,781	478	478	250	728	478	250	53	250	
Thomas Colliery Co.	1	1	2	1	1	2	277,027	106,680	47	123	200	77	77	77		
Cambridge Coal Co.	1	1	2	2	1	3	40,612	111	111	58	169	92	29	29		
Brighton Coal Co.	1	1	2	1	1	2	.....	.....	.....	347	553	.....	.....	.....	.....	
Miscellaneous companies,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals and averages for district, .....	19	8	27	51	11	62	217,474	81,020	6,138	3,924	10,062	322	490	120	357	

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Falls of coal, .....	1		1			1						2	5	26.32
Falls of slate, .....	2											1	2	10.53
Falls of roof, .....													1	10.53
Mine cars, .....						1						1	1	10.53
Explosions of gas and dust, .....		1											1	5.26
Explosions of powder and dynamite, .....					2			1					3	15.78
Premature blasts, .....						2							2	10.53
Falling into shafts, .....													1	5.26
Falling into slopes, etc., .....								1					1	5.26
Totals, .....	4	1	1		3	4		2				4	19	100
Causes of Accidents Outside														
Cars, .....		1											1	12.50
Machinery, .....		1	1							1			3	37.50
Miscellaneous, .....								2					4	50.00
Totals, .....	4	1	1					2		1			8	100
Grand totals inside and outside, .....	4	5	2		3	4		4		1		4	27	.....

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Falls of coal, .....	1		1			2							4	7.84
Falls of slate, .....										1	1		2	3.92
Mine cars, .....			1	1		1			1	2	1	2	8	17.65
Explosions of gas and dust, .....		2		2	4			3		2	2	1	16	31.38
Explosions of powder and dynamite, .....			1			1							2	3.92
Premature blasts, .....				1		1			1	1			4	7.84
Crushed at batteries, .....												1	1	1.96
Miscellaneous, .....	2	1		2	1	1	1			2	1	2	13	25.49
Totals, .....	3	3	3	6	7	4	1	3	2	8	5	6	51	100
Causes of Accidents Outside														
Cars, .....							1						2	18.18
Machinery, .....							1	1	2	1			1	9.09
Miscellaneous, .....		1	1									1	3	72.73
Totals, .....		1	1				2	1	2	2	1	1	11	100
Grand totals inside and outside, .....	3	4	4	6	7	4	3	4	4	10	6	7	62	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, .....	3	1	1	.....	1	2	.....	2	.....	.....	.....	3	13
Miners' laborers, .....	1	.....	.....	.....	1	1	.....	.....	.....	.....	.....	1	4
Drivers and runners, .....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Doorboys and helpers, .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Totals, .....	4	1	1	.....	3	4	.....	2	.....	.....	.....	4	19
Outside													
Slatepickers (boys), .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
All other employes, .....	.....	4	.....	.....	.....	.....	.....	2	.....	1	.....	.....	7
Totals, .....	.....	4	1	.....	.....	.....	.....	2	.....	1	.....	.....	8
Grand totals inside and outside, .....	4	5	2	.....	3	4	.....	4	.....	1	.....	4	27

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, .....	1	2	2	5	6	2	.....	2	1	5	3	1	32
Miners' laborers, .....	.....	.....	.....	.....	1	1	1	.....	.....	2	1	.....	8
Drivers and runners, .....	.....	.....	.....	.....	.....	1	.....	.....	1	1	1	.....	5
All other employes, .....	2	.....	1	1	.....	.....	.....	.....	1	.....	.....	4	8
Totals, .....	3	2	3	6	7	4	1	3	2	8	5	6	51
Outside													
Blacksmiths and carpenters, .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Slatepickers (boys), .....	.....	.....	1	.....	.....	.....	.....	1	.....	1	.....	.....	3
All other employes, .....	.....	1	.....	.....	.....	.....	1	.....	2	1	1	1	7
Totals, .....	.....	1	1	.....	.....	.....	2	1	2	2	1	1	11
Grand totals inside and outside, .....	3	4	4	6	7	4	3	4	4	10	6	7	62



TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, .....	2	2	...	...	1	1	...	1	...	1	...	...	8
English, .....	1	1	1	...	...	...	...	1	...	...	...	...	5
Irish, .....	...	...	...	...	...	...	...	...	...	...	...	...	1
German, .....	...	1	1	...	...	1	...	...	...	...	...	1	4
Polish, .....	...	1	...	...	...	...	...	...	...	...	...	...	1
Hungarian, .....	1	...	...	...	2	1	...	1	...	...	...	3	5
Lithuanian, .....	...	...	...	...	...	1	...	...	...	...	...	...	2
Russian, .....	...	...	...	...	...	1	...	...	...	...	...	...	1
Greek, .....	...	...	...	...	...	...	...	...	...	...	...	...	1
Totals, .....	4	5	2	...	3	4	...	4	...	1	...	4	27

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, .....	...	...	...	1	...	...	2	1	...	5	...	4	13
English, .....	...	...	1	...	...	...	...	1	...	...	...	...	3
Welsh, .....	...	2	...	...	...	...	...	...	...	...	...	...	2
Irish, .....	...	...	...	2	...	...	...	...	...	3	...	1	5
German, .....	...	...	...	...	...	1	1	...	...	...	...	...	3
Polish, .....	1	...	2	...	1	1	...	1	1	...	...	...	7
Hungarian, .....	...	1	...	...	...	...	...	1	1	...	...	...	3
Italian, .....	...	...	...	...	...	...	...	1	1	...	...	...	2
Lithuanian, .....	1	1	1	1	6	1	...	2	1	2	2	1	19
Austrian, .....	...	...	...	...	...	...	...	...	2	2	2	1	7
Russian, .....	1	...	...	1	...	...	...	...	...	...	2	...	4
Totals, .....	3	4	4	6	7	4	3	4	4	10	6	7	62

TABLE I.—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 person 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 for each person			
Philadelphia and Reading Coal and Iron Co. Girard Mammoth, .....	Slope,.....	Gasous,	Fan,.....	12	4	4	92	1 3/4	Gubbal,.....	Steam,	5	115,147	115,147	85,682	407	283			
	Slope,.....	Gasous,	Fan,.....	18	5	5	92	1 3/4			17	79,112	144,984	78,067	994	578			
	Slope,.....	Gasous,	Fan,.....	18	5	5	92	1 3/4			6	68,700	68,800	107,459	383	523			
	Slope,.....	Gasous,	Fan,.....	21	7	4	86	2			6	90,068	84,140	110,750	383	523			
	Slope,.....	Gasous,	Fan,.....	12	4	4	120	1 3-10			9	155,700	163,432	176,100	540	363			
	Slope,.....	Gasous,	Fan,.....	15	5	4	90	1 8-10			6	70,180	45,630	71,980	176	255			
	Slope,.....	Gasous,	Fan,.....	15	5	4	90	1 8-10			6	75,000	87,000	77,500	315	276			
	Slope,.....	Gasous,	Fan,.....	21	7	6	85	1 8-10			6	125,000	112,675	125,520	525	215			
	Slope,.....	Gasous,	Fan,.....	18	6	4 1/2	82	1 3-5			4								
	Slope,.....	Gasous,	Fan,.....	12	4	4	130	1 3-5			4								
	Lehigh Valley Coal Co. Packer No. 2, .....	Slope,.....	Gasous,	Fan,.....	20	6	5	47			3/4	Gubbal,.....	Steam,	4	83,000	79,200	83,000	215	368
		Slope,.....	Gasous,	Fan,.....	18	6	4 1/2	70			6-10			6	97,000	77,000	97,000	256	301
		Slope,.....	Gasous,	Fan,.....	20	6	4 1/2	60			7-10			6	57,200	45,000	59,000	206	218
		Shaft,.....	Gasous,	Fan,.....	20	6	4 1/2	75			7-10			12	70,470	110,690	132,035	551	201
		Slope,.....	Gasous,	Fan,.....	16	5	4	80			1 2-10			8					

Susquehanna Coal Co.														
Wm. Penn, .....	Shaft,.....	Gaseous,	Fan,.....	18	7	4½	90	} 1½	} Guibal,.....	151,185	120,400	241,470	478	252
Stanton, .....	Shaft,.....	Gaseous,	Fan,.....	18	7	4½	90			} 1½	} Guibal,.....	151,185	120,400	241,470
Brookwood Coal Co.	Drift,.....	Non-gas.	Natural, .....	12	5	4	100	} 8-10	} Guibal,.....			151,185	120,400	241,470
Thomas Colliery Co.	Slope,.....	Non-gas.	Fan,.....	14	5	4	80			} Guibal,.....	} Guibal,.....	23,000	21,000	23,000
Cambridge Coal Co.	Drift,.....	Non-gas.	Fan,.....	.....	.....	.....	.....	} Guibal,.....	} Guibal,.....			23,000	21,000	23,000
Cambridge, .....	Drift,.....	Non-gas.	Fan,.....	.....	.....	.....	.....			} Guibal,.....	} Guibal,.....	23,000	21,000	23,000
Gerber and Seaman	Slope,.....	Non-gas.	Fan,.....	10	4	2½	70	} ½	} Guibal,.....			20,640	18,118	21,957
Furnace, .....	Slope,.....	Non-gas.	Fan,.....	10	4	2½	70			} ½	} Guibal,.....	20,640	18,118	21,957
W. R. McTurk Coal Co.	Slope,.....	Gaseous,	Fan,.....	12	.....	.....	128	} 11	} Guibal,.....			40,000	34,000	41,000
Girard, .....	Slope,.....	Gaseous,	Fan,.....	12	.....	.....	128			} 11	} Guibal,.....	40,000	34,000	41,000

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
Shenandoah City, .....						
West Shenandoah, .....						
Turkey Run, .....						
Hammond, .....						
East, .....						
Bear Ridge, .....						
Kuhinor, .....						
Gilberton, .....						
Draper, .....						
Girard Mammoth, .....						
Plank Ridge washery, .....	Schuylkill,....	W. J. Richards,....	Pottsville, .....	Reese Tasker, ....	Pottsville, .....	P. and R.
Lehigh Valley Coal Co.						
Packer No. 2, .....						
Packer No. 3, .....						
Packer No. 4, .....	Schuylkill,....	S. D. Warriner,....	Wilkes-Barre, .....	J. M. Humphrey,...	Centralia, .....	Lehigh Valley
Packer No. 5, .....						
Susquehanna Coal Co.						
William Penn, .....	Schuylkill,....	R. A. Quin, .....	Wilkes-Barre, .....	William Auman, ..	Shaft, .....	Pennsylvania
Brookwood Coal Co.						
Stanton, .....	Schuylkill,....	W. G. Thomas, ....	Hazleton, .....	W. G. Thomas, ....	Hazleton, .....	P. and R.
Thomas Colliery Co.						
Kehley Run, .....	Schuylkill,....	Daniel H. Levan,...	Shenandoah, .....	.....	.....	P. and R.
Cambridge Coal Co.						
Cambridge, .....	Schuylkill,....	.....	.....	D. R. James, .....	Shenandoah, .....	P. and R.
Gerber and S-aman						
Furnace, .....	Schuylkill,....	M. A. Gerber, .....	Tamaqua, .....	.....	.....	P. and R.

W. R. McTurk Coal Co. Girard, .....	Schuykill, .....	W. R. McTurk, .....	Philadelphia, .....	Jacob M. Holt, ....	Girardville, ... ..	P. and R.
Brighton Coal Co. Brighton washery, .....	Schuykill, .....	.....	.....	R. R. Williams, ....	Fraekville, .....	P. and R.
Raven Run Coal Co. Raven Run washery, .....	Schuykill, .....	W. G. Thomas, ....	Hazleton, .....	W. G. Thomas, ....	Hazleton, .....	P. and R.
H. H. Smith and Co. Hudson washery, .....	Schuykill, .....	Henry Myers, .....	Minersville, .....	M. E. Jones, .....	Shaft, .....	P. and R.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Totals are averages, 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.												
Girard Mammoth, .....		84,319	26,138	293	110,750	265	273	.....	1	44	5,688	29
East, .....		206,685	50,454	6,723	263,862	273	684	1	7	45	83,075	79
Hammond, .....		291,690	25,960	6,788	324,348	280	956	1	5	2,709	105,707	61
Shenandoah City, .....		272,212	34,614	28,314	335,140	273	996	3	4	6,750	18,610	69
West Shenandoah, .....		590,898	21,898	.....	21,898	246	381	2	4	1,870	6,680	36
Turkey Run, .....		3,920	.....	.....	607,606	246	770	5	2	5,671	11,348	43
Bear Ridge, .....		126,852	16,176	3,434	146,462	223	347	1	2	2,439	19,916	59
Gilberton, .....		182,981	60,396	2,846	246,223	263	544	1	1	1,045	11,499	41
Draper, .....		322,587	13,816	.....	336,403	281	822	2	5	4,775	89,511	66
Totals, .....		2,078,134	270,110	48,398	2,396,642	260	6,484	19	35	27,219	414,704	526
Lehigh Valley Coal Co.												
Packer No. 2, .....		127,537	10,041	.....	137,578	256	288	1	.....	2,297	12,640	27
Packer No. 3, .....		297,404	574	.....	297,978	256	280	.....	3	1,398	17,783	41
Packer No. 4, .....		115,485	56,274	621	172,380	256	638	1	1	3,244	7,274	41
Packer No. 5, .....		340,437	13,173	.....	353,610	256	650	4	3	4,710	67,222	36
Totals, .....		790,863	80,062	621	871,546	256	1,836	6	13	11,669	104,849	204
Susquehanna Coal Co.												
William Penn, .....		298,388	36,596	2,043	277,027	238	728	2	10	7,147	24,400	66
Brookwood Coal Co.												
Stanton, .....		98,585	4,929	.....	103,514	291	105	.....	.....	75	16,250	11



Thomas Colliery Co.	Schuylkill, . . . . .	92,418	10,326	3,946	106,690	252	900	1	740	3,670	15
Kehley Run, . . . . .	Schuylkill, . . . . .	77,642	2,204	1,389	81,235	264	169	2	1,417	11,250	12
Cambridge, . . . . .	Schuylkill, . . . . .	59,575	4,733	.....	64,308	268	135	.....	160	22,600	12
Furnace, . . . . .	Schuylkill, . . . . .	106,875	3,690	7,817	118,382	261	227	.....	450	18,100	25
W. R. McTurk Coal Co.	Schuylkill, . . . . .	71,135	7,752	.....	78,887	274	92	1	.....	.....	4
Brighton Coal Co.	Schuylkill, . . . . .	22,400	1,123	249	23,822	161	31	.....	.....	525	.....
Raven Run washery, . . . . .	Schuylkill, . . . . .	9,473	479	.....	9,952	39	55	.....	.....	.....	.....
H. H. Smith and Co.	Schuylkill, . . . . .	3,645,548	422,004	64,463	4,132,015	261	10,062	27	62	48,997	616,278
Hudson washery, . . . . .	Schuylkill, . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	875
Grand totals, . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE 2.—Recapitulation

Philadelphia and Reading Coal and Iron Co., . . . . .	Schuylkill, . . . . .	2,078,134	270,110	48,398	2,396,642	260	6,484	19	35	27,219	414,704	536
Lehigh Valley Coal Co., . . . . .	Schuylkill, . . . . .	790,863	80,062	621	871,546	256	1,896	6	13	11,669	104,541	204
Miscellaneous companies, . . . . .	Schuylkill, . . . . .	776,551	71,832	15,444	863,827	.....	1,742	2	14	16,019	36,725	145
Totals, . . . . .	.....	3,645,548	422,004	64,463	4,132,015	261	10,062	27	62	48,997	616,278	875

TABLE 2.—PART 2.

Names of Operators	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	Steam	Air							
Philadelphia and Reading Coal and Iron Co., .....	Schuylkill, .....	46	1,340	107	14,470	15,810	9	4	146	19,408	29	34,260	22,640	.....	10
Lehigh Valley Coal Co., .....		21	679	28	5,490	6,079	6	.....	73	15,555	10	8,710	3,370	.....	.....
Susquehanna Coal Co., .....		.....	.....	11	1,570	1,550	1	.....	15	1,585	1	1,500	880	.....	.....
Brookwood Coal Co., .....		.....	.....	5	625	625	2	.....	15	526	.....	.....	.....	.....	.....
Thomas Colliery Co., .....		24	740	4	690	1,340	.....	.....	6	400	2	1,200	950	.....	.....
Cambridge Coal Co., .....		2	50	3	200	350	2	.....	4	120	.....	.....	.....	.....	.....
Gerber and Seaman, .....		1	15	5	310	315	.....	.....	8	120	1	360	150	.....	.....
W. R. McTurk Coal Co., .....		6	760	6	600	700	.....	.....	17	816	.....	.....	.....	.....	.....
Brighton Coal Co., .....		6	600	6	600	600	3	.....	8	630	.....	.....	.....	.....	.....
Raven Run Coal Co., .....		2	250	2	250	250	.....	.....	9	368	.....	.....	.....	.....	.....
H. H. Smith and Co., .....		.....	.....	3	375	375	1	.....	6	200	1	1,000	1,000	.....	.....
Totals, .....		.....	94	2,824	160	25,230	28,054	24	4	311	39,778	44	47,830	28,950	.....

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Pit bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door boys and helpers	Pumpmen	Company men	All other employes	Total Inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.		1	1	1	2	5	5	4	16	50	83	1	1	5	24	34	21	1	104	190	273	
Girard Mammoth, .....		2	10	6	39	28	36	4	110	112	407	1	1	10	31	40	13	3	168	277	445	
Bast, .....		1	6	183	176	24	13	4	72	86	546	1	1	12	29	101	50	3	213	410	623	
Hammond, .....		1	1	9	182	244	61	3	112	66	629	1	1	3	20	122	19	4	135	302	437	
Shenandoah City, .....		1	1	4	78	105	26	3	50	58	324	1	1	3	20	115	36	1	27	52	181	
Kohinor, .....		1	1	4	78	105	26	3	50	58	324	1	1	3	20	115	36	1	27	52	181	
West Shenandoah, .....		1	1	6	86	208	26	15	115	129	580	1	1	8	14	41	13	2	94	171	265	
Turkey Run, .....		1	1	2	25	76	12	2	20	36	176	1	1	5	15	41	13	2	94	171	265	
Bear Ridge, .....		1	1	5	67	69	25	2	52	16	215	2	2	8	39	38	17	3	122	229	351	
Gilberton, .....		1	1	7	134	80	40	7	90	106	525	1	1	8	18	69	31	2	167	297	464	
Draper, .....		1	1	7	134	80	40	7	90	106	525	1	1	8	18	69	31	2	167	297	464	
Totals, .....		11	6	54	974	1,088	269	91	24	718	4,038	5	16	77	298	569	200	25	1,316	2,446	6,484	
Lehigh Valley Coal Co.		1	1	4	88	34	13	2	4	69	215	1	1	5	12	12	1	1	24	43	258	
Packer No. 1, .....		1	1	4	63	80	16	6	4	81	256	1	1	3	6	6	1	1	24	34	290	
Packer No. 2, .....		1	1	4	81	40	13	2	5	58	206	1	2	25	39	75	1	5	285	432	638	
Packer No. 3, .....		1	1	2	5	80	172	34	7	249	351	1	1	15	15	1	1	1	67	99	650	
Packer No. 4, .....		1	1	2	5	80	172	34	7	249	351	1	1	15	15	1	1	1	67	99	650	
Totals, .....		5	4	17	312	326	76	17	14	457	1,228	1	4	48	72	75	1	8	406	618	1,836	
Susquehanna Coal Co.		1	1	6	167	94	79	2	7	116	478	1	1	24	28	71	12	6	107	250	728	
William Penn, .....		1	1	6	167	94	79	2	7	116	478	1	1	24	28	71	12	6	107	250	728	

TABLE 3.—Continued

Names of Operators and Col- lieries	County	Inside											Outside							Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Pit bosses and assistants	Miners	Miners' laborers	Drivers and runners	Door boys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers boys)	Slate pickers (men)	Bookkeepers and clerks		All other employes	Total outside	
Brookwood Coal Co.	Schuylkill...	1	.....	.....	7	6	2	.....	.....	12	10	38	1	1	2	8	18	2	2	33	67	105	
Thomas Colliery Co.	Schuylkill...	1	.....	.....	26	30	4	1	3	11	.....	77	1	1	18	13	23	16	2	49	123	200	
Cambridge Coal Co.	Schuylkill...	2	.....	.....	40	42	4	1	.....	15	6	111	.....	1	3	8	12	3	1	30	58	169	
Gerber and Seaman Furnace, .....	Schuylkill...	1	.....	.....	53	19	5	1	2	8	3	73	1	1	5	8	26	.....	.....	1	20	62	135
W. R. McTurk Coal Co. Girard, .....	Schuylkill...	1	.....	.....	41	16	7	3	.....	26	.....	95	1	1	5	7	41	.....	.....	2	75	132	227
Brighton Coal Co. Brighton washery, .....	Schuylkill...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	16	3	1	57	92	92	
Raven Run Coal Co. Raven Run washery, .....	Schuylkill...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	3	.....	.....	1	16	31	31
H. H. Smith and Co. Hudson washery, .....	Schuylkill...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	6	4	1	31	55	55	
Grand totals, .....	.....	22	11	80	1,600	1,621	446	124	50	906	1,277	6,138	14	29	188	409	890	240	50	2,134	3,924	10,062	

TABLE 3.—Recapitulation

Names of Operators	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employes	Total outside
Philadelphia and Reading Coal and Iron Co., Lehigh Valley Coal Co., Miscellaneous companies,	Schuylkill,	11	6	54	974	1,088	269	99	24	718	795	5	16	77	228	569	200	25	1,316	2,446	6,484
		5	4	17	312	326	76	17	14	.....	457	1	4	48	72	75	.....	8	400	608	1,896
		7	1	9	314	267	101	8	12	188	25	8	9	63	99	216	40	17	418	870	1,112
Totals,	.....	23	11	80	1,600	1,621	446	124	50	9'6	1,277	14	29	188	409	860	240	50	2,134	3,924	10,082

TABLE 3.—PART 2.

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total			
		January	February	March	April	May	June	July	August	September	October	November	December				
Philadelphia and Reading Coal and Iron Co.		19	11	24	22	26	23	20	24	23	24	24	23	24	23	25	256
Girard Mammoth, .....		22	20	22	23	25	23	19	24	22	22	22	22	22	22	22	256
East, .....		21	20	26	23	25	23	20	25	25	25	25	25	25	25	25	256
Hammond, .....		22	17	25	22	26	23	20	24	23	23	23	23	23	23	23	273
Shenandoah City, .....		19	19	22	20	23	21	17	21	21	21	21	21	21	20	216	
Kohinoor, .....		19	19	22	20	23	21	17	22	21	21	21	21	21	20	216	
West Shenandoah, .....		19	19	22	20	23	21	17	22	21	21	21	21	21	20	216	
Turkey Run, .....		19	16	20	19	20	19	16	20	19	19	19	19	18	18	223	
Bear Ridge, .....		24	20	27	23	24	22	17	23	23	20	22	21	21	20	263	
Gilberton, .....		24	20	27	23	24	22	17	23	23	20	22	21	21	20	263	
Draper, .....		24	20	27	24	23	21	19	26	24	25	23	22	22	22	281	
Lehigh Valley Coal Co.																	
Trucker No. 2, .....		20	12	24	23	26	23	20	20	22	22	22	22	22	22	22	256
Trucker No. 3, .....		20	12	24	23	26	23	20	20	22	22	22	22	22	22	22	256
Trucker No. 4, .....		20	12	24	23	26	23	20	20	22	22	22	22	22	22	22	256
Trucker No. 5, .....		20	12	24	23	26	23	20	20	22	22	22	22	22	22	22	256
Susquehanna Coal Co.																	
William Penn, .....	Schuylkill, .....	18	20	17	18	23	22	17	21	20	22	21	22	21	19	208	
Brookwood Coal Co.																	
Stanton, .....	Schuylkill, .....	23	22	27	24	26	26	20	26	23	25	25	25	24	24	261	
Thomas Colliery Co.																	
Kehley Run, .....	Schuylkill, .....	18	18	26	22	25	24	16	26	23	25	14	15	15	15	252	
Cambridge Coal Co.																	
Cambridge, .....	Schuylkill, .....	22	21	26	22	25	25	19	24	22	19	21	20	21	20	261	
Gerber and Seaman																	
Furnace, .....	Schuylkill, .....	21	21	20	23	26	25	20	25	23	22	21	21	21	21	268	
W. R. McTurk Coal Co.																	
Girard, .....	Schuylkill, .....	22	21	25	23	26	24	12	20	22	22	22	22	22	22	261	



TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 3	John Whalen	American	Miner	42	M	1	3	Packer No. 2		Killed by fall of slate.
9	Packer Imbachue	Irish	Laborer	33	S	1	1	Packer No. 4		Killed by fall of rock.
18	Daniel James	American	Miner	41	S	1	1	Kohinoor		Killed by fall of coal.
21	Thomas Miller	Lithuanian	Miner	30	S	1	1	Turkey Run		Fatally injured by fall of top rock. Died February 2.
Feb. 6	Daniel Britton	American	Laborer	40	M	1	4	Kohinoor		He was passing behind a fireman and was struck by scraper handle. Died February 8. Outside.
8	Roman Wassel	Hungarian	Jig runner	19	S	1	1	Gilberton		Instantly killed; caught in a screen pinion. Outside.
15	David Evans	American	Driver	18	S	1	1	Bear Ridge		Squeezed between cars and cribbing. Died February 18. Outside.
17	John Shebo	Polish	Miner	30	S	1	1	Shenandoah City		Fatally injured by explosion of gas. Died February 26.
20	Darby Howe	Irish	Miner	60	M	1	1	Packer No. 5		Killed by a slide of coal at strippings. Outside.
23	Andrew Wilcofsky	Polish	Miner	28	M	1	2	West Shenandoah		Killed by fall of coal.
29	Edward Allen	English	Slate picker	16	S	1	1	Hammond		Killed; caught in rope wheel. Outside.
May 11	Joseph Partius	Lithuanian	Miner	28	S	1	1	Shenandoah City		Killed by explosion of powder.
11	John Vilvansky	Lithuanian	Laborer	31	M	1	1	Shenandoah City	Schuylkill	Fatally injured by explosion of powder. Died May 12.
13	William Brennan	American	Door boy	18	S	1	1	Draper		Killed by falling down shaft.
June 2	John Price	American	Driver	21	S	1	1	Packer No. 5		Killed; ran over by car.
8	Simon Gerousky	Greek	Laborer	33	M	1	1	West Shenandoah		Killed by fall of coal.
21	Lewis Idocavage	Lithuanian	Miner	26	S	1	1	Draper		Killed by a blast; cause unknown.
29	John Covalock	Polish	Miner	28	M	1	1	West Shenandoah		Fatally injured by a blast. Died July 1.
Aug. 11	John Gibson	Lithuanian	Dumppman	38	M	1	4	West Shenandoah		Fatally injured. He was riding on the dumper and was thrown down the bank. Died May 14. Outside.
19	August Tomattis	German	Miner	35	M	1	2	William Penn		Fatally injured; fell down manway.
21	Dommiok Sokaski	Russian	Miner	32	M	1	1	Turkey Run		Fatally burned by powder.
29	Edward Coughlin	American	Machinist	42	M	1	1	William Penn		Killed; tripped fell on him. Outside.
Oct. 5	William Wink	American	Laborer	17	S	1	1	West		Killed; caught in rope wheel. Outside.
19	Simon Cordick	Lithuanian	Miner	45	M	1	1	West Shenandoah		Killed by fall of coal.
Dec. 1	Mike Sracalski	Polish	Miner	29	M	1	5	Turkey Run		Killed by fall of coal.
23	Pierce Botobus	Lithuanian	Laborer	22	S	1	1	Packer No. 5		Killed by fall of coal.
29	Alex Punsavage	Russian	Miner	23	S	1	1	Packer No. 5		Fatally injured; squeezed between cars and props.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 4	Alex Trevensky, .....	Russian, .....	Loader, .....	35	M.	Cambridge, .....		Leg broken. A piece of rock rolled against him.
25	Edward Rice, .....	Lithuanian, .....	Miner, .....	26	S.	Hammond, .....		Back sprained and bruised by fall of coal.
30	Steve Bulick, .....	Polish, .....	Loader, .....	36	M.	West Shenandoah, .....		Knee dislocated. Fell off car.
Feb. 6	Mike Patchenus, .....	Lithuanian, .....	Miner, .....	39	M.	Kohinoor, .....		Knee cap knocked off. Slipped off a piece of coal.
13	Peter Breshuf, .....	Italian, .....	Laborer, .....	28	S.	Bast, .....		Severely injured. Rock rolled on him. Outside.
17	Randell Reese, .....	Welsh, .....	Miner, .....	25	S.	Shenandoah City, ..		Head and hands burned by explosion of gas.
17	John Reese, .....	Welsh, .....	Miner, .....	40	M.	Shenandoah City, ..		Head and hands burned by explosion of gas.
March 9	George Culminskle, .....	Lithuanian, .....	Miner, .....	25	M.	Draper, .....		Hand blown off by dynamite.
13	Frank Houpes, .....	English, .....	Bottom man, .....	44	M.	Hammond, .....		Hand cut off. Run over by cars.
15	John Hummer, .....	Polish, .....	State picker, .....	14	S.	Brighton washery, ..		Head injured; fell off platform. Outside.
23	William Ruppie, .....	Polish, .....	Miner, .....	27	M.	Turkey Run, .....	Schuykill, .....	Head cut and squeezed about body by fall of coal.
April 15	George Drogalls, .....	Russian, .....	Miner, .....	48	M.	Packer No. 4, .....		Slightly burned by gas.
8	William McDonald, .....	American, .....	Loader, .....	18	S.	Cambridge, .....		Leg cut off while uncoupling cars.
13	Anthony Gusdon, .....	American, .....	Miner, .....	33	M.	Cambridge, .....		Leg fractured. Leg fell on him.
17	James Carigan, .....	Irish, .....	Miner, .....	26	M.	Hammond, .....		Face and eyes cut by premature blast.
24	Joseph Gulinisky, .....	Lithuanian, .....	Miner, .....	26	M.	Packer No. 1, .....		Burned by gas.
27	Harry McCarty, .....	Irish, .....	Miner, .....	46	M.	Kebley Run, .....		Leg fractured; leg fell on him.
May 2	John Dopton, .....	Lithuanian, .....	Miner, .....	29	S.	Kohinoor, .....		Leg and arm fractured by fall of coal.
10	Martin Martinolis, .....	Lithuanian, .....	Miner, .....	26	S.	William Penn, .....		Leg fractured while descending shaft.
10	William Clinsavage, .....	Lithuanian, .....	Miner, .....	40	M.	Draper, .....		Face and hands burned by explosion of gas.
23	George Kuchemsky, .....	Lithuanian, .....	Miner, .....	34	M.	William Penn, .....	Schuykill, .....	Severely burned by explosion of gas.
23	George Mitzkas, .....	Lithuanian, .....	Miner, .....	24	S.	William Penn, .....		Hip dislocated by fall of coal.
23	Matt Synkewicz, .....	Lithuanian, .....	Laborer, .....	25	S.	William Penn, .....		Hand blown off by dynamite.
31	Frank Schultz, .....	Polish, .....	Miner, .....	35	M.	Packer No. 5, .....		Bruised about body and hand cut by premature blast.
June 5	George Segentus, .....	Polish, .....	Miner, .....	47	M.	Packer No. 4, .....		Leg fractured by coal rolling on it.
12	Joseph Normus, .....	Polish, .....	Miner, .....	50	M.	Packer No. 4, .....		Leg cut off. Bumped by cars.
July 13	Charles Breglitz, .....	Lithuanian, .....	Laborer, .....	31	S.	Packer No. 3, .....		Collar bone broken. Fell down chute. Outside.
13	John Osuaid, .....	German, .....	Driver, .....	18	S.	Bast, .....		
13	Cornelius Daniel, .....	American, .....	Carpenter, .....	58	M.	Gilberton, .....		

Month	No.	Name	Nativity	Occupation	Age	Loco. helper,...	S. Packer No. 4, ....	Description of Injury
July	21	Martin Coyle, .....	American,.....	Loco. helper,...	25	S. Bast, .....	Collar bone broken. Was caught between	
	28	Thomas Lidicote, .....	German,.....	Slate picker,...	35	M. Bast, .....	lokte and wall. Outside.	
Aug.	3	Joseph O'Neil, .....	American,.....	Driver, .....	22	M. Draper, .....	Leg broken by collar falling on him.	
	22	Andrew Nowitsky, .....	Polish,.....	Miner, .....	26	M. William Penn,....	Compound fracture of arm. Fell off log	
Sept.	24	Peter Bendick, .....	Lithuanian,.....	Miner, .....	30	M. William Penn,....	in breaker. Outside.	
	24	Jacob Bendick, .....	Lithuanian,.....	Miner, .....	38	M. William Penn,....	Face and hands burned by gas.	
Oct.	3	Anth. Brasitus, .....	Polish,.....	Miner, .....	33	M. Packer No. 5, ....	Face and hands burned by gas.	
	13	Joseph Suctius, .....	Lithuanian,.....	Miner, .....	29	S. Kohinoor, .....	Ribs broken. Squeezed between car and	
Nov.	16	Joseph N. Savage, .....	American,.....	Slate picker,...	14	S. West Shenandoah,	rib.	
	18	John Gomey, .....	American,.....	Spragger, .....	17	S. William Penn, ....	Severely wounded inside by premature	
Dec.	6	John Casey, .....	American,.....	Repairman, ...	28	M. Bast, .....	blast.	
	6	Joseph Boschle, .....	American,.....	Repairman, ...	38	M. Bast, .....	Finger cut off by circular saw. Outside.	
Jan.	7	Joseph Fox, .....	American,.....	Civil engineer,.	18	S. Packer No. 4, ....	Bruised back by rock falling off dumper.	
	14	Michael Goff .....	Irish,.....	Repairman, ...	38	M. Bear Ridge, .....	Severely injured around body by fall of	
Feb.	23	Stephen Pavolko, .....	Austrian,.....	Driver, .....	27	M. William Penn, ...	slate.	
	29	Richard Lloyd, .....	American,.....	Fan boy, .....	17	S. William Penn, ...	Leg fractured. He was cutting out timber	
Mar.	29	Thomas Dominitus, .....	Lithuanian,.....	Miner, .....	45	M. Packer No. 4, ....	and it fell on him.	
	30	Simon Karousky, .....	Russian,.....	Miner, .....	25	S. Shenandoah City,	Back and head injured by premature	
Apr.	11	Joseph Ovlges, .....	Lithuanian,.....	Miner, .....	24	S. Draper, .....	blast.	
	13	Michael Austruskie, .....	Russian,.....	Miner, .....	38	M. Packer No. 4, ....	Hip dislocated and otherwise injured. He	
May	13	Mike Buscavage, .....	Lithuanian,.....	Miner, .....	26	S. Kohinoor, .....	was caught in rope wheel. Outside.	
	18	Thomas Riley, .....	Irish,.....	Driver, .....	19	S. Hammond, .....	Wrist broken. He slipped and fell. Out-	
June	27	Edward Barrett, .....	Irish,.....	Topman, .....	24	S. Ghard Mammoth,	side.	
	6	John Casey, .....	American,.....	Repairman, ...	28	M. Bast, .....	Leg broken. Bumped between cars.	
July	6	Joseph Boschle, .....	American,.....	Repairman, ...	38	M. Bast, .....	Ribs broken. Fell from top of car.	
	7	Joseph Fox, .....	American,.....	Civil engineer,.	18	S. Packer No. 4, ....	Hand crushed under car.	
Aug.	14	Michael Goff .....	Irish,.....	Repairman, ...	38	M. Bear Ridge, .....	Slightly burned by gas.	
	23	Stephen Pavolko, .....	Austrian,.....	Driver, .....	27	M. William Penn, ...	Shoulder blade broken by fall of slate.	
Sept.	29	Richard Lloyd, .....	American,.....	Fan boy, .....	17	S. William Penn, ...	Hand crushed and broken by timbers.	
	29	Thomas Dominitus, .....	Lithuanian,.....	Miner, .....	45	M. Packer No. 4, ....	One leg cut off and the other badly	
Oct.	29	Thomas Dominitus, .....	Lithuanian,.....	Miner, .....	45	M. Packer No. 4, ....	crushed. Fell under car on plane. Out-	
	30	Simon Karousky, .....	Russian,.....	Miner, .....	25	S. Shenandoah City,	side.	
Nov.	11	Joseph Ovlges, .....	Lithuanian,.....	Miner, .....	24	S. Draper, .....	Rib broken. Scraper chain broke and	
	13	Michael Austruskie, .....	Russian,.....	Miner, .....	38	M. Packer No. 4, ....	struck him. Outside.	
Dec.	13	Mike Buscavage, .....	Lithuanian,.....	Miner, .....	26	S. Kohinoor, .....	Arm broken. Timber fell from car and	
	18	Thomas Riley, .....	Irish,.....	Driver, .....	19	S. Hammond, .....	struck him.	
Jan.	27	Edward Barrett, .....	Irish,.....	Topman, .....	24	S. Ghard Mammoth,	Arm broke off and collar bone broken.	
	6	John Casey, .....	American,.....	Repairman, ...	28	M. Bast, .....	him on bottom.	
Feb.	6	Joseph Boschle, .....	American,.....	Repairman, ...	38	M. Bast, .....	Finger and hand crushed by piece of	
	7	Joseph Fox, .....	American,.....	Civil engineer,.	18	S. Packer No. 4, ....	timber falling down slope.	
Mar.	14	Michael Goff .....	Irish,.....	Repairman, ...	38	M. Bear Ridge, .....	Fractured pelvis bone. Squeezed between	
	23	Stephen Pavolko, .....	Austrian,.....	Driver, .....	27	M. William Penn, ...	car and door frame.	
Apr.	29	Richard Lloyd, .....	American,.....	Fan boy, .....	17	S. William Penn, ...	Slightly burned by explosion of gas.	
	29	Thomas Dominitus, .....	Lithuanian,.....	Miner, .....	45	M. Packer No. 4, ....	Fractured pelvis bone. Crushed against	
May	29	Thomas Dominitus, .....	Lithuanian,.....	Miner, .....	45	M. Packer No. 4, ....	battery.	
	30	Simon Karousky, .....	Russian,.....	Miner, .....	25	S. Shenandoah City,		

Schuykill, ...

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof.

Packer No. 2, January 3, John Whalen, miner, was instantly killed by a fall of slate. He was dressing down top slate after firing, when a piece fell upon him. Unavoidable.

Packer No. 4, January 9, Patrick Donahue, laborer, was killed in West Buck gangway in third level, by a fall of rock. Unavoidable.

Buck Mountain Seam, Kohinoor, January 18, Daniel James, miner, was killed by a fall of coal.

Turkey Run Colliery, January 21, Thomas Miller, miner, was fatally injured by a fall of top rock. He died February 2 in the hospital.

West Shenandoah colliery, March 23, Andrew Whilcofsky, miner, was killed at East Bottom Split, by a fall of coal. He was robbing back. Cause was the lack of good mining experience.

West Shenandoah Colliery, June 8, Simon Gerousky, laborer, was killed by a fall of coal.

West Shenandoah Colliery, December 1, Simon Cordick, miner, was fatally injured by a fall of coal. He was in the act of barring down a large piece of loose coal when it fell and crushed him. He died in the Miners' Hospital December 3. Avoidable.

Turkey Run colliery, December 19, Mike Socaloski, miner, was instantly killed by a fall of rock. He and his butty were making room for a set of relief timber, when a heavy piece of rock crushed down the surrounding timber, and caught him under the fall. Unavoidable.

East Mammoth No. 3 counter, Packer No. 5, December 23, Pierce Rototus, laborer, was caught under a fall of coal on the night shift. He was fastened by timber in such a manner as to be almost uninjured. The rescuers could talk to him until 7 o'clock in the morning when they were close enough to take him by the hand. Another rush of coal came, driving the rescuers back, and smothered him. Unavoidable.

## Mine Cars

Packer No. 5, June 2, John Price, driver, was killed by car running over him.

Packer No. 5, December 29, Alex Dunsavage, miner, was fatally injured by being squeezed between cars. He was standing outside the loaded trip of cars, and it is supposed he attempted to jump on what he thought was the last car as the trip passed, but there was another car behind that caught him. He died at Miners' Hospital, at Fountain Springs on the 31st. Carelessness.

## Explosions of Gas

Shenandoah City colliery, February 17, John Shebo, miner, was fatally injured by explosion of gas and died on the 26th in the hospital.

## Explosions of Powder and Dynamite

Shenandoah City colliery, May 11, Joseph Patritus, miner, was killed by an explosion of powder.

Shenandoah City colliery, May 11, John Vlivansky, laborer, was fatally injured by an explosion of powder, and died on the 12th.

Turkey Run colliery, August 21, Donnick Sokaski, miner, was fatally burned while filling a cartridge, with a lamp on his head, the cartridge exploded. He died from his injuries. Carelessness.

#### Premature Blasts

Draper colliery, June 21, Lewis Idocavage, miner, was killed by a blast. The cause is unknown.

West Shenandoah colliery, June 29, John Covalock, miner, was fatally injured. He tamped a tophole, and put in a squib, and was in the act of tamping a bottom hole, when his lamp came in contact with the squib in the upper hole. He died July 1. Carelessness.

#### Falling into Shafts, Slopes, Etc.

Gilberton colliery, May 13, William Brennan, doorboy, was killed. A wreck had taken place on the slope at Draper colliery and he with some others walked through the basin tunnel connecting Draper and Gilberton collieries. They got to the 4th level of the shaft, and Brennan was in the act of signaling the engineer when he fell down the shaft.

William Penn colliery, August 19, August Tomaitis, miner, was fatally injured. He fell down the manway and died on the 20th.

#### Miscellaneous

Kohinoor, February 6, Daniel Britton, laborer, was struck by a scraper handle. He was passing behind one of the firemen who was cleaning the fire, and as he pulled back the scraper, the handle struck Britton in the abdomen. He died on the 8th.

Packer No. 5, February 20, Darby Howe, miner, was killed by a slide of coal at strippings.

William Penn colliery, August 29, Edward Coughlin, machinist, was killed. He had raised a piece of machinery, with a block and tackle, and was in the act of backing a wagon underneath, when the wagon struck the tripod which collapsed and fell on him, killing him instantly.

#### Cars, Outside

Bear Ridge colliery, February 15, David Evans, driver, was fatally injured. He was squeezed between cars and cribbing. He died on the 18th. Carelessness.

West Shenandoah colliery, August 11, John Gibson, dumpman, was fatally injured. He was riding on a bumper to tip of dirt bank, and was thrown over the dumper. He died on the 14th.

#### Machinery, Outside

Gilberton colliery, February 8, Roman Wassel, jig runner, was instantly killed. He was caught in a screen pinion in breaker. He was away from his regular place of work, and had no business to be where accident occurred.



Hammond colliery, March 29, Edward Allen, slatepicker, was killed. Some breaker machinery broke down, and he left his place of work and stood on a platform above the breaker engine, looking at the breaker engineer as he started the engine. When he started to return to his place of work he was caught by a rope and was taken around a wheel. Breaker machinery well fenced in. Avoidable.

Bast colliery, October 5, William Wink, laborer, was caught in the rope wheel. His duty was to oil the machinery at noon hour, but he was seen with the oil can 20 minutes before noon. He approached the sheave wheel from the wrong side. It would have been impossible to fall into the wheel had he been on the proper side. The accident was caused by carelessness.

## CONDITION OF COLLIERIES

### PHILADELPHIA AND READING COAL AND IRON COMPANY

Girard Mammoth.—Ventilation fair, drainage fair, condition as to safety fair.

Bast.—Ventilation good, drainage good, condition as to safety fair.

Hammond.—Ventilation good, drainage good, condition as to safety fair.

Shenandoah City.—Ventilation good, drainage good, condition as to safety good.

Kohinoor.—Ventilation good, drainage good, condition as to safety good.

West Shenandoah.—Ventilation fair, drainage fair, condition as to safety good.

Turkey Run.—Ventilation fair, drainage fair, condition as to safety fair.

Bear Ridge.—Ventilation good, drainage good, condition as to safety fair.

Gilberton.—Ventilation fair, drainage good, condition as to safety good.

Draper.—Ventilation good, drainage good, condition as to safety good.

Packer No. 2.—Ventilation fair, drainage good, condition as to safety good.

Packer No. 3.—Ventilation fair, drainage good, condition as to safety good.

Packer No. 4.—Ventilation good, drainage fair, condition as to safety good.

Packer No. 5.—Ventilation good, drainage good, condition as to safety fair.

### SUSQUEHANNA COAL COMPANY

William Penn.—Ventilation fair, drainage fair, condition as to safety good.

### THOMAS COLLIERY COMPANY

Kehley Run.—Ventilation good, drainage bad, condition as to safety good.

### CAMBRIDGE COAL COMPANY

Cambridge.—Ventilation fair, drainage fair, condition as to safety good.



## GERBER AND SEAMAN

Furnace.—Ventilation fair, drainage fair, condition as to safety fair.

## IMPROVEMENTS

A great many improvements have been made in this district by all the companies during the year, both inside and outside, but not having complete reports, I can not give details.

## Mine Foremen's Examinations

The examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in Shenandoah in May. The board of examiners was William Stein, Mine Inspector; William Anman, Superintendent and Geo. H. Young and Joseph Corby, miners. The following is a list of the successful applicants:

## Mine Foremen

M. J. McLaughlin, Isaac M. Adams, Idris Davis, Newton Fritz, August Hess, John O'Brien, Thomas Maley, Henry Whittington, Peter McHale, John Herrity, P. J. Houston.

## Assistant Mine Foremen

Edward J. Roberts, Thomas Durkin.



# Eleventh District

SCHUYLKILL COUNTY

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Mahanoy City, Pa., February 22, 1906.

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

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Eleventh Anthracite District, for the year 1905.

The tables contain the statistics relative to production, number of employes, days worked, accidents, etc. The condition of the collieries is also reported.

Respectfully submitted,

P. C. FENTON,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	14
Number of mines, .....	18
Number of mines in operation, .....	18
Number of tons of coal shipped to market, .....	3,645,097
Number of tons used at mines for steam and heat, .....	482,133
Number of tons sold to local trade and used by employes, .....	55,236
Number of tons produced, .....	4,182,466
Number of persons employed inside of mines, .....	7,148
Number of persons employed outside, .....	3,643
Number of fatal accidents inside of mines, .....	47
Number of fatal accidents outside, .....	3
Number of non-fatal accidents inside of mines, .....	54
Number of non-fatal accidents outside, .....	4
Number of tons of coal produced per fatal accident inside, .....	88,989
Number of persons employed per fatal accident inside, .....	152
Number of persons employed per fatal accident outside, .....	1,214
Number of persons employed per non-fatal accident inside, .....	132
Number of persons employed per non-fatal accident outside, .....	911
Number of wives made widows, .....	11
Number of children orphaned, .....	41
Number of steam locomotives used inside of mines, .....	1
Number of steam locomotives used outside, .....	15
Number of compressed air locomotives used inside, .....	15
Number of electric motors used inside, .....	3
Number of fans in use, .....	21
Number of gaseous mines in operation, .....	18

## TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company, . . . . .	3,450,915
Lentz and Company, . . . . .	405,339
Lehigh Valley Coal Company, . . . . .	236,653
Silver Brook Coal Company, . . . . .	80,995
Crystal Run Coal Company, . . . . .	8,564
Total, . . . . .	<u>4,182,466</u>

## Production by Counties

Schuylkill, . . . . .	<u>4,182,466</u>
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TABLE E.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	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	per fatal accident		per non-fatal accident					
	Inside	Outside	Total	Inside	Outside	Total						Number of employees inside	Number of employees outside	Number of employees inside	Number of employees outside	Number of employees inside	Number of employees outside	Number of employees inside	Number of employees outside
Philadelphia and Reading Coal and Iron Co.,	38	3	41	38	3	41	50,813	5,898	3,055	8,963	355	1,022	155	1,022					
Lentz and Co.,	4	4	8	6	6	12	67,557	661	232	893	165	110	110	110					
Lehigh Valley Coal Co.,	4	4	8	7	7	14	54,162	370	149	519	92	53	53	53					
Silver Brook Coal Co.,	1	1	2	3	1	4	26,995	163	140	312	163	54	54	119					
Crystal Run Coal Co.,	1	1	2	3	1	4	26,995	56	48	104	56	104	56	104					
Totals and averages for district, .....	47	3	50	54	4	58	88,980	7,148	3,643	10,791	152	1,214	182	911					



TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Total
Falls of coal, .....	1	1	1	1	3	1	1	1	2	1	1	1	11	23.40
Falls of slate, .....	1	1	1	1	1	1	1	1	1	1	1	1	4	8.51
Falls of roof, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	2.13
Mine cars, .....	1	1	1	1	1	1	1	1	1	1	1	1	10	21.28
Explosions of gas and dust, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	10.64
Explosions of powder and dynamite, .....	1	1	1	1	1	1	1	1	1	1	1	1	3	6.38
Premature blasts, .....	1	1	1	1	1	1	1	1	1	1	1	1	3	17.02
Falling into shafts, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	2.12
Falling into slopes, etc., .....	1	1	1	1	1	1	1	1	1	1	1	1	2	4.26
Crushed at batteries, .....	1	1	1	1	1	1	1	1	1	1	1	1	2	4.26
Totals, .....	5	4	4	5	6	3	1	1	11	3	1	6	47	100
Causes of Accidents Outside														
Cars, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	33.33
Machinery, .....	1	1	1	1	1	1	1	1	1	1	1	1	2	67.67
Totals, .....	2	2	2	2	2	2	2	2	2	2	2	2	3	100
Grand totals inside and outside, .....	5	4	4	5	6	3	1	1	11	3	1	6	50	.....

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Total
Falls of coal, .....	1	1	1	1	1	1	1	1	1	1	1	1	13	24.08
Falls of slate, .....	1	1	1	1	1	1	1	1	1	1	1	1	2	3.71
Falls of roof, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1.85
Mine cars, .....	2	2	2	2	2	2	2	2	2	2	2	2	11	20.37
Explosions of gas and dust, .....	1	1	1	1	1	1	1	1	1	1	1	1	6	11.11
Explosions of powder and dynamite, .....	1	1	1	1	1	1	1	1	1	1	1	1	12	22.22
Premature blasts, .....	1	1	1	1	1	1	1	1	1	1	1	1	4	7.41
Falling into slopes, etc., .....	1	1	1	1	1	1	1	1	1	1	1	1	2	3.70
Crushed at batteries, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1.85
Machinery, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1.85
Miscellaneous, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1.85
Totals, .....	2	2	4	5	5	5	5	2	10	5	3	6	54	100
Causes of Accidents Outside														
Cars, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	25.00
Machinery, .....	1	1	1	1	1	1	1	1	1	1	1	1	2	50.00
Miscellaneous, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	25.00
Totals, .....	1	1	1	1	1	1	1	1	1	1	1	1	4	100
Grand totals inside and outside, .....	3	2	5	5	5	6	5	2	10	5	3	7	58	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Total
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....	2	1	2	2	4	2	1	1	2	3	1	4	25
Miners' laborers, .....	2	1	1	1	2	2	1	1	2	1	1	1	13
Drivers and runners, .....	1	1	1	1	1	1	1	1	1	1	1	1	4
Company men, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
All other employes, .....	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....	5	2	4	5	6	2	1	1	11	3	1	6	47
Outside													
All other employes, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Totals, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Grand totals inside and outside, .....	5	4	4	5	6	3	1	1	11	3	1	6	50

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Total
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Fire bosses and assistants, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Miners, .....	2	2	4	3	2	2	4	1	2	1	3	1	23
Miners' laborers, .....	2	1	1	1	1	1	1	1	1	1	1	1	11
Drivers and runners, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Doorboys and helpers, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Company men, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
All other employes, .....	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....	2	2	4	5	5	5	5	2	10	5	3	6	54
Outside													
Slatepickers (boys), .....	1	1	1	1	1	1	1	1	1	1	1	1	1
All other employes, .....	1	1	1	1	1	1	1	1	1	1	1	1	3
Totals, .....	1	1	1	1	1	1	1	1	1	1	1	1	4
Grand totals inside and outside, .....	3	3	5	5	5	6	5	2	10	6	4	7	58

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Total
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	1				1	1		2				6
English, .....									1				1
Irish, .....				2									2
German, .....								1	1				2
Polish, .....	3	2	2		5	1		1	3	1	1	1	20
Hungarian, .....	1		1										2
Italian, .....						1						1	2
Lithuanian, .....	1	1		3	1				4	2		4	16
Totals, .....	5	4	4	5	6	3	1	1	11	3	1	6	50

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Total
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....			1				1	1	2	1		1	7
Welsh, .....				1					1			1	3
Scotch, .....									1	1			2
Polish, .....	3		4	1	4	2	4	1	4	3	1		27
Hungarian, .....						2							2
Italian, .....									1				1
Lithuanian, .....		2		2	1	2			2		2	2	13
Totals, .....	3	2	5	5	5	6	5	2	10	5	3	7	58

TABLE I.—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 person 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 out-let	Number of persons employed inside	Average number of cubic feet per minute provided for each person
<b>Philadelphia and Reading Coal and Iron Co.</b>																
Knickerocker, .....	Slope, ..	Gaseous, ..	Fan, .....	18	6.6	6	95	1	Guibal, ...	Steam, ..	10	62,656	54,047	65,605	180	415
Kilgobbin, .....	Shaft, ..	Gaseous, ..	Fan, .....	20	6.6	6	80	2	Guibal, ...	Steam, ..	8	21,016	21,248	29,831	189	238
Ellingwood, .....	Slope, ..	Gaseous, ..	Fan, .....	15	5.6	4.4	70	1	Guibal, ...	Steam, ..	2	63,202	55,625	74,147	183	380
Maple Hill, .....	Shaft, ..	Gaseous, ..	Fan, .....	21	7	6.6	95	2	Guibal, ...	Steam, ..	6	87,481	59,868	60,650	291	265
Maple Hill, .....	Shaft, ..	Gaseous, ..	Fan, .....	21	7	6.6	95	1.5	Guibal, ...	Steam, ..	6	81,223	60,165	64,783	278	292
Suffolk, .....	Slope, ..	Gaseous, ..	Fan, .....	18	6.6	6.6	95	1	Guibal, ...	Steam, ..	6	46,150	22,370	51,070	110	203
Suffolk, .....	Slope, ..	Gaseous, ..	Fan, .....	18	6.6	6.6	55	1.1	Guibal, ...	Steam, ..	6	35,000	22,250	38,700	110	203
St. Nicholas, .....	Slope, ..	Gaseous, ..	Fan, .....	21	7	5.6	65	1.3	Guibal, ...	Steam, ..	6	49,170	48,670	57,000	144	337
Boston Run, .....	Slope, ..	Gaseous, ..	Fan, .....	21	7	6.6	65	1	Guibal, ...	Steam, ..	10	81,250	67,270	93,470	135	342
Tunnel Ridge, .....	Slope, ..	Gaseous, ..	Fan, .....	21	7	6.3	65	1	Whirling, ..	Steam, ..	6	121,223	100,000	125,000	312	320
Mahoney City, .....	Slope, ..	Gaseous, ..	Fan, .....	21	7	6.6	65	1	Guibal, ...	Steam, ..	8	112,500	40,140	119,000	189	212
North Mahanoy, .....	Slope, ..	Gaseous, ..	Fan, .....	21	7.6	6.3	80	2.1	Guibal, ...	Steam, ..	6	127,850	120,620	130,200	375	321
Indian Ridge, .....	Shaft, ..	Gaseous, ..	Fan, .....	18	6	4.6	65	1.5	Guibal, ...	Steam, ..	11	148,450	120,000	155,900	234	359
Indian Ridge, .....	Shaft, ..	Gaseous, ..	Fan, .....	18	6	4.6	60	1.1	Guibal, ...	Steam, ..	9					
<b>Lentz and Co.</b>																
Park Place, .....	Slope, ..	Gaseous, ..	Fan, .....	16	4	4.6	80	2	Guibal, .....	Steam, ..	6	100,000	90,000	150,000	213	422
Park Place, .....	Slope, ..	Gaseous, ..	Fan, .....	15	4	4	70	1	Guibal, .....	Steam, ..	4	55,400	43,000	57,000	210	215
<b>Lehigh Valley Coal Co.</b>																
Petrimose, .....	Slope, ..	Gaseous, ..	Fan, .....	16	4	4.6	90	1.4	Guibal, .....	Steam, ..	5	46,000	41,200	48,000	166	248
Primrose, .....	Slope, ..	Gaseous, ..	Fan, .....	10	3.6	4.3	110	1	Guibal, .....	Steam, ..	6	55,000	48,000	58,000	106	452
<b>Silver Brook Coal Co.</b>																
Silver Brook, .....	Slope, ..	Gaseous, ..	Fan, .....	18	5	8	60	2	Guibal, .....	Steam, ..	4	30,000	12,000	31,000	50	240
Silver Brook, .....	Slope, ..	Gaseous, ..	Fan, .....	14	4	7	55	2	Guibal, .....	Steam, ..	2					
<b>Crystal Run Coal Co.</b>																
Broad Mountain, .....	Slope, ..	Gaseous, ..	Fan, .....	16	4.6	4.6	65	5.10	Guibal, .....	Steam, ..	2	21,500	20,500	23,500	56	366

TABLE I.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.	Schuylkill	William J. Richards	Pottsville	Reese Tasker	Pottsville	P. and R.
Kulkebocker	Schuylkill	Edward Reese	Mahanoy City	James Reese	Park Place	Lehigh Valley
Ellangowan	Schuylkill	S. D. Warriner	Wilkes-Barre	Thomas Thomas	Hazleton	Lehigh Valley
Maple Hill	Schuylkill	John L. Wentz	1100 Girard Trust Building, Phila.	William Wragg	Silver Brook	Lehigh Valley
Suffolk	Schuylkill	Wm. E. Jones	Philadelphia	Wm. E. Jones	Frackville	P. and R.
St. Nicholas	Schuylkill	Leutz and Co.				
Boston Run	Schuylkill					
Thomas Run	Schuylkill					
Mahanoy City	Schuylkill					
North Mahanoy	Schuylkill					
Indian Ridge	Schuylkill					
Leutz and Co.	Schuylkill					
Park Place	Schuylkill					
Lehigh Valley Coal Co.	Schuylkill					
Primrose	Schuylkill					
Silver Brook Coal Co.	Schuylkill					
Silver Brook	Schuylkill					
Crystal Run Coal Co.	Schuylkill					
Broad Mountain	Schuylkill					

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Totals are averages, 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	Number of persons killed and injured, quantity of powder and dynamite used, etc.	
													Number killed	Quantity of powder and dynamite used, etc.
Philadelphia and Reading Coal and Iron Co.		133,137	32,489	1,170	172,706	243	634	.....	5	2,501	34,823	48	.....	.....
Knickerbocker, .....		394,685	40,339	521	432,145	249	1,278	5	7	19,389	62,054	99	.....	.....
Ellangowan, .....		658,111	35,927	.....	692,038	278	1,518	10	12	24,791	62,053	91	.....	.....
Maple Hill, .....		370,438	21,983	1,224	392,421	276	868	2	2	3,751	28,406	88	.....	.....
Suffolk, .....		345,106	35,051	389	380,157	279	863	2	2	3,757	69,406	73	.....	.....
St. Nicholas, .....		145,912	54,492	20	190,404	263	296	2	1	2,427	62,437	21	.....	.....
Boston Run, .....		235,526	63,133	.....	298,659	274	752	6	2	5,624	23,530	61	.....	.....
Tunnel Ridge, .....		296,476	43,754	23,417	340,190	274	752	6	2	5,624	23,530	74	.....	.....
Mahoney City, .....		352,531	43,753	2,333	396,284	235	947	4	2	6,579	45,779	92	.....	.....
North Mahanoy, .....		173,832	22,688	10,663	206,521	115	557	4	1	4,842	6,038	74	.....	.....
Indian Ridge, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....		3,014,004	387,179	49,732	3,450,915	248	8,963	41	41	79,106	425,865	722	.....	.....
Park Place, .....	Lentz and Co.	374,031	29,542	1,716	405,339	260	893	4	6	10,323	39,750	103	.....	.....
Primrose, .....	Lehigh Valley Coal Co.	199,863	34,412	2,378	236,653	192	519	4	7	5,675	19,367	44	.....	.....
Silver Brook, .....	Silver Brook Coal Co.	54,610	25,000	1,385	80,995	171	312	1	4	1,099	6,500	32	.....	.....
Broad Mountain, .....	Crystal Run Coal Co.	2,539	6,000	25	8,564	21	104	.....	.....	50	2,500	18	.....	.....
Grand totals, .....		3,615,097	482,133	55,236	4,132,466	178	10,791	50	58	96,253	493,982	919	.....	.....



TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Totals are averages, 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,.....	3,014,064	587,179	49,722	3,470,515	248	8,963	41	41	75,106	425,865	722
Lenz and Co., .....		374,081	23,542	1,716	406,339	260	883	4	6	10,323	33,750	103
Lehigh Valley Coal Co., .....		199,863	34,412	2,378	236,653	192	519	4	7	5,075	19,367	44
Silver Brook Coal Co., .....		54,510	25,000	1,385	80,595	171	312	1	4	1,099	6,500	32
Crystal Run Coal Co., .....		2,539	6,000	25	8,564	21	104	.....	.....	50	2,500	13
Totals, .....	.....	3,615,097	482,133	55,226	4,152,466	178	10,791	50	58	99,253	492,582	919

TABLE 2.—PART 2.

Names of Operators	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	Steam	Air							
Philadelphia and Reading Coal and Iron Co.	Schuylkill	12	309	160	20,800	21,100	11	15	171	29,133	31	47,246	24,550	.....	11
Lentz and Co.		.....	.....	13	3,250	3,250	2	.....	32	1,910	3	4,800	1,440	.....	.....
Lehigh Valley Coal Co.		.....	.....	10	1,500	1,500	1	.....	18	1,300	3	1,340	.....	.....	.....
Silver Brook Coal Co.		.....	.....	.....	1,800	1,800	1	.....	10	600	4	3,250	2,000	.....	2
Crystal Run Coal Co.		.....	.....	8	920	1,920	1	.....	15	760	2	180	400	.....	.....
Totals.	.....	12	309	203	28,270	28,570	16	15	247	34,033	41	57,516	28,390	.....	1



TABLE 3.—Recapitulation

Names of Operators	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)		State pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.	Schuylkill, ...	11	5	68	2,117	1,562	412	90	24	525	1,051	5,898	16	79	272	1,038	171	38	5	63	1,440	3,065	8,963
Lentz and Co., .....		2	2	8	260	230	44	6	11	69	29	661	1	28	35	13	85	5	5	63	1,440	3,065	8,963
Lehigh Valley Coal Co., .....		1	1	3	160	65	28	3	4	.....	106	370	1	10	16	25	7	10	2	87	1,440	3,065	8,963
Silver Brook Coal Co., .....		1	1	1	70	30	18	3	12	28	.....	163	1	6	22	40	18	2	2	58	1,440	3,065	8,963
Crystal Run Coal Co., .....		.....	.....	1	1	18	10	11	5	10	.....	56	1	5	6	8	6	6	1	20	1,440	3,065	8,963
Totals, .....	.....	15	12	80	2,625	1,897	513	102	56	622	1,216	7,148	4	21	352	1,145	277	48	48	1,668	3,643	10,791	



TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 11	Andrew Creechcock	Polish	Laborer	26	S.	.....	.....	Suffolk		Instantly killed by a fall of slate.
12	Matthew Wakecock	Polish	Miner	37	S.	.....	.....	Maple Hill		Instantly killed by trip of mine cars.
18	Joe Switayaw	Lithuanian	Laborer	23	S.	.....	.....	Indian Ridge		Instantly killed by a fall of coal.
19	Charles Musifsky	Polish	Miner	40	M.	1	3	North Mahanoy		Injured by premature blast. Died the same day.
20	Martin Patrisky	Hungarian	Laborer	30	S.	.....	.....	Mahanoy City		Instantly killed by fall of slate.
Feb. 7	Matthew Dolmskey	Lithuanian	Miner	33	M.	1	5	Maple Hill		Injured by premature blast. Died the same day.
8	George Wilkes	Polish	Laborer	20	S.	.....	.....	St. Nicholas		Instantly killed by a P. and K. Railway car. Outside.
17	Matthew Cooper	American	Laborer	20	S.	.....	.....	Mahanoy City		Injured by being caught in rope wheel. Died the same day. Outside.
25	Alexander Mayufskie	Polish	Driver	23	S.	.....	.....	Ellangowan		Instantly killed by being caught between mine cars.
March 8	Steve Tallo	Polish	Miner	27	S.	.....	.....	Mahanoy City	Schuylkill	Injured by fall of coal March 8. His injuries were considered trifling and the accident was not reported to the Mine Inspector until the next day. The man died at the State Hospital, April 27.
10	Fred Becker	American	Bottom man	20	S.	.....	.....	North Mahanoy		Instantly killed by being caught between mine cars.
11	Joseph Pawskis	Polish	Miner	40	S.	.....	.....	Park Place		Burned by gas. Died at State Hospital March 23.
22	George Shilwskie	Hungarian	Miner	45	S.	.....	.....	Ellangowan		Injured by a fall of top slate. Died at State Hospital same day.
April 11	George Krlsnismy	Lithuanian	Miner	32	S.	.....	.....	St. Nicholas		Injured by fall of coal. Died at State Hospital April 14.
20	William Shaughnessy	Irish	Driver	23	S.	.....	.....	Maple Hill		Instantly killed by falling under a trip of cars.
21	Frank McCormick	Irish	Driver	22	M.	1	.....	Indian Ridge		Instantly killed by falling under a trip of cars.
27	Andrew Gorrnas	Lithuanian	Miner	20	M.	1	3	Maple Hill		Burned by gas. Died at State Hospital April 29.
27	Andrew Marcavage	Lithuanian	Miner	30	S.	.....	.....	Maple Hill		Burned by gas. Died at State Hospital April 29.





TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 12	George Reddy, .....	Polish, .....	Laborer, .....	26	S.	Maple Hill, .....		Leg injured by trip of mine cars.
13	Stincy Anulavage, .....	Polish, .....	Laborer, .....	23	S.	Maple Hill, .....		Head and body injured by mine cars.
17	Cassmore Budash, .....	Polish, .....	Laborer, .....	22	S.	Suffolk, .....		Arm broken. Caught between pulley and rope. Outside.
Feb. 7	Simon Askitus, .....	Lithuanian, .....	Miner, .....	38	M.	Maple Hill, .....		Leg broken by premature blast.
21	Peter Zebolish, .....	Lithuanian, .....	Miner, .....	40	M.	Park Place, .....		Injured on head and chest by piece of coal.
March 11	George Koberlittus, .....	Polish, .....	Miner, .....	37	S.	Park Place, .....		Burned by gas.
18	William Alfolf, .....	American, .....	Shatepicker, .....	15	S.	Mahanoy City, .....		Foot crushed by machinery. Outside.
23	John Levenavage, .....	Polish, .....	Miner, .....	50	M.	Knickerbocker, .....		Neck and head injured by falling down chute.
29	John Vinco, .....	Polish, .....	Miner, .....	31	M.	Maple Hill, .....		Injured by explosion of dynamite.
April 29	Frank Wasnietzki, .....	Polish, .....	Miner, .....	43	M.	Maple Hill, .....		Face injured by explosion of dynamite.
5	Thomas Powell, .....	Welsh, .....	Fire boss, .....	52	M.	Eliangowan, .....		Injured by compressed air pipe bursting.
6	John Tomala, .....	Lithuanian, .....	Miner, .....	37	M.	Maple Hill, .....		Leg injured by fall of coal.
19	Peter Gohber, .....	Lithuanian, .....	Miner, .....	37	S.	Maple Hill, .....		Leg injured by fall of coal.
25	Michael Stravinsky, .....	Lithuanian, .....	Bottom man, .....	34	S.	Knickerbocker, .....		Foot injured by mine car.
May 1	George Kuluniskie, .....	Polish, .....	Miner, .....	40	S.	Eliangowan, .....	Schuylkill,	Back injured by fall of coal.
10	George Brodrick, .....	Lithuanian, .....	Laborer, .....	28	S.	Park Place, .....		Leg and arm injured by fall of coal.
11	Frank Anaskavich, .....	Polish, .....	Timberman, .....	45	S.	Knickerbocker, .....		Hip squeezed by mine car and door frame.
11	Matt. Gearey, .....	Polish, .....	Miner, .....	39	M.	Maple Hill, .....		Face, chest and arms injured by premature blast.
June 11	Charles Danavoge, .....	Polish, .....	Miner, .....	35	S.	Eliangowan, .....		Leg broken by fall of slate.
13	Peter Budis, .....	Polish, .....	Fan boy, .....	17	S.	Suffolk, .....		Hip dislocated. Squeezed between two mine cars.
7	John Ostronskey, .....	Polish, .....	Miner, .....	36	S.	North Mahanoy, .....		Back injured by fall of coal.
8	Anthony Biazus, .....	Polish, .....	Laborer, .....	23	S.	St. Nicholas, .....		Leg injured. Caught between mine car and door frame.
July 17	Joe Gratt, .....	Hungarian, .....	Timberman, .....	35	S.	Maple Hill, .....		Back injured by mine car. Outside.
21	Andrew Petruskie, .....	Lithuanian, .....	Miner, .....	25	M.	Maple Hill, .....		Burned by an explosion of powder.
26	John Tenuas, .....	Lithuanian, .....	Laborer, .....	25	S.	Maple Hill, .....		Hand caught under mine car.
31	William Burke, .....	Polish, .....	Catcher, .....	17	S.	Silver Brook, .....		Hand caught under mine car.
12	Stanley Matulis, .....	Polish, .....	Miner, .....	32	S.	Tunnel Ridge, .....		Back injured by fall of coal.
22	John Brush, .....	Polish, .....	Miner, .....	45	M.	Mahanoy City, .....		Head and face injured by fall of slate.
			Laborer, .....	25	S.	Eliangowan, .....		Chest injured by fall of coal.

Month	No.	Name	Occupation	Nationality	Age	Residence	Location	Cause of Injury
July	22	Matt. Cusle, .....	Miner, .....	Polish, .....	30	Park Place, .....	Schuykill,	Head injured by fall of coal, knocking him down the manway.
Aug.	24	Joe Seick, .....	Miner, .....	American, .....	56	Mahanoy City, .....	Schuykill,	Burned by gas.
	24	John Kotkosky, .....	Driver, .....	Polish, .....	17	Knickerbocker, .....		Burned by an explosion of powder.
	29	Czariah Hughes, .....	Laborer, .....	American, .....	30	Indian Ridge, .....		Face and hands burned by gas.
	30	Charles Retch, .....	Miner, .....	Polish, .....	45	Mahanoy City, .....		Face and hands burned by gas.
Sept.	9	John Bork, .....	Miner, .....	Polish, .....	43	Mahanoy City, .....	Schuykill,.....	Face and hands burned by gas.
	12	Charlie Kech, .....	Laborer, .....	Polish, .....	22	Boston Run, .....		Burned by gas.
	16	Marlin Reeder, .....	Miner, .....	Lithuanian, .....	38	M. ....		
	16	Paul Powsner, .....	Laborer, .....	Lithuanian, .....	23	M. ....		
	16	Joseph Stoshitus, .....	Miner, .....	Italian, .....	27	M. ....		
	16	Thomas Serian, .....	Miner, .....	American, .....	41	M. ....		
	16	William Simmons, .....	Miner, .....	American, .....	25	S. ....		
	16	Charles Kates, .....	Miner, .....	American, .....	38	M. ....		
	16	John Lowe, .....	Miner, .....	Scotch, .....	43	M. ....		
	Oct.	2	William S. Deck, .....	Miner, .....	American, .....	43		S. ....
	4	Walter Capauskie, .....	Miner, .....	Polish, .....	53	M. ....	Schuykill,.....	Burned by explosion of powder.
	10	James Watson, .....	Fire boss, .....	Scotch, .....	53	M. ....		
	12	Joe Richofskite, .....	Miner, .....	Polish, .....	30	S. ....		Leg fractured by machinery.
	16	Mike Minuts, .....	Laborer, .....	Polish, .....	23	S. ....		Head and side injured by premature blast.
Nov.	3	John Harpell, .....	Miner, .....	Lithuanian, .....	36	M. ....	Schuykill,	Head and body injured by falling down manway.
	13	Charles Czaglis, .....	Miner, .....	Polish, .....	27	M. ....		Body injured by fall of rock.
	21	John Zurdinski, .....	Miner, .....	Lithuanian, .....	47	M. ....		Leg injured by fall of coal.
Dec.	7	Joe Pleakenis, .....	Miner, .....	Lithuanian, .....	32	S. ....	Schuykill,	Foot broken by fall of coal.
	7	Joe Chalk, .....	Ashman, .....	Italian, .....	20	S. ....		Leg broken by fall of coal.
	7	Joe Mitchell, .....	Laborer, .....	Lithuanian, .....	25	S. ....		Burned by explosion of gas.
	11	Paul Dugan, .....	Driver, .....	American, .....	18	S. ....		Soiled by darning down ashes under boiler outside.
	19	John Dellinsid, .....	Miner, .....	Lithuanian, .....	38	M. ....	Schuykill,	Injured by a beam squeezed between mine cars and platform.
	21	William Griffiths, .....	Leader boss, .....	Welsh, .....	30	M. ....		Leg broken by fall of coal.
	28	Joseph Phillips, .....	Miner, .....	Italian, .....	23	S. ....		Leg injured by mine car.

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

Indian Ridge, January 18, Joe Swityraw, laborer, was killed instantly while shoveling coal into sheet iron chute. A piece of coal fell on him.

Saint Nicholas, April 11, George Krisnisky, miner, was fatally injured. He was dressing down some loose coal in the gangway when a piece fell. He died April 14 at the State Hospital.

Mahanoy City, March 8th, Steve Tallow, miner, was fatally injured. He was dressing down some loose coal when a piece rolled on him, and he died at the State Hospital April 27.

Maple Hill, May 20, Michael Rudkofski, miner, was killed instantly. While dressing down some loose coal a piece fell on him.

Maple Hill, May 26, Stiney Bugdanvich, miner, was in the act of dressing down some loose coal when a piece fell, instantly killing him.

Ellangowan, May 31, Joe Dougert, was fatally injured. While in the act of dressing down some loose coal a piece fell on him. He died at the State Hospital June 1.

Mahanoy City, June 15, Tarter Romondo, laborer, was instantly killed. He was told to load a car with coal off the platform. He disobeyed orders and picked coal from the side when a piece fell on him.

Tunnel Ridge, October 6, Joe Shevnohis, miner, was killed instantly. While crossing the breast to see if his manway was open a fall of coal caught him.

Suffolk, October 11, Matthew Yokitis, miner, was in the act of dressing some loose coal when a piece fell, killing him instantly.

St. Nicholas, November 25, Stiney Sheva, miner, was caught by a fall of coal while timbering a heading and instantly killed.

Mahanoy City, December 4, Mike Sasarock, miner, was killed instantly. He had fired a blast the night before and was warned by his butty not to go under until he had dressed down the loose material, but he did not heed the warning and began mining under this loose coal and bone which fell on him.

Suffolk, January 11, Andrew Creahock, laborer, while in the act of firing a blast was caught by a fall of slate and instantly killed.

Mahanoy City, January 20, Martin Patrisky, laborer, was instantly killed. He and his miner were working in a breast when a fall of top slate caught him.

Ellangowan, March 22, George Shilwskie, miner, while working in a breast was caught by a fall of slate and died at State Hospital the same day.

North Mahanoy, May 5, Charles Rice, laborer, while loading a buggy of coal was caught by a fall of slate and instantly killed.

Ellangowan, October 12, Charles Gubliskey, miner, had fired a blast which discharged some props from supporting the roof and while making an examination it fell, killing him instantly.

## Cars

Maple Hill, January 12, Matt. Walehock, miner, was killed instantly. In going to work on the night shift with his two laborers was run over by a trip of mine cars. The locomotive making a flying shift at the time.

Ellangowan, February 25, Alexander Mayufskie, driver, was instantly killed. While cleaning the rail in front of car wheel the mule started and he was caught between the car and high side of gangway.

North Mahanoy, March 10, Fred Becker, bottom man, was killed instantly. He was in the act of uncoupling two mine cars while in motion and his head was caught.

Maple Hill, April 20, William Sbaughnessy, driver, fell under a trip of cars that was being pulled to the turn-out and was instantly killed.

Indian Ridge, April 21, Frank McCormick, driver, was caught between car and low side of gangway. He died the same day.

Indian Ridge, June 14, Jacob Boots, laborer, was instantly killed, while walking along the rope haulage road by being run over with a trip of cars.

Ellangowan, August 12, Simon Novitskie, miner, was instantly killed. He was walking down the slant having been told not to, when a trip of cars got off the track.

Indian Ridge, September 7, Anthony Posko, driver, was instantly killed by falling under car when in the act of jumping on the bumper.

Maple Hill, September 8, James Lockley, switchman, was fatally injured. The boy had forgotten to turn the switch, and he was caught between two trips on same track. He died the same day.

Park Place, December 16, John Shetoskie, laborer, was fatally injured. He was about to go home, having forgotten his oil can, when he jumped across between the moving cars and was caught between the car and platform. He died the same day.

St. Nicholas, February 8, George Wilkes, laborer, was instantly killed. He with others was pushing a P. & R. railroad car when he fell under.

## Explosions of Gas, Powder and Dynamite

Park Place, March 11, Joseph Pawskis, miner, was fatally injured. He was working with locked safety lamp, and picked the lock open, firing the gas. He died at the State Hospital, March 23.

Maple Hill, April 27, Andrew Gorronas and Andrew Marcavage, miners, were fatally injured. They went into an abandoned portion of the mine and fired the gas. They died at the State Hospital April 29.

Mahanoy City, July 24, Daniel Seick, miner, was fatally injured. He went up the breast with a naked lamp. His father at the same time was removing a small quantity of gas by fixing up canvas near the heading, and this gas the boy lit in the return airway. He died at the State Hospital July 30.

Boston Run, September 12, Mike Blesens, laborer, was fatally injured. He was told by the miner to load a car of coal at the chute. The miner had sent the fan boy home, stating that he would not need him that night and would not work in the chute, but he sent the



two laborers back to the chute to load and they fired the gas. Blescus died at the State Hospital September 18.

Primrose colliery, September 16, Salius Reeder, laborer, James Smith, miner, and Joseph Shedlofski, laborer, were fatally injured. They with others were taking their powder through the tunnel and one of the kegs came in contact with an electric wire, giving the man that had the keg a shock. He dropped the keg on the floor and it burst, and the powder was ignited by the lamp of one of the victims. Reeder died at State Hospital September 19, Smith died at home September 24, Shedlofskie died at the State Hospital September 26.

### Premature Blasts

North Mahanoy, January 19, Charles Musinskey, miner, was in the act of firing a blast and went back thinking the squib had missed. It went off, instantly killing him.

Maple Hill, February 7, Matt. Dolinskey, miner, was fatally injured. He was in a heading when the man in the next breast fired a blast, blowing through into the heading which they were in. He died the same day.

Maple Hill, May 11, John Solowak, laborer, was fatally injured. He and the miner were charging a hole with dynamite, using an iron drill for a tamping bar. He died the same day at State Hospital.

Park Place, September 11, John Adams, miner, was instantly killed while in the act of firing a blast he cut the match on the squib so short that there was no time to get away from the place.

Park Place, September 11, John Golinski, laborer, was instantly killed. He and the miner were in the act of firing a blast and shortened the match on the squib. The blast went off killing him.

Tunnel Ridge, September 19, Frank Slavinsky, was instantly killed. He was in the act of firing a blast and shortened the match. It went off before he could get away.

North Mahanoy, December 28, Anthony Geoskie, miner, was fatally injured. He had lighted a blast and gone to a place of safety, remaining there for a time. Thinking the shot had missed, he returned and it went off, injuring him. He died at the State Hospital December 29.

Silver Brook, December 28, John Phillips, miner, and his son were in the act of tamping a hole when the charge went off, killing the father instantly.

### Falling Down Shafts, Slopes and Manways

St. Nicholas, May 20, Simon Staunkunus, was killed instantly. The miners in the next breast had just fired a blast while he was in the heading very close to the face, the smoke from the blast coming through the heading where he was. It is supposed that he was overcome by the fumes from the shot and fell down the manway breaking his neck.

St. Nicholas, September 18, John Goeppfert, laborer, fell and was instantly killed while he and others were repairing the main slope at night.

Primrose, December 5, Benjamin Yourish, headman, was drowned.



He and three others were hoisting water. Yourish got over the fence, disobeyed orders, and fell down the shaft.

#### Miscellaneous

Tunnel Ridge, September 19, John Macknavige, starter, was in the act of starting a battery when one of the foot props gave out, causing the coal to rush, instantly killing him.

Boston Run, December 7, Mike Matulis, miner, was standing on the gangway when an explosion occurred in one of the breasts, blowing out a temporary battery, which caused the coal to rush, killing him instantly.

#### Caught by Machinery, Outside

Mahanoy City, February 17, Mathew Cooper, laborer, was fatally injured. He and others were working over-time fixing the scraper line and other parts of the machinery and in some unknown manner he got caught in a rope wheel. He died the same day.

Maple Hill, June 10, James Collins, jigman, was instantly killed by getting into the jig to do some repairs without first stopping the machinery.

### CONDITION OF COLLIERIES

#### PHILADELPHIA AND READING COAL AND IRON COMPANY

Knickerbocker Colliery.—Ventilation and road beds in good condition.

Ellangowan Colliery.—Ventilation and roads beds in good condition.

Maple Hill Colliery.—Ventilation and road beds in good condition.

Suffolk Colliery.—Ventilation and road beds in good condition.

St. Nicholas Colliery.—Ventilation and road beds in good condition.

Boston Run Colliery.—Ventilation and road beds in good condition.

Tunnel Ridge Colliery.—Ventilation and road beds in good condition.

Mahanoy City Colliery.—Ventilation and road beds in good condition.

North Mahanoy Colliery.—Ventilation and road beds in good condition.

Indian Ridge Colliery.—Ventilation fair, road beds in good condition.

#### LENTZ AND COMPANY

Park Place Colliery.—Ventilation and road beds in fair condition.

#### LEHIGH VALLEY COAL COMPANY

Primrose Colliery.—Ventilation and road beds in fair condition.

#### SILVER BROOK COAL COMPANY

Silver Brook Colliery.—Ventilation and road beds in poor condition.

## CRYSTAL RUN COAL COMPANY

Broad Mountain Colliery.—Ventilation and road beds in fair condition.

## Mine Foremen's Examinations

The following is a list of those who were successful in the examination for mine foremen and assistant mine foremen, held at Pottsville in April.

## Mine Foremen

William McLaren, St. Nicholas; John Perry, Mahanoy City; George Carmitchel, Park Place; Daniel Phillips, Mahanoy City; John Lannon, Yatesville; Henry Fry, Yatesville; Thomas Frost, Mahanoy City; Charles McKern, Maple Hill; John Gustitus, Maple Hill; Charles Klingerman, Mahanoy City; Arthur Dixon, Shenandoah; John H. Roberts, Shenandoah; Henry Petritsch, Boston Run; William Mauger, Mahanoy City.

## Assistant Mine Foremen

William Raudenbush, Maple Hill; Thomas Quinney, Mahanoy City; James J. Glennon, Park Place.

# Twelfth District

SCHUYLKILL COUNTY

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Pottsville, Pa., March 2, 1906.

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

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Twelfth Anthracite District, for the year ending December 31, 1905.

Respectfully submitted,  
MICHAEL J. BRENNAN,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	22
Number of mines, .....	50
Number of mines in operation, .....	50
Number of tons of coal shipped to market, .....	3,722,322
Number of tons used at mines for steam and heat, .....	525,110
Number of tons sold to local trade and used by employes, ..	41,856
Number of tons produced, .....	4,289,288
Number of persons employed inside of mines, .....	6,602
Number of persons employed outside, .....	3,786
Number of fatal accidents inside of mines, .....	38
Number of fatal accidents outside, .....	6
Number of non-fatal accidents inside of mines, .....	63
Number of non-fatal accidents outside, .....	13
Number of tons of coal produced per fatal accident inside, ..	112,876
Number of persons employed per fatal accident inside, ..	174
Number of persons employed per fatal accident outside, ..	631
Number of persons employed per non-fatal accident inside, ..	105
Number of persons employed per non-fatal accident outside, ..	291
Number of wives made widows, .....	28
Number of children orphaned, .....	60
Number of steam locomotives used inside of mines, .....	1
Number of steam locomotives used outside, .....	28
Number of electric motors used inside, .....	9
Number of fans in use, .....	37
Number of gaseous mines in operation, .....	37
Number of non-gaseous mines in operation, .....	13
Number of old mines abandoned, .....	2

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TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company, . . . . .	2,349,576
St. Clair Coal Company, . . . . .	504,400
Lytle Coal Company, . . . . .	385,320
Buck Run Coal Company, . . . . .	266,593
Oak Hill Coal Company, . . . . .	174,601
Pine Hill Coal Company, . . . . .	145,048
Snyder and Company, . . . . .	93,241
Stoddart Coal Company, . . . . .	78,456
Mt. Hope Coal Company, . . . . .	75,911
Darkwater Coal Company, . . . . .	44,833
Silverton Coal Company, . . . . .	41,963
John H. Davis Company, . . . . .	37,954
E. White and Company, . . . . .	35,295
East Ridge Coal Company, . . . . .	25,118
Black Diamond Anthracite Company, . . . . .	11,542
Pottsville Coal Company, . . . . .	9,722
Lehigh Valley Coal Company, . . . . .	9,715
	<hr/>
Total, . . . . .	4,289,288
	<hr/> <hr/>
Production by Counties	
Schuylkill, . . . . .	4,289,288
	<hr/> <hr/>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	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., . . . . .	12	3	15	28	6	34	196,798	83,913	3,898	2,065	5,963	325	685	189	342
St. Clair Coal Co., . . . . .	4	0	4	4	0	4	126,100	126,100	490	315	805	122	0	122	315
Lytell Coal Co., . . . . .	7	0	7	13	2	15	55,045	29,640	557	274	761	79	0	79	42
Buck Run Coal Co., . . . . .	4	0	4	3	0	3	66,648	88,864	317	148	465	79	0	79	102
Bak Hill Coal Co., . . . . .	1	1	2	1	1	2	174,601	174,601	327	134	461	327	134	327	134
Pine Hill Coal Co., . . . . .	1	0	1	3	0	3	145,048	48,349	309	190	499	309	0	309	103
Stoddard Coal Co., . . . . .	0	1	1	0	1	1	25,304	37,956	113	66	179	37	35	35	35
Mt. Hope Coal Co., . . . . .	3	0	3	2	2	4	22,416	22,416	113	89	202	56	0	56	89
Duffrader Coal Co., . . . . .	2	0	2	2	1	3	41,963	41,963	152	70	222	152	0	152	0
Silverton Coal Co., . . . . .	0	0	0	0	0	0	35,285	8,823	85	58	143	85	0	85	21
E. White and Company, . . . . .	1	0	1	4	0	4	3,253	4,857	25	72	97	72	0	72	0
East Ridge Coal Co., . . . . .	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Lehigh Valley Coal Co., . . . . .	3	0	3	2	0	2	0	0	154	130	284	51	0	51	77
Miscellaneous companies, . . . . .	0	0	0	0	0	0	0	0	62	220	282	0	0	0	0
Totals and averages for district, . . . . .	38	6	44	63	13	76	112,876	68,084	6,602	3,786	10,388	174	631	105	291



TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Totals	
	January	February	March	April	May	June	July	August	September	October	November	December		Percentages
Falls of coal, .....	1	1	1	1	1	1	1	1	1	1	1	1	4	10.53
Falls of slate, .....	1	5	2	1	1	1	1	1	1	1	2	1	7	18.42
Falls of roof, .....	1	1	1	1	1	1	1	1	1	1	1	1	6	15.79
Mine cars, .....	1	1	2	1	1	1	1	1	1	1	1	1	6	15.79
Explosions of gas and dust, .....	1	1	1	1	1	1	1	1	1	1	1	1	3	7.89
Suffocation by gas, etc., .....	2	1	1	1	1	1	1	1	1	1	1	1	4	10.53
Explosions of powder and dynamite, .....	1	1	1	1	1	1	1	1	1	1	1	1	4	10.53
Premature blasts, .....	1	1	1	1	1	1	1	1	1	1	1	1	4	10.53
Falling into shafts, .....	1	1	1	1	1	1	1	1	1	1	1	1	2	5.26
Falling into slopes, etc., .....	1	1	1	1	1	1	1	1	1	1	1	1	1	2.63
Totals, .....	3	6	6	2	3	1	2	2	2	5	4	2	38	100
Causes of Accidents Outside														
Cars, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	16.67
Machinery, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	16.67
Suffocation in chutes, etc., .....	1	1	1	1	1	1	1	1	1	1	1	1	1	16.67
Boiler explosions, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	16.66
Miscellaneous, .....	1	1	1	1	1	1	1	1	1	1	1	1	2	33.33
Totals, .....	1	1	1	1	1	1	1	1	1	1	1	1	6	100
Grand totals inside and outside, .....	4	7	6	3	3	2	3	2	2	5	4	3	44	.....

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Falls of coal, .....	1	1	1	1	1	1	1	2	1	1	1	1	9	14.28
Falls of slate, .....	1	1	1	1	2	1	1	2	2	2	3	1	14	22.22
Falls of roof, .....	1	1	1	1	1	1	1	2	2	2	1	1	4	6.35
Mine cars, .....	1	1	2	1	1	1	2	4	3	1	5	1	12	19.05
Explosions of gas and dust, .....	1	1	1	1	1	1	1	1	1	1	1	1	18	28.57
Premature blasts, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1.59
Falling into slopes, etc., .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1.59
By mules, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1.59
Miscellaneous, .....	1	1	1	1	1	1	1	1	1	1	1	1	3	4.76
Totals, .....	3	1	4	2	4	6	6	13	10	5	7	2	63	100
Causes of Accidents Outside														
Cars, .....	1	1	1	1	1	1	1	1	1	1	1	1	5	33.46
Machinery, .....	1	1	1	1	1	1	1	1	1	1	1	1	3	23.08
Boiler explosions, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	7.69
Miscellaneous, .....	1	1	1	1	1	1	1	1	1	1	1	1	4	30.77
Totals, .....	3	1	1	1	2	2	1	1	1	1	2	13	100	
Grand totals inside and outside, .....	6	2	4	3	6	8	6	14	10	6	7	4	76	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....	3	4	3	1	1	1	1	2	1	3	1	2	23
Miners' laborers, .....	1	1	1	1	2	1	1	1	1	1	3	1	8
Drivers and runners, .....	1	1	1	1	1	1	1	1	1	1	1	1	4
Company men, .....	1	1	1	1	1	1	1	1	1	1	1	1	4
Totals, .....	3	6	6	2	3	1	2	2	2	5	4	2	35
Outside													
Engineers and firemen, .....	1	1	1	1	1	1	1	1	1	1	1	1	1
Slatepickers (boys), .....	1	1	1	1	1	1	1	1	1	1	1	1	1
All other employees, .....	1	1	1	1	1	1	1	1	1	1	1	1	4
Totals, .....	1	1	1	1	1	1	1	1	1	1	1	1	6
Grand totals inside and outside, .....	4	7	6	3	2	2	3	2	2	5	4	3	44

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....	2	1	3	2	3	2	4	9	7	3	4	1	37
Miners' laborers, .....	1	1	1	1	1	4	1	1	1	1	2	1	15
Drivers and runners, .....	1	1	1	1	1	1	1	1	2	1	1	1	6
Company men, .....	1	1	1	1	1	1	1	1	1	1	1	1	4
All other employees, .....	1	1	1	1	1	1	1	1	1	1	1	1	4
Totals, .....	3	1	4	2	4	6	6	13	10	5	7	2	63
Outside													
Blacksmiths and carpenters, .....	1	1	1	1	1	1	1	1	1	1	1	1	1
Engineers and firemen, .....	1	1	1	1	1	1	1	1	1	1	1	1	1
All other employees, .....	3	1	1	1	2	1	1	1	1	1	1	2	11
Totals, .....	3	1	1	1	2	2	1	1	1	1	1	2	13
Grand totals inside and outside, .....	6	2	4	3	6	8	6	14	10	6	7	4	76

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	2	2	1	...	1	2	...	1	3	2	1	16
English, .....	...	...	...	1	...	1	...	...	1	...	...	...	1
Welsh, .....	...	...	...	...	...	...	1	...	...	...	...	...	1
Irish, .....	...	1	...	...	...	...	1	...	...	...	...	...	3
German, .....	...	1	1	...	...	...	1	...	1	...	...	1	3
Polish, .....	...	...	1	...	...	...	1	...	...	...	...	1	3
Hungarian, .....	...	...	1	1	...	...	1	...	...	...	...	...	1
Slavonian, .....	1	2	1	...	1	...	...	...	1	1	...	...	7
Lithuanian, .....	2	1	...	1	1	...	...	...	...	1	...	...	6
Austrian, .....	...	1	1	...	...	...	...	...	...	...	1	...	1
Russian, .....	...	...	...	...	...	1	...	...	...	...	...	...	2
Tyrolean, .....	...	...	...	...	...	1	...	...	...	...	...	...	1
Totals, .....	4	7	6	3	3	2	3	2	2	5	4	3	44

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	3	1	3	1	3	5	5	4	6	3	2	1	37
Welsh, .....	...	1	...	...	...	...	...	1	...	...	...	...	1
German, .....	...	1	...	...	...	...	...	2	...	...	...	...	3
Polish, .....	1	...	...	...	...	...	...	2	1	1	1	2	7
Hungarian, .....	1	...	...	...	1	...	...	1	1	1	1	1	7
Slavonian, .....	...	...	1	1	...	1	...	2	1	1	...	...	7
Lithuanian, .....	...	...	...	...	1	2	...	1	2	...	2	...	2
Austrian, .....	1	...	...	1	1	...	...	1	...	...	...	...	2
Russian, .....	...	...	...	1	1	...	1	...	...	1	...	...	4
Totals, .....	6	2	4	3	6	8	6	14	10	6	7	4	76

TABLE I.—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 person 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—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 Coast and Iron Co.	Slope.....	Gasous	Fan.....	18	6	5	80	1.8	Gulbal.....	Steam..	1	16,520	16,520	17,420	70	246	
	No. 1 West Brookside.....	Gasous	Fan.....	18	6	5	85	1.8	Gulbal.....	Steam..	7	89,780	48,685	97,650	172	283	
	No. 4 West Brookside.....	Gasous	Fan.....	21	7	6	76	1.3	Gulbal.....	Steam..	9	115,100	135,525	135,525	310	364	
	No. 5 East Brookside.....	Gasous	Fans.....	16	4.5	3.8	85	1.4	Gulbal.....	Steam..	14	103,097	105,160	107,224	333	315	
	Lincoln No. 1.....	Gasous	Fans.....	12	4	5	85	.8	Gulbal.....	Steam..	5	95,610	93,200	97,500	241	387	
	Lincoln No. 2.....	Gasous	Fans.....	12	4	3.4	104	.9	Gulbal.....	Steam..	8	44,800	44,800	42,800	109	411	
	Otto Red Ash.....	Slope.....	Gasous	Fans.....	12	4	5.3	95	1.3	Gulbal.....	Steam..	5	44,800	44,800	42,800	109	411
	Otto White Ash.....	Slope.....	Gasous	Fan.....	15	5	2.5	94	1.4	Gulbal.....	Steam..	6	78,000	78,500	79,000	329	239
	Wadesville.....	Shaft.....	Gasous	Fan.....	21	7	6	70	1.2	Gulbal.....	Steam..	15	187,700	184,200	192,250	384	468
	Wadesville.....	Shaft.....	Gasous	Fan.....	21	7	6	70	1.2	Gulbal.....	Steam..	15	187,700	184,200	192,250	384	468
	Good Spring No. 1.....	Slope.....	Gasous	Fan.....	18	6	5	80	1.1	Gulbal.....	Steam..	8	81,203	78,500	81,630	201	390
	Good Spring No. 1.....	Slope.....	Gasous	Fan.....	18	6	5	80	1.1	Gulbal.....	Steam..	8	81,203	78,500	81,630	201	390
	Good Spring No. 3.....	Slope.....	Gasous	Fan.....	18	6	5	80	1.1	Gulbal.....	Steam..	8	81,203	78,500	81,630	201	390
	Good Spring drift.....	Drift.....	Non-gas.	Fan.....	16	6	5	80	.7	Gulbal.....	Steam..	2	66,660	63,450	67,940	122	520
	Phoenix Park No. 3.....	Slope.....	Gasous	Fans.....	15	5	3.5	150	.75	Gulbal.....	Steam..	7	19,780	19,000	20,500	66	287
Glendower.....	Slope.....	Gasous	Fans.....	15	5	3.5	85	1.1	Gulbal.....	Steam..	3	74,060	73,250	75,100	331	221	
Glendower.....	Slope.....	Gasous	Fans.....	15	5	3.5	85	1.1	Gulbal.....	Steam..	3	74,060	73,250	75,100	331	221	
Taylorville.....	Slope.....	Gasous	Fans.....	12	4	3.5	45	.7	Gulbal.....	Steam..	7	47,461	44,100	49,200	52	348	
West Glendower.....	Slope.....	Gasous	Fan.....	12	4	3.5	50	.4	Gulbal.....	Steam..	1	12,687	7,800	12,987	15	520	
Pine Knot.....	Shaft.....	Gasous	Fan.....	18	5.5	4.6	42	1.3	Gulbal.....	Steam..	3	27,862	21,300	23,173	26	819	
John Veith No. 1.....	Shaft.....	Gasous	Natural.	18	6	5.2	40	.3	Gulbal.....	Steam..	2	24,620	24,000	31,000	39	615	
John Veith No. 2.....	Shaft.....	Gasous	Natural.	18	6	5.2	41	.4	Gulbal.....	Steam..	1	24,620	24,000	31,000	39	615	



TABLE 1.—Operators, location of collieries, railroads, etc

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal Brookside, and Iron Co. } Lincoln, ..... } Otto, ..... } Wadesville, ..... } Good Spring, ..... } Phoenix Park, ..... } Glendower, ..... } Pine Knot, ..... } John Velth, ..... } Middle Creek washery, ..... } Anchor washery, ..... } Kalmla washery, ..... } Rausch Creek washery, ..... }	Schuylkill,.....	W. J. Richards, ..	Pottsville, .....	Reese Tasker, ....	Pottsville, .....	P. and R.
St. Clair Coal Co. } St. Clair, ..... } St. Clair washery, .....	Schuylkill,.....	.....	.....	William T. Smyth,	Pottsville, .....	P. and R.
Lytle Coal Co. } Buck Run Coal Co. } Buck Run, .....	Schuylkill,.....	Robert A. Quin, ..	Wilkes-Barre, .....	Arthur Kennedy, ..	Minersville, .....	Pennsylvania
Oak Hill Coal Co. } Pine Hill Coal Co. } Black Heath washery, .....	Schuylkill,.....	Chas. A. Schwenck	Minersville, .....	Wm. R. Wilson,....	Minersville, .....	P. and R.
Lorberry washery, ..... } Snyder and Co. } Stoddart Coal Co. } Wolf Creek washery, .....	Schuylkill,.....	C. B. Sturgis, .....	Scranton, .....	Chas. A. Schwenck	Minersville, .....	P. and R.
Mt. Hope Coal Co. } Mt. Hope, .....	Schuylkill,.....	S. D. Kynor, .....	Pottsville, .....	W. B. Richards, ...	Minersville, .....	Pennsylvania
				William Fetherman	Tremont, .....	P. and R.
				D. H. McGee, ....	Minersville, .....	P. and R.
				.....	.....	P. and R.



Darkwater Coal Co. Newcastle, .....	Schuylkill, .....	.....	.....	James Tinley, .....	Tamaqua, .....	Pennsylvania
Silverton Coal Co. Silverton,* .....	Schuylkill, .....	John H. Brooke, ..	Llewellyn, .....	.....	.....	P. and R.
John H. Davis Co. Ellsworth, .....	Schuylkill, .....	Jno. H. Davis, ....	St. Clair, .....	.....	.....	P. and R.
E. White and Co. Howard, .....	Schuylkill, .....	Richard White, ...	Pottsville, .....	Richard White, ...	Pottsville, .....	P. and R.
East Ridge Coal Co. East Ridge,* .....	Schuylkill, .....	B. E. Kingsley, ..	Minersville, .....	.....	.....	P. and R.
Black Diamond Anthracite Co. Black Diamond, .....	Schuylkill, .....	F. F. Christian, ...	Pottsville, .....	.....	.....	P. and R.
Pottsville Coal Co. Pottsville washery, .....	Schuylkill, .....	.....	.....	W. A. Snyder, ....	Pottsville, .....	P. and R.
Lehigh Valley Coal Co. Blackwood, .....	Schuylkill, .....	S. D. Warriner, ...	Wilkes-Barre, .....	Frank E. Shedd, ...	Blackwood, .....	Lehigh Valley

\* Abandoned.

TABLE 2.—Number of tons of coal mined, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Totals are averages, 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.		590,893	72,592	.....	663,490	288	1,213	1	6	3,548	67,815	135
Brookside, .....		475,885	28,926	7,466	512,277	278	1,121	3	10	10,649	13,259	137
Lincoln, .....		201,156	48,019	1,796	250,971	279	808	4	2	3,857	52,592	83
Otto, .....		214,068	28,672	4,181	246,951	262	721	1	12	2,768	64,754	52
Wadesville, .....	Schuylkill,...	214,409	18,336	4,916	237,711	286	637	2	1	4,880	87,444	53
Good Spring, .....		101,098	24,842	1,577	127,517	258	632	2	2	796	29,541	66
Phoenix Park, .....		75,894	33,001	353	109,348	254	313	1	1	109,348	14,605	34
Glendower, .....		1,050	5,007	.....	6,057	.....	132	1	.....	.....	3,175	8
Pine Knot,*		.....	.....	.....	.....	.....	160	1	.....	.....	21,215	.....
John Veith,†		1,874,588	259,415	20,289	2,154,322	272	5,738	15	34	26,991	359,490	575
Middle Creek washery, .....		64,572	8,144	523	73,239	151	67	.....	.....	.....	.....	1
Anchor washery, .....		65,148	3,951	.....	69,079	153	62	.....	.....	.....	.....	.....
Kauba washery,†	Schuylkill,...	24,637	2,185	.....	26,822	135	32	.....	.....	.....	.....	.....
Rausch Creek washery, .....		24,004	2,110	.....	26,114	59	54	.....	.....	.....	.....	.....
Totals, .....		178,361	16,370	523	195,254	124	215	.....	.....	.....	.....	1
St. Clair, .....		2,052,949	275,815	20,812	2,349,576	272	5,983	15	31	26,991	359,490	577
St. Clair Coal Co. ....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Clair washery, .....	Schuylkill,...	376,422	74,140	1,944	452,506	270	780	4	4	11,826	13,871	58
Totals, .....		47,284	4,610	.....	51,894	154	25	.....	.....	.....	.....	.....
St. Clair Coal Co. ....		423,706	78,750	1,944	504,400	270	805	4	4	11,826	13,871	58

†No coal mined.

‡Abandoned.

\*No time given.



TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Totals are averages, 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	2,652,949	275,815	20,812	2,349,576	272	5,953	15	34	26,991	359,490	577
S. C. Clair Coal Co., .....		78,150	1,914	4,986	504,400	270	805	4	4	11,826	13,871	68
Lytie Coal Co., .....		319,313	60,991	608	385,320	282	761	7	15	1,975	23,825	84
Back Run Coal Co., .....		244,085	21,990	608	266,593	271	465	4	3	3,175	63,325	60
Oak Hill Coal Co., .....		152,436	18,009	4,165	174,601	264	461	2	2	4,164	27,585	47
Sine Hill Coal Co., .....		133,164	11,247	637	145,048	151	499	1	3	4,657	17,575	38
Snyder and Co., .....		90,736	2,400	105	93,241	222	55	.....	.....	.....	.....	.....
Stouart Coal Co., .....		73,479	4,880	91	78,456	244	35	.....	.....	.....	.....	.....
Marysville Coal Co., .....		63,826	5,000	7,065	75,911	215	179	1	1	.....	.....	.....
Darke Coal Co., .....		33,866	10,950	17	44,833	159	202	2	3	466	10,525	14
Silverton Coal Co., .....		30,319	11,466	178	41,963	131	222	.....	.....	.....	.....	.....
John H. Davis Co., .....		34,346	3,000	608	37,954	289	110	.....	.....	.....	.....	.....
E. White and Co., .....		27,955	7,200	140	35,295	160	143	.....	.....	.....	.....	.....
East Ridge Coal Co., .....		21,950	3,100	68	25,118	132	97	.....	.....	.....	.....	.....
Black Diamond Anthracite Co., .....		5,412	6,100	.....	11,542	61	81	.....	.....	.....	.....	.....
Pottsville Coal Co., .....		8,472	696	252	9,422	58	36	.....	.....	.....	.....	.....
Lehigh Valley Coal Co., .....		5,947	3,615	153	9,715	39	284	.....	.....	.....	.....	.....
Totals, .....		3,722,322	525,116	41,856	4,289,283	195	10,388	44	76	55,277	588,165	979

TABLE 2.—PART 2.

Names of Operators	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.,.....		130	4,440	108	15,990	19,730	18	4	145	20	21,029	11,400	2	7
St. Clair Coal Co.,.....		9	450	18	9,700	9,150	5	3	23	5	1,500	500	2	3
Lytle Coal Co.,.....				28	4,100	4,100	1		14		1,500	500		
Back Run Coal Co.,.....				8	1,500	1,500			23		900	300		3
Oak Hill Coal Co.,.....				10	1,425	1,545			23		3,400	1,550		1
Pine Hill Coal Co.,.....				9	1,350	1,350	2		9		1,300	850		1
Snyder and Co.,.....				4	400	400		2	9		1,290			
Stoddard Coal Co.,.....				4	550	550			7		1,139			
Mt. Hope Coal Co.,.....				4	550	550			7		327			
Darkwater Coal Co.,.....				6	665	745	2		10		240			
Silverton Coal Co.,.....				70	4,000	470	1		12		718			
John H. Davis Co.,.....	Schuylkill,...	8	450	7	1,071	1,521			12		629			
E. White and Co.,.....				7	340	340			12		150	30		
East Ridge Coal Co.,.....				4	575	575			6		1,270	518		
Black Diamond Anthracite Co.,.....				4	400	400			6		2,000	300		
Portsville Coal Co.,.....				2	500	500			3		2,000	1,400		
Lehigh Valley Coal Co.,.....				4	1,200	1,200			9		700	300		
Totals,.....		161	5,610	227	33,066	38,676	29	9	314	47	38,349	23,208	8	16

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)		Bookkeepers and clerks	All other employes
Philadelphia and Reading Coal and Iron Co.		13	4	59	1,442	715	267	57	14	440	887	3,895	16	71	261	340	69	21	1,062	1,840	5,738
Brookside, .....		2	2	10	322	166	81	12	5	167	239	820	...	4	15	56	74	3	231	793	1,213
Lincoln, .....		2	1	9	265	79	41	9	...	95	196	556	...	2	13	43	48	3	114	235	1,121
Otto, .....		1	1	8	212	57	32	7	...	49	101	355	...	3	8	36	45	3	149	253	808
Wadesville, .....		2	...	...	196	71	13	4	...	63	59	433	...	7	28	53	16	3	119	228	721
Good Spring, .....		1	...	...	176	69	47	6	...	57	71	469	...	1	6	27	39	8	123	228	637
Phoenix Park, .....		1	...	...	41	24	6	2	...	56	100	192	...	1	5	22	39	5	124	170	912
Glendower, .....		1	...	...	...	...	...	...	...	18	15	130	...	1	5	29	22	8	121	170	912
Pine Knot, .....		1	...	...	2	121	...	...	...	...	...	123	...	1	5	11	...	1	86	102	192
John Veith, .....		13	4	59	1,442	715	267	57	14	440	887	3,895	16	71	261	340	69	21	1,062	1,840	5,738
Middle Creek washery, .....	Schuylkill.	...	...	...	...	...	...	...	...	...	...	...	...	1	1	6	15	1	43	67	67
Archer washery, .....		...	...	...	...	...	...	...	...	...	...	...	...	1	2	3	9	5	1	41	62
Kaima washery, .....		...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	1	26	32
Kausch Creek washery, .....		...	...	...	...	...	...	...	...	...	...	...	...	1	2	9	2	1	33	54	54
Totals, .....		13	4	59	1,442	715	267	57	14	440	887	3,898	...	29	77	281	372	25	1,205	2,055	5,953
St. Clair Coal Co.	Schuylkill,...	2	...	5	172	126	42	19	8	...	116	490	1	2	20	38	46	4	165	250	780





TABLE 3.—Recapitulation

Names of Operators	County	Inside											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	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employes	
Philadelphia and Reading Coal and Iron Co., .....	Schuylkill,	13	4	59	1,442	715	287	57	14	440	887	3,898	20	77	281	372	75	25	1,205	2,055	5,953
St. Clair Coal Co., .....		2	.....	5	172	126	42	19	8	.....	116	480	1	20	40	50	13	4	185	315	805
Lytle Coal Co., .....		1	2	9	255	47	42	7	.....	69	125	557	1	15	21	44	24	4	94	214	783
Buck Run Coal Co., .....		1	1	3	118	61	28	6	4	23	72	317	1	10	14	20	14	6	82	148	465
Miscellaneous companies, .....		10	6	18	605	262	121	17	15	143	1,340	13	14	54	133	224	71	19	536	1,064	2,404
Totals, .....		27	13	94	2,592	1,211	500	106	41	675	1,243	6,622	38	176	489	710	197	58	2,102	3,786	10,388



TABLE 3.—PART 2.—Continued.

Names of Operators	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Howard, .....	Schuykill,.....	.....	10	15	.....	.....	21	20	18	21	22	9	160	
East Ridge, .....	Schuykill,.....	19	15	23	18	19	21	7	.....	.....	.....	.....	132	
Black Diamond Anthracite Co. Black Diamond, .....	Schuykill,.....	.....	.....	.....	6	18	21	2	.....	.....	.....	.....	61	
Blackwood, .....	Schuykill,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24	15	29	

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 18	Henry Confahr, .....	American,....	Fireman, ...	36	M.	1	2	Wolf Creek washery		Seriously scalded by the explosion of boiler. Died January 20 at Pottsville Hospital. Outside.
21	Wasil Dunski, .....	Slavonian,...	Miner, .....	31	M.	1	2	St. Clair, .....		Killed by fall of slate while bracing and wedging a set of timber.
23	William Posseskle, .....	Lithuanian, ..	Miner, .....	40	M.	1	.....	Mt. Hope, .....	Schuykill,...	Sufoicated by rush of steam, while working at face of gangways. They attempted to cross an old breast that was full of timber.
23	John Boycock, .....	Lithuanian, ..	Miner, .....	35	S.	.....	.....	Mt. Hope, .....		Killed by fall of frozen culm. He ventured too far under an overhanging piece and it fell on him. Outside.
Feb. 9	Paul Looks, .....	Slavonian,....	Laborer, ....	18	S.	.....	.....	East Ridge, .....		Killed by fall of rock while descending slope to their places of work.
18	Daniel Deegan, .....	American,....	Repairman, ..	43	S.	.....	.....	.....	Schuykill,....	Killed by fall of slate. He and his partner tried to pull the piece down, but could not do it. Later on the piece fell on them.
18	Henry B. Moore, .....	American,....	Laborer, ....	40	S.	.....	.....	.....		Killed by a breast of coal following him down the breast manway.
18	Pete Mastofskie, .....	Lithuanian, ..	Miner, .....	28	M.	1	1	Lytle, .....		Killed by fall of slate while standing underneath it on the gangway. The repairman was preparing to timber it and had one prop hole sunk.
18	George Cutlash, .....	Slavonian,....	Miner, .....	38	M.	1	1	.....		Fatally squeezed between mine car and rib of tunnel while endeavoring to cross from one bumper to the other. Died the next day.
18	Sylvester Pedock, .....	Russian,.....	Miner, .....	42	S.	.....	.....	Phoenix Park,....		Killed by being run over by mine car. He gave the team the warning of a stroke of his whip before starting, which caused them to start in haste. He attempted to get on the car and fell.
27	George Marshall, .....	German,.....	Miner, .....	39	M.	1	5	.....		
March 1	Joseph Gauntlett, .....	American,....	Miner, .....	40	M.	1	1	Good Spring, ....		
14	Albert Master, .....	Polish,.....	Driver, .....	37	M.	1	4	New Castle, .....		
14	Adam Drusk, .....	Slavonian,....	Laborer, ....	24	S.	.....	.....	Lytle, .....	Schuykill,...	
14	Michael Brushkle, .....	Hungarian,...	Driver, .....	18	S.	.....	.....	Blackwood, .....		

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
March 16	Jerry Brunner, .....	Russian .....	Miner, .....	27	M.	1	2	Wadesville, .....		Killed by fall of slate while working at gangway face. Killed by falling down the shaft, while endeavoring to adjust the head block. Killed by cars passing over him. He attempted to cross from one bumper of car to the other, and slipped and fell on the track. Killed by blast. While walking through pillar heading a shot was exploded in the heading in the opposite pillar. Killed in endeavoring to oil shaker cams while in motion. Outside. Killed by fall of coal while filling a car from gangway pillar. Killed by mine car while on his way to work in the morning, in the gangway. He failed to notice the warning given by the driver and others. Fatally injured May 9 by blast. Died June 3. His partner ignited a blast on the inside pillar of breast and failed to notify Sinders, who was drilling hole on the inside rib. Killed by fall of slate while trimming down after a blast in gangway. Killed while emptying rock dumper on bank outside. A loaded car that was standing back on the track ran in and squeezed him against the car on the dump. Outside. Fatally injured, burned and bruised by explosion of powder and falling down breast manway. Died same day. Killed by being caught between mine car and timber.
22	Frank Bambrick, .....	American, ..	Topman, ..	25	S.	.....	.....	Pine Knot, .....		
April 10	James Schreffler, .....	American, ..	Driver, .....	23	M.	1	.....	Lincoln, .....		
27	Anthony Wenskonnis, .....	Lithuanian, ..	Miner, .....	27	S.	.....	.....	Pine Hill, .....		
29	Claude White, .....	English, .....	Jig runner, ..	23	M.	1	.....	Otto, .....		
May 2	John Stolka, .....	Slavonian, ..	Laborer, ....	23	M.	1	2	St. Clair, .....		
25	John Davis, .....	Welsh, .....	Laborer, ....	55	M.	1	4	Otto, .....		
9	Anthony Sinders, .....	Lithuanian, ..	Miner, .....	21	S.	.....	.....	Oak Hill, .....	Schuylkill, ...	
June 10	Michael Stablum, .....	Tyrolean, .....	Miner, .....	40	M.	1	2	Otto, .....		
20	Daniel Nicewenter, .....	American, .....	Laborer, ....	27	S.	.....	.....	Good Spring, .....		
July 3	Patrick Brophy, .....	Irish, .....	Miner, .....	38	S.	.....	.....	Buck Run, .....		
14	George Ryan, .....	American, .....	Driver, .....	17	S.	.....	.....	Mt. Hope, .....		



July	22	Felix Saymon, .....	American,...	Slate picker, 14	S. ....	Oak Hill, .....	Smothered in buckwheat coal chute. Out-side.
Aug.	25	Albert Fisher, .....	German,.....	Miner, .....	M. 1	Phoenix Park, ..	Fatally burned by explosion of gas. Died September 7.
Sept.	30	Stiney Buchloskey, ....	Polish,.....	Miner, .....	M. 1	Buck Run, .....	Killed by blast in gangway.
	7	Richard Davis, .....	Welsh,.....	Miner, .....	M. 1	St. Clair, .....	Killed by fall of coal while changing a prop.
	28	Charles Fessler, .....	American,...	Topman, ...	M. 1	Lincoln, .....	Killed by being caught between mine car and rib of tunnel on top of slope.
Oct.	2	John Gampet, .....	American,...	Miner, .....	M. 1	Brookside, .....	Fatally injured by explosion of gas. Died October 7th.
	5	Woclech Skobish, .....	Slavonian,...	Laborer, ....	M. 1	St. Clair, .....	Killed by fall of rock at face of breast.
	6	Cornelius Shugartz, ....	American,...	Miner, .....	S. ....	Howard, .....	Killed by premature explosion of blast at face of breast.
	7	James Ryan, .....	American,...	Starter, .....	M. 1	Buck Run, .....	Smothered by rush of clay at battery.
	11	Charles Obenhouse, ....	German,.....	Miner, .....	M. 1	Blackwood, .....	Killed by fall of coal while in the act of opening a new breast.
Nov.	10	Michael Baylon, .....	American,...	Miner, .....	M. 1	Buck Run, .....	Fatally burned by gas explosion. Died November 18.
	21	Louis Oculitas, .....	Lithuanian,...	Laborer, ....	M. 1	Lytle, .....	Killed by fall of slate while filling a car at face of gangway.
	22	Geo. Washko, .....	Slavonian,...	Laborer, ....	M. 1	John Velth, .....	Fatally injured by falling from scaffold in shaft. Died January 15.
	29	John Richards, .....	American,...	Laborer, ....	M. 1	Otto, .....	Killed by fall of slate in monkey while wheeling a barrow to the face.
Dec.	14	Joseph Wable, .....	Polish,.....	Miner, .....	M. 1	New Castle, ....	Drowned in chute by inrush of water, while in the act of tapping it.
	18	Angelo Zerner, .....	Austrian,...	Miner, .....	S. ....	Blackwood, .....	Killed by falling down breast manway.
	18	Charles Lewis, .....	American,...	Laborer, ....	M. 1	Lincoln, .....	Killed by being run over by railroad cars near breaker. Outside.

Schuykill, ...

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 11	Michael Vestia, .....	Austrian, .....	Miner, .....	31	M.	Pine Hill, .....		Foot crushed by fall of slate while preparing for set of timber.
14	Theo. Shermonski, .....	Polish, .....	Doorboy, .....	17	S.	Lytle, .....		Leg fractured by mine cuts.
18	Philip Russell, .....	American, .....	Ashman, .....	20	S.	Wolf Creek washery, .....		Seriously scalded about the body by boiler explosion. Outside.
24	Charles Reed, .....	American, .....	Miner, .....	27	M.	Good Spring, .....		Injured by fall of coal at face of breast.
29	Michael Hoshwell, .....	Hungarian, .....	Ashman, .....	35	S.	Glendower, .....		Leg fractured. Run over by ash dumper. Outside.
30	John Schoffstall, .....	American, .....	Machinist, .....	25	S.	Lytle, .....		Arm seriously injured while repairing scraper line. Outside.
Feb. 21	Ben. Gardner, .....	German, .....	Carpenter, .....	62	M.	Otto, .....		Leg fractured. He was carrying a piece of timber and fell on rail. Outside.
27	Frank Lengie, .....	American, .....	Repairman, .....	39	M.	Lincoln, .....		Collar bone fractured. Caught between mine car and prop.
March 1	Frank Frankenstein, .....	American, .....	Miner, .....	33	M.	Wadesville, .....		Shoulder dislocated by explosion of gas.
1	John Curran, .....	American, .....	Laborer, .....	33	M.	Wadesville, .....		Ribs fractured by explosion of gas.
11	Fred Matley, .....	American, .....	Laborer, .....	34	M.	Wadesville, .....		Leg fractured by fall of rock at face of breast.
29	Michael Gutta, .....	Slavonian, .....	Laborer, .....	24	M.	Phoenix Park, .....	Schuylkill, ...	Skull fractured by fall of slate while assisting to erect set of timber.
April 2	Paul Zerovsky, .....	Russian, .....	Miner, .....	25	S.	Lytle, .....		Hand cut and broken by fall of coal.
4	Charles Mugford, .....	American, .....	Asst. machinist, .....	18	S.	Lytle, .....		Toes crushed. He was removing a cog wheel and it fell on him. Outside.
22	Paul Stinab, .....	Slavonian, .....	Miner, .....	40	M.	St. Clair, .....		Leg fractured. While prying down loose top at face of breast he stumbled and fell.
May 2	Andrew Nelder, .....	Russian, .....	Miner, .....	41	M.	Lincoln, .....		Back injured by fall of slate.
6	Stdney Covalovage, .....	American, .....	Laborer, .....	30	S.	Lytle, .....		Hands and face slightly burned by explosion of gas.
9	John Williams, .....	American, .....	Miner, .....	35	M.	Wadesville, .....		Leg fractured by fall of slate in breast.
10	Anthony Gellavage, .....	Lithuanian, .....	Miner, .....	42	S.	Oak Hill, .....		Leg fractured by piece of coal from blast breaker engine. Outside.
13	Eugene Donahoe, .....	American, .....	Other, .....	19	S.	Phoenix Park, .....		Caught in fly wheel of
22	John Lukash, .....	Hungarian, .....	Laborer, .....	38	M.	Otto, .....		Hands crushed while loading rock dumper. Piece of rock slipped from chute and struck him on the hands. Outside.

June	2	Valentine Sterouke, .....	Slavonian, .....	Laborer, .....	30	M.	Blackwood, .....	Leg fractured by fall of roof in tunnel.
	3	Anthony Bernatoni, .....	Lithuanian, .....	Miner, .....	28	S.	Lytle, .....	Hands and face burned by gas.
	6	William Alex, .....	Lithuanian, .....	Miner, .....	45	M.	Lytle, .....	Head cut by fall of slate in breast.
	11	George Farrell, .....	American, .....	Fireman, .....	31	M.	Mt. Hope, .....	Scalded by steam from blow off pipe while cleaning boiler flues. Outside.
	14	William Ney, .....	American, .....	Laborer, .....	20	S.	Lincoln, .....	Leg fractured. Fell under mine car.
	17	Charles Dubbs, .....	American, .....	Laborer, .....	18	S.	Brookside, .....	Leg fractured while taking a wrench from front of car at bottom of plane. The car moved and caught him. Outside.
	21	Patrick Kelly, .....	American, .....	Laborer, .....	38	M.	Wadesville, .....	Leg fractured by fall of coal.
	29	George Stauffer, .....	American, .....	Laborer, .....	19	M.	Lincoln, .....	Back bruised. Caught between mine car and rib of gangway.
July	1	Anthony Gelfsky, .....	Russian, .....	Miner, .....	32	M.	Lytle, .....	Back and leg injured by fall of coal.
	1	Joseph Molson, .....	American, .....	Driver, .....	20	S.	Lytle, .....	Arm fractured. Bumped between cars.
	14	Thomas Gorman, .....	American, .....	Miner, .....	35	S.	Mt. Hope, .....	Leg fractured. Caught between car wheel and pile of slate he had picked.
	22	Henry Dress, .....	American, .....	Miner, .....	28	M.	Wadesville, .....	Arm and neck burned by explosion of gas.
	25	Thomas McDonald, .....	American, .....	Laborer, .....	24	S.	Wadesville, .....	Arm and neck burned by explosion of gas.
	25	Andrew Kelm, .....	American, .....	Miner, .....	40	M.	Sliverton, .....	Leg cut by fall of slate.
Aug.	1	George Comford, .....	Slavonian, .....	Miner, .....	29	S.	Wadesville, .....	Face and hands burned by explosion of gas.
	3	James Fetter, .....	American, .....	Miner, .....	44	M.	Lincoln, .....	Collar bone fractured by fall of top slate.
	8	Thomas Foley, .....	American, .....	Miner, .....	36	S.	Buck Run, .....	Pelvis bone fractured by fall of coal.
	10	A. F. Ginsburgh, .....	German, .....	Miner, .....	23	S.	New Castle, .....	Head fractured by fall of rock.
	11	Paul Yehowdrick, .....	Lithuanian, .....	Laborer, .....	25	S.	Mt. Hope, .....	Wrist fractured by fall of coal.
	11	George Evans, .....	Welsh, .....	Motor helper, .....	19	S.	Pine Hill, .....	Head bruised between mine car and pole he was using to side-track the car.
	14	Michael Morecavage, .....	Polish, .....	Miner, .....	28	S.	Howard, .....	Leg bruised by fall of rock while at work at face of breast.
	16	Henry Miller, .....	American, .....	Dumpman, .....	56	M.	Brookside, .....	Leg fractured while trying to unhitch mule. The truck caught him. Outside.
	18	Max Grundl, .....	Austrian, .....	Miner, .....	22	S.	Blackwood, .....	Collar bone fractured by fall of slate.
	21	John Phillips, .....	Polish, .....	Miner, .....	40	S.	Howard, .....	Hands and face burned by gas.
	21	John Wanock, .....	German, .....	Miner, .....	40	M.	Wadesville, .....	Slightly burned. Went to face of breast with naked light, causing the gas to explode.
	21	George Staunkis, .....	Hungarian, .....	Miner, .....	30	S.	Wadesville, .....	Leg fractured. Mule fell on him and the car bumped him.
	28	John Kline, .....	American, .....	Driver, .....	22	S.	Lincoln, .....	Leg fractured. Car wheel came loose from ascending car and struck him.
	30	Phillip Ambousky, .....	Slavonian, .....	Bottom man, .....	23	S.	Lytle, .....	Face slightly burned by explosion of gas.
Sept.	6	Albert Unavage, .....	Hungarian, .....	Miner, .....	41	M.	Wadesville, .....	Leg fractured. Fell under mine car.
	2	Daniel Grim, .....	American, .....	Driver, .....	22	M.	Brookside, .....	Arm fractured. Fell from mine car while riding to work.
	18	John Yudork, .....	Slavonian, .....	Miner, .....	28	S.	St. Clair, .....	Burned by gas. Baubon unscrewed the cap from his lamp to ignite fuse. He ignited the gas, burning Doubelhis and himself.
	20	William Doubelhis, .....	Lithuanian, .....	Laborer, .....	28	S.	Lytle, .....	Head cut and bruised by falling down breast away.
	20	Peter Baubon, .....	Lithuanian, .....	Miner, .....	35	M.	Lytle, .....	Ribs fractured by fall of slate.
	22	Edward Bonewitz, .....	American, .....	Miner, .....	35	M.	Lincoln, .....	Head injured. Killed by a mule.
	22	James Carroll, .....	American, .....	Miner, .....	29	M.	Lincoln, .....	Leg fractured. Was setting piece of slate and it fell on him.
	23	Frank Maguire, .....	American, .....	Driver, .....	21	S.	St. Clair, .....	
	27	John Allen, .....	American, .....	Miner, .....	43	M.	Wadesville, .....	

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TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Sept. Oct.	28 James Updegrave, .....	American, .....	Miner, .....	44 M.		Brookside, .....		Leg fractured by fall of coal.
	7 Howard Houser, .....	American, .....	Miner, .....	25 M.		Lincoln, .....		Arms dislocated by fall of coal.
	9 Andrew Choleck, .....	Slavonian, .....	Laborer, .....	23 M.		St. Clair, .....		Leg fractured by fall of slate at face of breast.
12	John Foley, .....	American, .....	Miner, .....	29 M.		Buck Run, .....		Head and leg injured by slate in breast.
	12 Alfred Snyder, .....	American, .....	Driver, .....	18 S.		Brookside, .....		Leg injured. Caught between car and loose rail.
23	Frank Strrock, .....	Polish, .....	Miner, .....	43 M.		Brookside, .....		Back and leg injured by fall of slate at face of breast.
26	George Cuatch, .....	Hungarian, .....	Brakeman, .....	22 S.		Mt. Hope, .....		Leg and ribs fractured. Fell between mine car and stripping. Outside.
	10 George Keroostas, .....	Polish, .....	Miner, .....	28 S.		Howard, .....		Face burned by explosion of gas.
Nov.	10 Edward Dempsey, .....	American, .....	Miner, .....	21 S.		Buck Run, .....		Hands and face burned by explosion of gas.
	15 William Heisler, .....	American, .....	Miner, .....	39 M.		Lincoln, .....		Back and leg injured by fall of coal.
16 Joseph Comafsky, .....	Hungarian, .....	Fan turner, .....	28 S.		Lytie, .....	Schuylkill, .....	Face and hands burned by explosion of gas.	
21	Anthony Barnett, .....	Lithuanian, .....	Laborer, .....	34 M.		Lytie, .....		Leg injured by fall of slate.
	21 Anthony Yancosky, .....	Lithuanian, .....	Laborer, .....	42 S.		Lytie, .....		Face and hands burned by explosion of gas.
22	Matthew Sneakas, .....	Russian, .....	Miner, .....	27 M.		Howard, .....		Hands and back burned by explosion of gas.
Dec.	1 Michael Orickto, .....	Hungarian, .....	Laborer, .....	22 S.		New Castle, .....		Knee bruised. Dumper fell on him. Outside.
	2 Edward Orff, .....	American, .....	Driver, .....	21 S.		Pine Hill, .....		Body bruised. Slipped from car and was squeezed between mine car and side of gangway.
3	Stiney Varanofski, .....	Polish, .....	Laborer, .....	29 S.		Oak Hill, .....		Body burned by ashes from boiler room. Outside.
14	John Yasutka, .....	Polish, .....	Laborer, .....	25 S.		New Castle, .....		Leg injured by rush of water in chute.

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

Good Spring Colliery, March 1, Joseph Gauntlett, miner, was instantly killed. He commenced a pillar heading at the face of breast on the above date, and had driven it about 7 feet on one side. He failed to place any timber to sustain the upper side of the heading, and while going down the breast manway in the evening on his way home a piece of coal fell from the upper side of the heading on him.

St. Clair Colliery, May 2, John Stolka, laborer, was killed by fall of coal. He was engaged filling a car with coal from a pillar which was being removed, when a fall occurred from an unseen slip, pinning him against the car.

St. Clair colliery, September 7, Richard Davis, miner, was instantly killed. He was changing a prop on the side of gangway when the coal pushed the prop from its position and fell on him.

Lytle colliery, February 18, Daniel Deegan, repairman, Henry B. Moore, loader, Peter Mostofskie, miner, George Cutlash, miner, Sylvester Pedock, miner, were descending slope in gunboat on west side at point opposite No. 2 level, when they were killed by a fall of rock.

The throttle valve of the tender slope hoisting engine being out of order, the officials concluded to lower the men in the gunboat of No. 2 slope. They placed a false bottom in west gunboat which made it convenient for men to get in and out. The east was running empty, timber being lowered in it during the day to No. 3 level.

The East boat was lowered rapidly, there being no person aboard. There were three boat loads of men lowered before the accident occurred.

The east or empty boat jumped the track disturbing the timber on the slope at No. 2 level, which in turn set the top moving, and it fell about the time west side boat with men in arrived at this place.

St. Clair colliery, October 5, Wociech Skobish, laborer, was killed by piece of rock, triangular shape, falling on him at face of breast.

St. Clair colliery, January 21, Wasil Dunski, miner, was killed by fall of slate. A piece of coal from a blast struck a set of timber near the face of the breast displacing it, Dunski got a hammer to arrange the timber, and struck it one blow when the timber collapsed allowing the slate to fall on him.

Phoenix Park colliery, February 27, George Marshall, miner, was instantly killed. He, his partner and one laborer, were engaged moving pillars on No. 1 plane N. basin. There was a bad piece of slate hanging near the face of skip. The three men tried to pull it down with drills, but failed. Marshall's partner wanted to put a blast in it, but Marshall objected, saying, it was all right. About 12:00 M. the slate fell, killing him.

New Castle colliery, March 14, Albert Master, driver, was killed by fall of top slate while on the gangway watching the loader filling his car. The mine foreman and repairman claimed they examined this piece of slate shortly before the accident occurred. The foreman ordered the repairman to put some props under it. He had sunk a prop hole and went out the gangway to get a prop, and while he was away the piece of slate fell on Master.



Wadesville colliery, March 16, Jerry Brunner, miner was killed by fall of slate while driving East Orchard gangway. At the time of the accident, he was digging coal at the face.

Otto colliery, June 10, Michael Stablum, miner, was killed by fall of slate at the face of gangway he was driving. He was trimming down a loose piece after a blast, when the slate fell on him.

Lytle colliery, November 21, Louis Oculbitas, laborer, was killed by fall of slate while filling car at face of gangway. The miner claimed he tried to pull the piece down and failing he notified the laborers not to go under it.

Otto colliery, November 29, John Richards, laborer, was killed by fall of slate while wheeling a barrow in the monkey heading. This piece of slate had two smooth sides running parallel with the heading, one end of it tapering to thin edge. The miner tested the roof a short time prior to the accident and pronounced it good.

### Mine Cars

Lytle colliery, March 14, Adam Drusk, laborer, was killed while working with timbermen by night. There were two loaded cars left standing in the gangway, and it was necessary to move them to allow free access for their timber truck. He hitched the mule to one of the cars and started into a tunnel close by, and as the car was entering the tunnel he attempted to jump on it to cross to the other side and while doing so he was caught between the car and the tunnel.

Blackwood tunnel, March 14, Michael Brushkie, driver, was killed while coming out of tunnel with two mules attached to two loaded cars. He stopped the trip about 200 feet from the tunnel mouth to take one of the cars out to the rock bank. When he returned he hitched his team to car in tunnel, whipped the mules, which caused them to move quickly, and in attempting to get on the car he fell under it.

Lincoln colliery, April 10, James Schreffler, driver, was fatally injured while attempting to cross from one bumper of empty cars of trip he was hauling in gangway, he fell to the track, two of the cars passing over him. He died April 14.

Otto colliery, May 25, John Davis, laborer, was killed by being run over by mine car. A loaded car had been left over after the night shift on the gangway, and team driver undertook to move it out of the way. He got it started and jumped on behind. He saw lights on the track and gave the alarm, but Davis failed to get out of the way.

Good Spring colliery, June 20, Daniel Nicewenter, laborer, was killed by being squeezed between two rock dumpers on the end of rock bank. The locomotive pushed two cars against the head block on end of bank and then pulled one back to turnout, a short distance.

The switchman placed a sprag in wheel of dumper when they started from end of dump, but it did not hold, he recoupled the engine from the dumper, believing the sprag would remain in the wheel and retain the car in position, as it had often done before. The locomotive and crew left for breaker and had gone but a short distance when car commenced to gravitate to end of bank, catching deceased against car and dump.



Mt. Hope, July 14, George Ryan, driver, was killed by being squeezed between mine car and gangway leg on upper side of gangway. He was driving a mule and pulling out a loaded car when it caught against timber. He unhitched the mule and pulled the car back, hitched the mule to front of car and started off again. When the car arrived at the place where it had caught before, it caught again and killed him. He should have been on the lower side of gangway.

Lincoln colliery, September 28, Charles Fessler, topman, was instantly killed while pulling spreader chain on top of inside slope. The first car of a trip coming up the slope, after crossing the knuckle, jumped the track, and ran across the tracks, pinned Fessler against the side of the tunnel.

Lincoln colliery, December 18, Charles Lewis, laborer, was run over and killed. He was running two empty gondolas to breaker, and in some unknown manner slipped from the car and fell under the cars.

### Explosions of Gas and Dynamite

Phoenix Park colliery, August 25, Albert Fisher, miner, was fatally injured. He had left the colliery and secured work elsewhere. Later he and his partner returned for their tools, and while hunting for them with a naked light ignited gas in a blind heading above the foot of Tracey's shaft. He died September 7.

Brookside colliery, October 2, John Gamper, miner, was fatally burned while going into the gangway in the morning. When he arrived at a point at outside end of turnout, he ignited a small pocket of gas. Died October 7. The fireboss had been in the gangway one hour before the accident and found no gas. There had been no gas found in this gangway since 1900.

Buck Run colliery, November 10, Michael Baylon, miner, was engaged skipping pillar in N. dip Crosby vein, when a fall of coal at or near face of breast forced gas on his naked light burning him and his partner. Baylon died November 18.

### Premature Blasts

Pine Hill colliery, April 27, Anthony Wenskonnis, miner, was killed. No. 80 breast men in West Buck Mountain went into 79 breast to fire a blast in face of heading from No. 79 to connect with heading they were driving from No. 80. They drilled a hole, charged and ignited it, retiring to the monkey, giving the usual signal.

Wenskonnis came through heading in opposite pillar, from No. 78 breast to call No. 79 men to go home and about the time he arrived at the end of heading in breast No. 79, the blast exploded, killing him.

Oak Hill colliery, May 9, Anthony Sindors, miner, was fatally injured by being struck with coal from a blast. His partner drilled and charged a hole on the inside of breast at face, while he was drilling another hole on the outside rib with his back turned to his partner Thomas Kurtz. Kurtz ignited the blast he had prepared without notifying Sindors, who was but 15 or 16 feet away, and

when the blast exploded some of the coal struck Sindors. He died June 3.

Buck Run colliery, August 30, Stiney Buckloskey, miner, was instantly killed. He ignited two blasts, one in the bottom and the other in the top at the face of gangway. One of the blasts exploded and Buchloskey concluded they both were exploded. He went back to face of gangway and while viewing the place the second blast exploded, killing him.

Howard colliery, October 6, Cornelius Shugartz, miner, ignited a blast at face of breast, and before he could retire to the heading the blast exploded, killing him.

### Falling into Shafts, Slopes, Etc.

Pine Knot shaft, March 22, Frank Bambrick, topman, went from south end to north end of shaft to fix head block and fell into shaft and was killed. The outside foreman had removed a plank that separated the top landing and compartment and failed to replace it.

John Veith No. 2 shaft, November 22, George Washko, laborer, was internally injured. He and others were on scaffold in shaft. The bucket came down loaded with plank lagging 2x8 inches, and landed on the scaffold. They removed the chains and turned the bucket on its side in order to remove the lagging quickly. When it struck the scaffold it gave way, precipitating Washko and others to the bottom of the shaft, a distance of 22 feet.

Blackwood colliery, December 18, Angelo Zerner, miner, was killed. He retreated to his manway after igniting a blast, and was found at the bottom partly covered with loose coal and dead.

### Suffocation

Mt. Hope colliery of Mt. Hope Coal Company, January 23, William Posseskie and John Boyock, miners, were smothered by clay. They were engaged driving a gangway across old breasts. The gangway was timbered to the face and forepolled. About noon the face of the gangway commenced to move but they paid little attention to it. About 2 P. M. a rush of clay and mud pushed out from the face of gangway. Boyock made an attempt to run, but tripped and fell, the clay smothering him. Posseskie crouched beside one of the gangway legs and was covered to the chin. Regaining consciousness he directed his rescuers how to proceed to relieve him. While attempting to extricate him, another rush of clay occurred and completely enveloped him. The rescuers barely escaped with their lives.

While stripping the surface in vicinity of this breast some years ago, they filled the breast with clay and sand to an elevation of 15 to 20 feet above the surface.

Oak hill, July 22, Felix Saymon, slate picker, was engaged shoveling buckwheat coal in pocket. He remained too long in the pocket after loading had commenced and was drawn through the chute and smothered.

Buck Run colliery, October 7, James Ryan, starter, exploded a

blast in breast battery. He remained in the monkey a short time, and the clay rushed through the batter filling the monkey heading and smothering him.

Blackwood colliery, October 11, Charles Obenhouse, miner, was killed. He commenced to open new breast, and removed the lagging from the monkey heading timber. The vein dipping at a heavy angle, the coal gravitated from the upper side of the monkey, smothering him while he was in the top part of the chute.

#### Explosion of Boiler, Outside

Wolf Creek washery, January 18, Henry Confair, fireman, was seriously scalded by an explosion of a boiler and died January 20, at Pottsville Hospital.

#### Explosions of Powder

Buck Run colliery, July 3, Patrick Brophy, miner, was killed while working in breast on the afternoon shift. He was told the place was all right in the morning when he was up at the face. He went up inside manway to bring his powder down from the pillar heading to use it in driving the heading on the outside. He left his safety lamp down in the monkey and went up with naked light. When found at the bottom of the manway the powder keg which he was carrying was close to him and spread open. According to the testimony of the first person at the scene of accident the powder smoke was oozing from the loose coal at foot of manway.

#### Machinery

Otto colliery, April 29, Claude White, jig receiver, was killed. He took an oil can and said he was going down to the scraper line to oil some wheels. There had been a new cam put on the mud shaker, and it is supposed that on his way back he went to look at it and perhaps oil it. While doing so his clothers were caught by the shaker shaft, and he was drawn into the machinery. No one was supposed to oil the cams while in motion.

#### Miscellaneous

East Ridge colliery, February 9, Paul Looks, laborer, was killed by culm falling on him. He was engaged loading culm from bank outside. On two occasions it appears he took the pick from the person engaged the culm and undertook the task himself, but he ventured too far beneath the frozen crust, and it fell on him.

Newcastle colliery, December 14, Joseph Wable, miner, was killed. He and his partner were driving a chute in Mud drift gangway to tap water confined in the old gangway above them. They had drilled two holes and encountering rock and water, they commenced another cut, and after firing a blast, the water broke in and drowned Wable.

## CONDITION OF COLLIERIES AND IMPROVEMENTS

## PHILADELPHIA AND READING COAL AND IRON COMPANY

## Brookside Colliery

East Brookside No. 5 Slope.—A plane has been driven from the 7th to the 5th lift on No. 4 vein; length 228 yards. The shaft mentioned in last year's report is completed at a distance of 1,836 feet. Foundation has been laid for 45x60 inch water shaft engines. A sump tunnel is being driven to connect with bottom of shaft. The length when finished will be 183 1-3 yards; the distance driven is 75 2-3 yards. A tunnel has been driven from the bottom of slope to the bottom of the new shaft. Length of tunnel 364 2-3 yards. A tunnel driven from No. 4 to No. 5 vein at the top of No. 3 plane; length of tunnel 43 yards. Tunnel driven on Tender slope No. 3 lift from No. 4 to No. 5 vein; length of tunnel 30 yards.

West Brookside.—A tunnel has been driven on No. 5 lift E. from No. 5 to No. 4 vein in the Basin slope.

## Lincoln Colliery

No. 2 Slope.—Plane has been driven from the 4th to the 3rd lift on West No. 5 vein; length of plane 330 feet. A tunnel is being driven on the No. 4 lift from No. 4 lift from No. 4 to No. 5 vein. When completed it will approximate 103 1-3 feet. Distance driven 20 1-3 yards. There has been a direct current electric plant installed at this colliery during the year. The power house equipment consists of two 19 by 18 Reeves automatic cut-off, simple engines, directly connected to two 175 K. W., 250 volt, 225 R. P. M. general electric generators. The electric power is controlled by a switch-board, consisting of two generator panels, and one two-circuit feeder panels. The mining equipment consists of four eight-ton general electric mining motors of the Standard type, speeded at 6 miles per hour; two electrical driver hoists, and one 15 H. P. stationery motor, for operating car hoists on head of breaker. Condition of colliery is good.

## Good Spring Colliery

No. 1 Slope.—One set of return tubular boilers has been installed. Turnout has been driven 111 1-3 yards long on the 4 foot vein at the bottom of No. 1 slope. Tunnel has been driven on 3rd lift east side from Mammoth vein to the 4 foot vein, a distance of 30 2-3 yards. Tunnel has been driven on the east side of No. 3 lift from the Mammoth to the Bottom bench, a distance of 11 1-3 yards. A new pump room has been made on No. 3 lift 16 2-3 yards long. A tunnel is being driven on the No. 2 lift from the Skidmore vein to the Buck Mountain vein, a distance of 20 yards.

No. 3 Slope.—One set of return tubular boilers has been installed. One 14x20 inch hoisting engine has been erected on the top of new plane outside, to hoist the coal from the Lykens Valley tunnel.



Water level tunnel has been driven, cutting the No. 2 Lykens Valley vein at a distance of 277 1-3 yards. This tunnel is being extended to the No. 4 vein and is driven a distance of 209 2-3 yards.

A tunnel is being driven on the 1st lift East Skidmore vein to the Buck Mountain vein; length driven 16 2-3 yards.

Air tunnel is being driven in the water level; length driven 13 1-3 yards.

Condition of colliery is good.

#### Glendower Colliery

A slope on the Buck Mountain vein has been sunk a distance of 1,040 feet and completed.

A tunnel 40 feet has been driven in West Glendower, Daniel vein slope, from the Daniel to the Skidmore vein.

Condition of colliery is good.

#### Otto Colliery

Nest slope.—Air tunnel has been driven on the lower lift from the Primrose to the Holmes vein; distance 140 feet. Completed July 3. Air shaft 10x10 feet is being sunk from the surface to the Holmes vein.

Condition of colliery is good.

#### John Veith Shafts

Shaft No. 1 is now down to a depth of 614 feet; No. 2, 480 feet.

#### Phoenix Park Colliery

The Tracey shaft mentioned in last year's report was completed April 29, at a distance of 344 feet. A slope is being driven from the bottom of this shaft to the 6th level of Diamond vein. A 21 foot fan, driven by an engine 20x30 direct acting, has been erected at the Tracey air shaft.

Condition of colliery is good.

#### Rausch Creek Washery

Erected a frame screen house 97 feet x 5 inches x 73 feet x 3 inches x 80 feet x 4 inches. One pair 24x48 inch scraper line engines. Six return tubular boilers. One Jeansville Duplex pump 14 x 18 x 22 inches has been installed. Wood-lined column 14 inches diameter, 666 feet long, has been placed. A scraper line 445 feet long, 32x12 inches; another 188 feet long 36x12 inches, another 320 feet long, 24x12 inches, has been erected.

#### ST. CLAIR COAL COMPANY

#### St. Clair Colliery

During the month of March they commenced to operate a stripping on the Mammoth vein in the old Johns colliery workings. They removed about 300,000 cubic yards of material and uncovered part of the vein. In some places it ranges from 50 to 60 feet in thickness, and is in excellent shape. They are mining 100 mine cars of coal

daily. The output will be increased as the stripping is extended. The excavation is being done by contract. The Millard-McGraw Construction Company, Philadelphia, are the contractors. There are two large steam shovels and four locomotives operated day and night.

Condition of colliery is good.

#### LYTLE COAL COMPANY

##### Lytle Colliery

A tunnel has been driven from Big Tracey S. dip, to Bid Tracey N. dip, 245 feet. A tunnel has been driven from White Ash 235 feet, with bore hole extending from face 60 feet long. Tapping the water in Kears old Primrose slope No. 5 lift. An air tunnel driven from N. dip Diamond vein to N. Dip Primrose 505 feet. A tunnel driven from Orchard to Primrose N. dip, 210 feet. An air tunnel has been driven from White Ash to Four Foot vein East side 5th level, 50 feet. Air tunnel driven from Orchard to Primrose, 120 feet.

New 18 foot diameter force fan, concrete and iron, blades 7x7x5 feet x 5 inches, has been erected to take the place of Primrose fan, which was destroyed by fire May 19.

Six new spiral separators have been placed in the breaker.

Condition of colliery is good, except drainage in West Primrose No. 4 lift, and West Skidmore vein, Billy plane.

#### BUCK RUN COAL COMPANY

##### Buck Run Colliery

There have been erected one fan, 16 feet in diameter, on Daniel vein south dip, and one 14x16 inch engine to drive the fan. One fan has been erected 12 feet diameter, on the Crosby vein North dip, also a 9x18 inch fan engine. Erected one pair of 30x42 inch first motion hoisting engines, to hoist the coal from the Daniel slope, and abandoned the 22x48 inch geared engines. Installed two 320 horse power Babcock and Wilcox tubular boilers, making a total of 1,500 horse power.

No. 1 Buck Mountain tunnel, second level, was driven 226 feet and completed. No. 2 Buck Mountain tunnel, second level, was driven 279 feet and completed.

A slope 12x8 feet, on the Crosby vein South dip No. 2 level was driven to basin, a distance of 151 feet.

The Daniel vein slope 14 feet by 6 inches by 8 feet has been driven a distance of 280 feet No. 2 level, but is not yet completed.

Condition of colliery is good.

#### OAK HILL COAL COMPANY

##### Oak Hill Colliery

A tunnel has been driven from the Black Heath to Skidmore vein in the No. 3 level. A tunnel has been driven from West White Ash gangway around east side of shaft, to connect with former tunnel, which was driven to make a water course to run water from Hill workings to the No. 3 level and to avoid back switching the mine cars on their way to slope bottom on the third level. A new 36x



12x36 double acting plunger pump has been placed at foot of No. 2 Primrose slope. Air tunnel is being driven in No. 4 level from a point 140 feet north of shaft southward, around the west side of shaft, to connect with return airway in Black Heath, at the 4th level on the south side of shaft. This tunnel is being driven to carry return air to North Basin. Two narrow breasts have been driven from the third level Skidmore vein through to the water level drift. They intend to tap and remove the water from the old Hill slope workings in the Black Heath vein, through a bore hole from the Skidmore.

Condition of colliery is good, except the drainage in West Skidmore water level drift.

#### PINE HILL COAL COMPANY

##### Pine Hill Colliery

A tunnel was driven on No. 3 level in the shaft from Buck Mountain vein, cutting the Seven Foot Skidmore and Black Heath veins. Total length driven 309 feet. Tunnel is not completed. Tunnel driven from Seven Foot in No. 2 level towards Skidmore vein is not completed. Total length driven 18 feet; turnouts driven.

Turnout in No. 3 level, West Seven Foot was driven 45 feet; turnout not completed. Turnout in No. 3 level East seven foot, was driven 131 feet; turnout not completed. Turnout in No. 3 level West Buck Mountain was driven 131 feet drift.

In the drift a slope was driven through the rock and slate, in Buck bottom split in the West Side No. 1 breast, 84 feet. This slope will be driven to the surface. Not yet completed. A 16 foot fan was installed out on the mountain near Lawrence workings, for the drift. This fan runs 86 revolutions per minute and is run by a continuous current 250 horse power and 136 amperes motor. Motor runs 975 revolutions per minute.

The shaft was completed this year and is now down 2 lifts. A new pump from Scranton Steam Pump Company, size 40 by 14 by 36, was installed at the bottom of the shaft. The capacity is 3,000 gallons; the lift is 600 feet. Condition of colliery is good.

Pine Hill breaker, boiler house, office and two dwelling houses burned down August 24, at 2:20 A. M. Cause unknown. A new breaker is being erected on the site of the old one. The breaker will be 121 feet wide and 118 feet deep. The first bent will be concrete up to the height of 29 feet and the last bent will be concrete up to the height of 53 feet. The coal and rock pockets will also be all concrete. The concrete work is re-inforced by the Kahn system of re-inforcement.

A new car shop, machine and blacksmith shop have been erected. A breaker engine house made from concrete blocks is also being erected. Two sets of Sterling Maxim boilers will be erected south of the breaker. A separator will also be built to take the large rock and grind the coal before entering the breaker.

#### DARKWATER COAL COMPANY

##### Newcastle Colliery

A tunnel has been driven from Skidmore to Buck Mountain vein in Skidmore slope North basin. Two outlets are being driven on the

Buck Mountain vein to surface. A double track slope has been sunk in Skidmore vein Main basin, a distance of 660 feet deep on the south dip. Condition of colliery is fair.

#### LEHIGH VALLEY COAL COMPANY

##### Blackwood Colliery

A tunnel 8x12 feet was driven from main tunnel, east, through the foot of the shaft, a distance of 200 feet, and then 200 feet north, and then 200 feet west, back to the main tunnel. This is for handling the loaded and empty cars. The loaded cars run by gravity from main tunnel to foot of shaft, and the empty cars run by gravity from shaft to the foot of the car hoist, about 50 feet. They are then taken by an endless chain up a short plane, 40 feet, and again run by gravity back to the main tunnel.

A tunnel has been started on the West Orchard, about 3,000 feet from main tunnel, to go south from West Orchard to Mammoth vein. It has only been driven about 60 feet. Two 10 ton motors have been put in service in Blackwood tunnel, and 1 in Woods tunnel. All coal will be moved by electric haulage. A 7x10 foot tunnel has been driven from West Orchard North 90 feet to Diamond vein. An air hole has been started on the Diamond vein, but is not quite completed. In Woods tunnel, air holes have been driven on the Primrose and Mammoth veins. Condition of colliery is good.

The breaker mentioned in last year's report is completed, and commenced operations on November 1.

The shaft mentioned in last year's report is completed at a distance of 206 feet.

An air shaft, 12x12 feet, was sunk on the Tracey vein, and a 6x20 foot Guibal ventilating fan was erected. This fan can be used as an exhaust or blow fan. It is proposed to use it as an exhaust fan in warm weather, and a blow fan in cold weather.

A brick engine house, 26x69 feet, was built, and contains the shaft hoisting engines, 26x36 feet, direct motion, Plane engine, 16x30 inches, geared, and a 20x20 inch McEwen engine for driving the electric dynamo.

A new Goyne Compound Duplex pump, 19x32 inches-14x48 inches, was erected, and is used for furnishing the breaker wash water.

A "We-Fu-Go" purifying plant was erected by W. B. Scaife and Company. This is to purify mine water for the boilers. It has a capacity of 6,000 gallons per hour.

#### E. WHITE AND COMPANY

Howard colliery in good condition.

#### MT. HOPE COAL COMPANY

Mt. Hope colliery in fair condition.

#### JOHN H. DAVIS COMPANY

Ellsworth colliery in good condition, except drainage in North dip slope.

## Mine Foremen's Examinations

The annual examination for mine foremen and assistant mine foremen was held at the Court House, Pottsville, April 26 and 27. The board was composed of the following members:

Michael J. Brennan, Inspector, Pottsville.

John Maguire, Superintendent, Pottsville.

Patrick Purcell, Miner, Heckscherville.

Jacob Amos, Miner, Branchdale.

The following persons were recommended for certificates:

## Mine Foremen

Oliver Machamor, Tower City.

Rudolph Schneider, Tower City.

Frank Schneider, Tower City.

Michael Close, Heckscherville.

Tobias Hyer, St. Clair.

## Assistant Mine Foremen

John E. Salem, Minersville.

John Crone, Minersville.

Thomas F. Glennon, Minersville.

Henry Smith, Jolliette.

William Jones, Jolliette.

George W. Schrope, Tower City.

Charles Gable, Duncott.

James Collins, Duncott.

William F. Ney, Llewellyn.

Archie Kelly, Zerbe.



# Thirteenth District

SCHUYLKILL COUNTY

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Pottsville, Pa., February 26, 1906.

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

Sir: I have the honor of transmitting herewith my report as Inspector of Mines of the Thirteenth Anthracite District for the year ending December 31, 1905.

Respectfully submitted,

JOHN CURRAN,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	23
Number of mines, .....	45
Number of mines in operation, .....	44
Number of tons of coal shipped to market, .....	2,992,177
Number of tons used at mines for steam and heat,.....	384,303
Number of tons sold to local trade and used by employes,	69,001
Number of tons produced, .....	3,445,481
Number of persons employed inside of mines, .....	5,828
Number of persons employed outside, .....	3,396
Number of fatal accidents inside of mines, .....	32
Number of fatal accidents outside, .....	8
Number of non-fatal accidents inside of mines, .....	85
Number of non-fatal accidents outside, .....	21
Number of tons of coal produced per fatal accident inside,	107,671
Number of persons employed per fatal accident inside, ..	182
Number of persons employed per fatal accident outside,..	424
Number of persons employed per non-fatal accident inside,	69
Number of persons employed per non-fatal accident out- side, .....	161
Number of wives made widows, .....	23
Number of children orphaned, .....	65
Number of steam locomotives used inside of mines, ....	8
Number of steam locomotives used outside, .....	32
Number of compressed air locomotives used inside, .....	4
Number of fans in use, .....	25
Number of gaseous mines in operation, .....	26
Number of non-gaseous mines in operation, .....	18
Number of new mines opened, .....	1
Number of old mines abandoned, .....	1



## TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Lehigh Coal and Navigation Company, .....	1,069,128
Philadelphia and Reading Coal and Iron Company, ....	518,002
Mill Creek Coal Company, .....	511,013
Lehigh and Wilkes-Barre Coal Company, .....	503,807
Coxe Brothers and Company, Incorporated, .....	306,957
Truman M. Dodson Coal Company, .....	118,052
Dodson Coal Company, .....	114,631
Beddall Brothers, .....	90,635
Maryd Coal Company, .....	64,613
Gorman and Campion, .....	38,533
Butcher Creek Coal Company, .....	34,590
East Lehigh Coal Company, .....	23,034
Phillips Brothers, .....	15,601
William Cook, .....	12,275
Joseph H. Dennings, .....	6,098
Neil Breslin and Sons, .....	2,031
Dunkleberger and Young, .....	1,480
William H. Greenfield, Jr., and Company, .....	15,001
Total, .....	3,445,481

## Production by Counties

Schuylkill, .....	3,445,481
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	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										
Lehigh Coal and Navigation Co., .....	5	3	8	15	1	16	213,826	51,275	1,564	780	2,344	313	260	104	780	
Philadelphia and Reading Coal and Iron Co., .....	1	.....	1	16	4	20	14,076	32,375	1,182	609	1,782	169	.....	74	130	
Mill Creek Coal Co., .....	1	.....	1	19	.....	20	73,822	29,873	624	342	966	89	.....	33	.....	
Lehigh and Wilkes-Barre Coal Co., .....	3	3	6	14	.....	14	167,826	3,186	1,908	298	1,908	266	169	78	102	
Coxe Brothers and Co., Incorporated, .....	.....	.....	.....	.....	.....	.....	61,391	.....	.....	.....	.....	.....	.....	.....	.....	
Truman M. Dodson Coal Co., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Dodson Coal Co., .....	1	.....	1	10	3	13	11,595	17,105	509	234	528	59	.....	.....	47	
Beddall Brothers, .....	1	.....	1	6	.....	7	114,531	19,105	274	92	476	254	.....	.....	60	
Maryd Coal Co., .....	1	.....	1	.....	.....	.....	10,635	.....	95	110	205	95	.....	.....	36	
Gorman and Campion, .....	.....	.....	.....	.....	.....	.....	64,613	16,153	231	169	400	231	.....	.....	.....	
Butcher Creek Coal Co., .....	.....	1	1	.....	.....	.....	19,296	8,633	50	22	81	27	.....	.....	.....	
East Lehigh Coal Co., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Phillips Brothers, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
William Cook, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Joseph H. Dennings, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nell Breslin and Sons, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hunkleberger and Young, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
William H. Greenfield, Jr. and Co., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Totals and averages for district, .....	32	8	40	85	21	106	17,671	40,735	5,858	3,236	9,224	182	424	69	161	

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Falls of coal, .....	1	1	1	3	1	1	1	1	1	1	1	1	8	25.00
Falls of slate, .....	1	1	1	4	1	1	1	1	1	1	1	1	9	28.12
Falls of roof, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	3.12
Mine cars, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	6.25
Explosions of gas and dust, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	6.25
Suffocation by gas, etc., .....	1	1	1	1	1	1	1	1	1	1	1	1	11	3.12
Explosions of powder and dynamite, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	3.12
Premature blasts, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	6.25
Falling into shafts, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	3.12
Falling into slopes, etc., .....	1	1	1	1	1	1	1	1	1	1	1	1	11	3.12
By mules, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	6.25
Miscellaneous, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	6.25
Totals, .....	3	1	2	6	7	2	2	1	2	2	1	3	32	100
Causes of Accidents Outside														
Cars, .....	1	1	1	1	1	1	1	1	1	1	1	1	4	50.00
Machinery, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	25.00
Miscellaneous, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	25.00
Totals, .....	2	1	1	1	1	1	1	1	1	1	1	1	11	100
Grand totals inside and outside, .....	3	5	3	6	8	3	2	2	3	3	1	3	40	.....

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Falls of coal, .....	3	2	1	1	3	1	1	2	2	2	2	2	11	12.94
Falls of slate, .....	1	1	1	1	1	1	1	1	1	1	1	1	4	4.71
Falls of roof, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	2.35
Mine cars, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	15.29
Explosions of gas and dust, .....	3	2	2	1	8	3	2	2	3	1	2	2	24	28.23
Explosions of powder and dynamite, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	3.53
Premature blasts, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	1.13
Falling into shafts, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	5.78
Falling into slopes, etc., .....	1	1	1	1	1	1	1	1	1	1	1	1	11	1.18
By mules, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	10.59
Miscellaneous, .....	1	1	1	1	1	1	1	1	1	1	1	1	11	10.59
Totals, .....	5	10	8	4	14	6	5	6	6	9	6	6	85	100
Causes of Accidents Outside														
Cars, .....	1	1	1	1	1	1	1	1	1	1	1	1	4	19.05
Machinery, .....	1	1	1	1	1	1	1	1	1	1	1	1	4	19.05
Boiler explosions, .....	1	1	1	1	1	1	1	1	1	1	1	1	4	4.76
Miscellaneous, .....	2	1	1	1	5	1	1	1	1	1	1	1	12	57.14
Totals, .....	3	1	1	1	7	4	1	1	2	1	1	1	21	100
Grand totals inside and outside, .....	5	15	8	5	21	10	6	7	8	9	7	7	106	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....	2	1	2	4	6	2	2	...	...	2	1	...	23
Miners' laborers, .....	...	...	...	2	1	...	...	1	...	...	...	2	6
Drivers and runners, .....	...	...	...	...	...	...	...	1	1	...	...	...	1
Pumpmen, .....	1	...	...	...	...	...	...	...	1	...	...	...	1
Company men, .....	...	...	...	...	...	...	...	...	...	...	...	1	1
All other employes, .....	...	...	...	...	...	...	...	...	...	...	...	1	1
Totals, .....	3	1	2	6	7	2	2	1	2	2	1	3	32
Outside													
All other employes, .....	...	2	1	...	1	1	...	1	1	1	...	...	8
Totals, .....	...	2	1	...	1	1	...	1	1	1	...	...	8
Grand totals inside and outside, .....	3	3	3	6	8	3	2	2	3	3	1	3	40

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Fire bosses and assistants, .....	...	...	...	...	...	...	1	...	...	...	...	...	1
Miners, .....	4	2	2	3	2	6	3	4	4	4	1	3	42
Miners' laborers, .....	...	1	2	1	2	...	3	1	2	...	...	...	17
Drivers and runners, .....	...	1	1	1	1	...	...	1	...	3	...	3	11
Pumpmen, .....	1	...	...	...	...	...	1	...	...	...	...	...	1
Company men, .....	...	...	1	...	...	...	...	...	2	...	...	...	3
Totals, .....	5	10	8	4	14	6	5	6	6	9	6	6	85
Outside													
Enginers and firemen, .....	...	...	...	...	3	1	1	1	...	...	...	...	6
Statepickers (boys), .....	...	...	...	1	3	...	...	...	...	...	...	...	4
All other employes, .....	...	3	...	...	1	3	...	...	2	...	1	1	11
Totals, .....	...	3	...	1	7	4	1	1	2	...	1	1	21
Grand totals inside and outside, .....	5	13	8	5	21	10	6	7	8	9	7	7	106

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	2	1	2	3	1	1	1	1	1	1	1	1	12
Welsh, .....	1	1	1	1	1	1	1	1	1	1	1	1	11
Irish, .....	1	1	1	1	1	1	1	1	1	1	1	1	11
German, .....	2	2	2	2	2	2	2	2	2	2	2	2	23
Polish, .....	1	1	1	1	1	1	1	1	1	1	1	1	11
Hungarian, .....	1	1	1	1	1	1	1	1	1	1	1	1	11
Italian, .....	1	1	1	1	1	1	1	1	1	1	1	1	11
Slavonian, .....	1	1	1	1	1	1	1	1	1	1	1	1	11
Lithuanian, .....	1	1	1	1	1	1	1	1	1	1	1	1	11
Austrian, .....	1	1	1	1	1	1	1	1	1	1	1	1	11
Russian, .....	1	1	1	1	1	1	1	1	1	1	1	1	11
Totals, .....	2	2	3	6	2	2	2	2	2	2	1	3	40

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	4	2	3	2	2	4	2	3	2	1	1	31
Welsh, .....	1	1	1	1	1	1	1	1	1	1	1	1	12
Irish, .....	1	1	1	1	1	1	1	1	1	1	1	1	12
German, .....	1	1	1	1	1	1	1	1	1	1	1	1	12
Polish, .....	2	3	5	2	1	3	3	3	1	6	2	3	31
Hungarian, .....	1	1	1	1	2	1	1	1	1	1	1	1	14
Italian, .....	1	1	1	1	1	1	1	1	1	1	1	1	12
Slavonian, .....	1	1	1	1	6	1	2	1	2	3	1	1	18
Lithuanian, .....	2	2	1	1	1	3	3	1	1	1	1	2	13
Russian, .....	1	1	1	1	1	1	1	1	1	1	1	1	12
Tyrolean, .....	1	1	1	1	1	1	1	1	1	1	1	1	12
Totals, .....	5	13	8	5	21	10	6	7	8	9	7	7	106

TABLE 1.—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 person 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 person
Lehigh Coal and Navigation Co.	Shaft, ..	Gaseous, ..	Fan, ..	25	8	7	70	1.9	} Guibal, ....	Steam, ..	4	84,477	68,539	90,150	225	285
No. 8, ..	Slope, ..	Gaseous, ..	Fan, ..	24	6	5.6	76	2.2				71,359	76,475	81,562	238	237
No. 10, ..	Slope, ..	Gaseous, ..	Fan, ..	24	6	5.6	75	1.3				62,000	40,000	62,000	239	187
No. 11, ..	Shaft, ..	Gaseous, ..	Fan, ..	24	6	5.6	70	1				55,000	30,000	60,000	239	126
No. 12, ..	Slope, ..	Gaseous, ..	Fan, ..	21	6	7	61	1.5				69,710	70,082	70,455	163	480
Philadelphia and Reading Coal and Iron Co.	Shaft, ..	Gaseous, ..	Fan, ..	21	6.10	6	75	1.5	56,600	57,200	58,000	206	229			
Silver Creek, ..	Slope, ..	Gaseous, ..	Fan, ..	18	4	4	80	1	} Guibal, ....	Steam, ..	7	70,588	74,457	78,317	254	293
Mill Creek Coal Co.	Slope, ..	Gaseous, ..	Fan, ..	18	4	4	80	.5				27,188	20,084	24,788	86	244
Buck Mountain No. 1, ..	Slope, ..	Gaseous, ..	Fan, ..	25	8	6.3	65	2				57	57	57	57	57
Buck Mountain No. 2, ..	Slope, ..	Gaseous, ..	Fan, ..	15	4.5	3.1	70	.8				58,550	59,201	60,035	156	380
Buck Mountain No. 3, ..	Slope, ..	Gaseous, ..	Fan, ..	15	4.5	3.1	70	.8				58,840	58,840	59,040	156	377
Lehigh and Wilkes-Barre Coal Co.	Slope, ..	Non-gas, ..	Fan, ..	15	4.5	3.1	65	.7	39,265	39,665	40,065	125	317			
Honey Brook No. 5, ..	Drift, ..	Non-gas, ..	Natural, ..	15	4.5	3.1	65	.7	39,265	39,665	40,065	125	317			
Honey Brook drift, ..	Slope, ..	Non-gas, ..	Fan, ..	15	4.5	3.1	65	.7	39,265	39,665	40,065	125	317			
Honey Brook No. 20, ..	Slope, ..	Non-gas, ..	Fan, ..	15	4.5	3.1	65	.7	39,265	39,665	40,065	125	317			
Green Mountain, ..	Slope, ..	Non-gas, ..	Fan, ..	15	4.5	3.1	65	.7	39,265	39,665	40,065	125	317			
Audenried No. 4, ..	Slope, ..	Gaseous, ..	Fan, ..	15	4.5	3.1	65	.7	39,265	39,665	40,065	125	317			

\*Fan not in operation, opening old work.



Audenried No. 11, .....	Slope, ...	Gaseous, ..	Fan,.....	4.2	3.8	90	.5	Guibal, .....	Steam, ..	10	90,350	93,275	96,200	251	332
Audenried No. 16, .....	Slope, ...	Gaseous, ..	Fan,.....	3.4	4	80	.5	Guibal, .....	Steam, ..	2	30,000	31,000	42,000	42	738
Coxe Brothers and Co., Incorporated															
Oneida No. 1, .....	Shaft, ...	Gaseous, ..	Fan,.....	5.3	5.10	150	1.75	Pelzer, .....	Steam, ..	9	56,705	53,115	49,225	115	461
Oneida No. 1, .....	Slope, ...	Gaseous, ..	Fan,.....	6	5.9	50	1	Guibal, .....	Steam, ..	2	28,000	28,750	29,500	32	888
Oneida No. 4, .....	Shaft, ...	Non-gas.	Fan,.....	6	6.6	60	.9	Guibal, .....	Steam, ..	7	69,500	71,760	73,400	147	488
Oneida shaft, .....	Slope, ...	Non-gas.													
Oneida No. 6, .....	Slope, ...	Non-gas.													
Truman M. Dodson Coal Co.															
Kaska William, .....	Shaft, ...	Gaseous, ..	Fan,.....	4	5	65	.6	} Guibal, .....	Steam, {	6	86,940	87,470	88,000	162	539
Kaska William, .....	Shaft, ...	Gaseous, ..	Fan,.....	6	5.10	200	1.1								
Kaska William, .....	Shaft, ...	Gaseous, ..	Fan,.....	4		220	1.5								
Dodson Coal Co.															
Morea, .....	Shaft, ...	Gaseous, ..	Fan,.....	6.10	6	80	1	} Guibal, .....	Steam, ..		41,170	43,550	45,500	108	403
Morea, .....	Slope, ...	Gaseous, ..	[ Fan,.....	6.10	6	80	.9								
			[ Fan,.....	6.10	6	80	.5								
Beddall Brothers															
Greenwood, .....	Slope, ...	Gaseous, ..	Natural,†							3	21,000	23,000	25,000	95	242
Greenwood, .....	Drift,...	Non-gas.	Natural,												
Maryd Coal Co.															
Maryd No. 1, .....	Slope, ...	Gaseous, ..	Fan,.....	4	5	72	1.75	Guibal, .....	Steam, ..	3	68,000	68,000	68,000	79	797
Maryd No. 1, .....	Drift,...	Non-gas.	Natural,												
Maryd No. 2, .....	Drift,...	Non-gas.	Natural,												
Gorman and Campion															
Bell, .....	Drift,...	Non-gas.	Natural,											50	
Butcher Creek Coal Co.															
Laurel Run, .....	Slope, ...	Non-gas.	Natural,											12	
East Lehigh Coal Co.															
East Lehigh, .....	Drift,...	Gaseous, ..	Fan,.....	4	3.6	75	.5	Guibal, .....	Steam, ..	2	17,250	16,237	15,225	46	353
Phillips Brothers															
Silver Hill, .....	Drift,...	Non-gas.	Natural,											25	
William Cook															
Oakley, .....	Slope, ...	Non-gas.	Natural,											11	
Joseph H. Dennings															
Sebastopol, .....	Slope, ...	Non-gas.	Natural,											15	
Neil Breslin and Sons															
Coal Hill, .....	Drift,...	Non-gas.	Natural,											4	
Dunkleberger and Young															
West Lehigh, .....	Drift,...	Non-gas.	Natural,											20	

†Vented by fan at No. 10 colliery, Lehigh Coal and Navigation Co.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office.	Name of Superintendent	Post Office	Railroad to Mine
Lehigh Coal and Navigation Co. Colliery No. 8, .....	Schuylkill,	Wm. D. Zehner, ..	Lansford, .....	Bald Snyder, Jr.,	Lansford, .....	C. R. R. of N. J.
Colliery No. 10, .....						
Colliery No. 11, .....						
Colliery No. 12, .....						
Colliery No. 13, .....						
Colliery No. 14, .....						
Philadelphia and Reading Coal and Iron Co. Silver Creek, .....	Schuylkill,	Wm. J. Richards, ..	Pottsville, .....	Reese Tasker, .....	Pottsville, .....	P. and R.
Eagle Hill, .....						
Mill Creek Coal Co. Buck Mountain, .....	Schuylkill,	T. D. Jones, .....	New Boston, .....	J. E. Jones, .....	New Boston, .....	Lehigh Valley
Vulcan, .....						
Middle Lehigh, .....						
Lehigh and Wilkes-Barre Coal Co. Honey Brook No. 5, .....	Schuylkill,	C. F. Huber, .....	Wilkes-Barre, .....	E. J. Newbaker, ..	Audenried, .....	C. R. R. of N. J.
Audenried No. 4, .....						
Coxe Brothers and Co., Inc. Onelda No. 1, .....	Schuylkill,	S. D. Warriner, ..	Wilkes-Barre, .....	William H. Davis,	Drifton, .....	D. S. and S.
Onelda No. 2, .....						
Onelda No. 3, .....						
Truman M. Dodson Coal Co. Kaska William, .....	Schuylkill,	E. L. Bullock, ....	Audenried, .....	Thomas H. Williams	Kaska, .....	P. and R. and C. R. R. of N. J.
Dodson Coal Co. ....						
Morea, .....	Schuylkill,	E. L. Bullock, ....	Audenried, .....	J. H. Dugan, .....	Morea, .....	Lehigh Valley
Beadall Brothers Greenwood, .....	Schuylkill,	M. A. Gerber, ....	Tamaqua, .....	M. A. Gerber, ...	Tamaqua, .....	C. R. R. of N. J.
Maryd Coal Co. ....						
Gorman and Camplon Bell, .....	Schuylkill,	J. L. Wentze, ....	Philadelphia, .....	George M. Willmot,	Maryd, .....	C. R. R. of N. J. and P. and R.
				D. J. Slattery, ...	Tuscarora, .....	P. and R.

Butcher Creek Coal Co. Laurel Run, .....	Schuylkill,.....	James J. Whims, .	St. Clair, .....	James J. Whims, .	St. Clair, .....	P. and R.
East Lehigh Coal Co. East Lehigh, .....	Schuylkill,.....	James Tinley, .....	Tamaqua, .....	James Tinley, .....	Tamaqua, .....	P. and R.
Phillips Brothers Silver Hill, .....	Schuylkill,.....	Thomas C. Reese, ..	Middleport, .....	Thomas C. Reese, ..	Middleport, .....	P. and R.
Oakley, .....	Schuylkill,.....	.....	.....	William Cook, ....	Tuscarora, .....	P. and R.
Sebastopol, .....	Schuylkill,.....	.....	.....	Joseph H. Dennings	St. Clair, .....	P. and R.
Coal Hill, .....	Schuylkill,.....	Cornellus Breslin, ..	Middleport, .....	Patrick Breslin, ..	Middleport, .....	P. and R.
Dunkleberger and Young West Lehigh, .....	Schuylkill,.....	George H. Young, ..	Tamaqua, .....	William C. Dunkleberger	Tamaqua, .....	P. and R.
William H. Greenfield, Jr. and Co. Pine Dale washery, .....	Schuylkill,.....	.....	.....	Fred H. John, ....	Tamaqua, .....	P. and R.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Totals are averages, 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
Leligh Coal and Navigation Co.	Schuylkill,	328,664	17,136	9,456	355,255	291	587	2	2	150	104,000	121
No. 8		275,775	34,160	3,161	319,016	280	723	4	13	669	115,275	91
No. 10		248,332	20,226	9,164	277,722	275	575	1	1	600	73,650	72
No. 11		104,461	12,593	.....	117,054	284	347	1	1	330	91,100	35
No. 12		.....	.....	.....	.....	.....	112	.....	.....	.....	7,625	110
Totals		957,232	84,115	27,781	1,069,128	225	2,344	8	16	2,040	301,850	329
P. and P. Coal and Iron Co.	Schuylkill,	271,169	30,834	3,990	305,993	274	1,036	6	15	5,270	2,091	89
Silver Creek		176,586	33,052	2,371	212,009	277	679	1	5	1,942	36,167	54
Eagle Hill		.....	.....	.....	.....	.....	67	.....	.....	.....	15,544	.....
Eagle Hill No. 2		417,755	63,886	6,361	518,002	184	1,782	7	20	7,272	53,872	143
Totals		749,510	94,716	10,322	854,548	451	1,715	14	20	13,482	95,507	232
Mill Creek Coal Co.	Schuylkill,	245,831	25,947	.....	271,778	245	430	5	4	7,759	12,850	32
Buck Mountain		218,755	20,440	.....	239,195	250	427	1	13	8,017	10,835	37
Vulcan		.....	.....	.....	.....	.....	169	.....	.....	30	4,550	15
Middle Lehigh	464,626	46,987	.....	511,613	165	986	7	19	15,866	28,025	84	
Totals		910,022	93,374	.....	1,003,396	410	1,416	12	16	21,611	38,280	103

\*No time given.

†Sinking new shaft.



TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Totals are averages, 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,	957,222	84,115	27,751	1,069,193	282	2,344	8	16	2,040	391,970	529
Philadelphia and Reading Coal and Iron Co., .....		417,755	63,886	6,361	518,002	275	1,782	7	20	7,202	53,802	143
Mill Creek Coal Co., .....		464,636	46,387	.....	511,013	247	1,565	7	19	15,866	28,035	84
Lehigh and Wilkes-Barre Coal Co., .....		443,501	52,297	.....	503,807	170	1,606	6	19	7,699	201,187	117
Miscellaneous companies, .....		674,060	137,618	31,853	843,531	194	2,526	12	32	14,750	135,369	291
Totals, .....	.....	2,992,177	384,303	69,001	3,445,481	203	9,224	40	106	47,467	810,353	964



TABLE 2.—PART 2.

Names of Operators	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	Steam	Air								Electric
Lehigh Coal and Navigation Co., .....	Schuylkill,	32	550	32	9,883	10,433	9	.....	80	4,083	9	10,590	4,600	.....	2	
Philadelphia and Reading Coal and Iron Co., .....		20	600	21	2,750	3,350	1	.....	30	5,550	4	2,700	1,370	.....	1	
Mill Creek Coal Co., .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lehigh and Wilkes-Barre Coal Co., .....		52	2,960	25	4,050	7,010	5	3	48	4,860	11	13,400	3,500	.....	2	
Coxe Brothers and Co., Incorporated, .....		29	1,350	40	4,325	5,685	8	.....	34	4,820	11	16,311	7,015	.....	1	
Truman M. Dodson Coal Co., .....		24	880	25	3,290	4,080	4	1	34	2,610	8	7,729	4,662	.....	1	
Dodson Coal Co., .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Beddall Brothers, .....		1	290	15	2,180	2,380	5	.....	13	2,425	3	2,350	1,500	.....	1	
Maryd Coal Co., .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gorman and Camplon, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butcher Creek Coal Co., .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Lehigh Coal Co., .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Phillips Brothers, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
William Cook, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Joseph H. Dennings, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nell Breslin and Sons, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dinkberger and Young, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
William H. Greenfield, Jr. and Co., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Totals, .....	174	6,588	209	31,408	37,996	40	4	281	95,755	75	63,316	25,627	.....	1	3	

TABLE 3.--Number of each class of employes inside and outside of mines

Names of Operators and Col- leries	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	Statepickers (boys)	Statepickers (men)	Bookkeepers and clerks		All other employes	Total outside
Lehigh Coal and Navigation Co.	Schuylkill,	2	2	2	96	41	33	16	3	89	119	406	1	8	13	14	38	1	106	181	587	
		2	2	5	107	23	44	21	6	90	162	462	1	9	33	38	61	1	118	261	723	
		2	2	5	54	37	26	14	4	85	137	366	1	8	31	23	49	1	96	209	575	
		1	1	2	66	59	14	2	4	28	62	239	1	5	11	46	15	1	29	108	347	
		1	1	2	4	73	4	2	1	6	.....	91	1	2	7	.....	.....	.....	12	21	112	
Totals,		8	7	17	327	233	121	55	18	298	480	1,561	4	32	95	121	163	4	361	780	2,344	
Philadelphia and Reading Coal and Iron Co.	Schuylkill,	1	1	9	250	151	40	4	.....	49	172	687	2	12	27	88	43	4	173	249	1,036	
		1	.....	6	155	113	19	4	4	67	75	445	2	11	22	59	22	3	115	231	670	
		2	.....	2	48	.....	.....	.....	.....	.....	.....	60	1	1	6	.....	.....	.....	9	17	67	
		2	1	15	417	312	59	8	4	116	248	1,182	5	24	55	147	65	7	297	660	1,782	
Mill Creek Coal Co.	Schuylkill,	1	1	6	122	79	23	.....	2	16	9	259	1	9	27	32	47	2	43	161	420	
		1	1	5	181	55	20	9	2	21	13	308	1	1	8	21	36	31	2	29	129	437
		1	1	1	2	4	2	1	4	4	38	57	1	1	1	21	.....	.....	2	24	52	109
		3	3	11	305	138	45	10	8	41	69	624	1	21	69	68	78	6	96	342	966	

Lehigh and Wilkes-Barre Coal Co.	1	2	1	1, 2	110	15	10	1	79	166	537	1	4	23	82	8	2	108	765
Honey Brook No. 5, .....	2	3	21	141	2	17	4	4	73	84	361	3	4	27	62	4	2	107	228
Audenried No. 4, .....	3	2	4	366	27	38	27	5	152	240	1,098	3	6	51	144	12	4	256	508
Totals, .....																			1,066
Coxe Brothers and Co., incorporated	1	1	1	53	1	15	3	8	3	26	112	1	17	46	21	26	3	121	234
Oneida No. 1, .....	1	1	1	13	2	12	10	1	5	27	155	1	17	46	21	26	3	121	234
Oneida No. 2, .....	1	1	1	88	11	14	10	1	29	155	155	1	17	46	21	26	3	121	234
Oneida No. 3, .....	3	2	1	156	14	31	14	8	5	60	234	1	17	46	21	26	3	121	234
Totals, .....																			538
Truman M. Dodson Coal Co.	1	1	4	150	40	18	5	6	7	69	300	1	10	26	24	18	2	98	180
Kaska William, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....																			480
Dodson Coal Co.	1	1	3	55	57	21	5	4	16	52	254	1	4	15	34	40	25	101	222
Totals, .....																			476
Beddall Brothers	1	1	1	29	16	13	2	25	25	8	95	1	1	5	8	32	4	58	110
Greenwood, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....																			205
Maryd Coal Co.	1	1	1	87	53	8	1	2	78	231	231	1	1	15	19	29	2	99	169
Totals, .....																			400
Gorman and Campion.	1	1	1	28	6	6	2	7	7	50	50	1	2	2	7	7	2	18	32
Totals, .....																			82
Butcher Creek Coal Co.	1	1	1	4	7	7	7	7	7	12	12	1	4	3	5	4	1	60	78
Laurel Run, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....																			90
East Lehigh Coal Co.	1	1	1	21	10	8	1	7	7	49	49	1	1	2	5	4	1	20	35
East Lehigh, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Phillips Brothers	1	1	1	14	5	2	3	3	3	25	25	1	1	2	3	3	1	6	18
Silver Hill, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....																			43
William Cook	1	1	1	6	2	2	2	4	4	11	11	1	1	2	4	4	4	4	12
Oakley, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....																			23
Joseph H. Dennings	1	1	1	5	7	7	7	2	2	15	15	1	1	3	4	4	4	9	17
Sebastopol, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....																			32
Neil Breslin and Sons	1	1	1	1	2	1	1	1	1	4	4	1	1	1	1	1	1	1	6
Coal Hill, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....																			10
Dunkleberger and Young	1	1	1	4	5	6	1	1	1	20	20	1	1	2	4	7	7	16	32
West Lehigh, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....																			52

\*Miscellaneous.

TABLE 3.—Continued

Names of Operators and Collieries	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	Statepickers (boys)	Statepickers (men)	Bookkeepers and clerks	All other employes	Total outside						
William H. Greenfield, Jr. and Co.	Schuylkill, ..	29	17	58	2,015	1,158	379	131	55	758	1,228	5,828	14	37	186	429	661	395	.....	39	1,635	14	21	21	21	9,224	
Pine Dale washery, .....	Schuylkill, ..																										
Grand totals, .....		29	17	58	2,015	1,158	379	131	55	758	1,228	5,828	14	37	186	429	661	395	.....	39	1,635	14	21	21	21	9,224	

TABLE 3.—Recapitulation

Names of Operators and Collieries	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	Statepickers (boys)	Statepickers (men)	Bookkeepers and clerks	All other employes	Total outside				
Lehigh Coal and Navigation Co.	Schuylkill, ..	8	7	17	327	233	121	55	18	238	480	1,564	.....	4	32	95	121	163	4	361	4	780	2,314		
Philadelphia and Reading Coal and Iron Co.	Schuylkill, ..	2	1	15	417	312	59	8	4	116	248	1,182	.....	5	24	55	147	65	7	297	600	1,782			
Mill Creek Coal Co., .....	Schuylkill, ..	3	3	11	365	138	45	10	8	41	60	694	1	3	21	69	68	78	6	96	342	966			
Lehigh and Wilkes-Barre Coal Co.	Schuylkill, ..	3	2	4	366	251	38	27	5	152	250	1,068	3	6	32	51	144	12	4	256	508	1,606			
Miscellaneous companies, ..	Schuylkill, ..	13	4	11	600	224	116	31	20	151	190	1,360	10	19	77	159	181	77	18	625	1,166	2,525			
Totals, .....		29	17	58	2,015	1,158	379	131	55	758	1,228	5,828	14	37	186	429	661	395	39	1,635	14	21	21	21	9,224







TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 6	Peter Farber, .....	German, ....	Miner, .....	58	M	1	6	Bell, .....		Fatally injured by an explosion of powder in breast heading. Died January 7.
10	Joseph Tirpot, .....	Savonian, .....	Loader, ....	50	M	1	1	Silver Creek, ...		Fatally injured by a kick from a mule. Died the same day.
10	Lewis Pfeil, .....	German, ....	Miner, ....	53	M	1	4	Greenwood, .....		Faced the wrong piece of coal. Died from blood poison on January 22.
Feb. 3	Paul Buston, .....	Hungarian, .....	Laborer, ....	36	S.	.....	.....	Honey Brook No. 5, .....		Killed by being caught between clay bank and bumper of locomotive in strippings. Outside.
9	Elmer Schretrom, .....	American, .....	Feeding counter screen, .....	17	S.	.....	.....	West Lehigh, ....		Killed by being caught in the wheel of main driving belt in breaker. Outside.
18	Charles O'Donnel, .....	American, .....	Miner, .....	43	M.	1	7	L. C. & N. Co. No. 10, .....		Fatally injured by a fall of coal. Died same day.
March 6	Joseph Real, .....	Italian, .....	Jackman, ..	23	M.	1	.....	Honey Brook No. 5, .....		Killed by a piece of rock rolling down the face of strippings. Outside.
20	John Skoa, .....	Lithuanian, .....	Miner, .....	27	M.	1	.....	L. C. & N. Co. No. 10, .....	Schuylkill,	Suffocated by gas.
6	Angelo Sartori, .....	Austrian, .....	Miner, .....	25	.....	.....	.....	Oneida No. 3, .....		Fatally injured by being struck by a piece of coal flying from a blast. Died April 17.
6	Albert Eisenhower, .....	American, ..	Miner, .....	22	S.	.....	.....	Oneida No. 3, ...		Fatally injured by being struck by a piece of slate on the head. Died two days later from paralysis resulting from the blow.
13	John Mulhallock, .....	Austrian, ....	Miner, .....	42	M	1	.....	L. C. & N. Co. No. 8, .....		Suffocated by a rush of coal in chute. Killed by fall of slate.
14	Michael Gladdish, .....	Russian, ....	Laborer, ....	27	S.	.....	.....	Honey Brook No. 5, .....		Killed by fall of coal.
22	Anthony Margalls, .....	Lithuanian, ..	Miner, .....	46	M.	.....	.....	Vulcan, .....		Killed by a blast.
25	Andrew Bellulis, .....	Polish, .....	Miner, .....	35	M.	1	5	Eagle Hill, .....		Killed by falling down shaft.
27	Theodore Maucyecz, .....	Polish, .....	Laborer, ....	33	S.	.....	.....	Morea, .....		Fatally injured, caught between mine cars and died the same day. Outside.
May 1	Christ Krell, .....	German, ....	Laborer, ....	54	M	1	5	L. C. & N. Co. No. 11, .....		Killed by a fall of coal in breast.
13	Chas. Kohlmire, .....	American, ..	Miner, .....	24	M.	.....	.....	Bell, .....		Killed by a fall of coal.
13	John Valingo, .....	Polish, .....	Miner, .....	40	M	1	.....	Buck Mountain, ..		Killed by a fall of slate.
16	Michael Cupira, .....	Hungarian, ..	Miner, .....	41	M.	1	6	Oneida No. 3, ..		Killed by a fall of coal.
22	Henry Proscasco, .....	American, ..	Laborer, ....	18	.....	.....	.....	Silver Creek, ....		Killed by a fall of slate.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
May 23	Charles Smith, .....	Polish, .....	Miner, .....	45	.....	.....	.....	Audenried No. 4,		Fatally injured by a fall of slate causing a compound fracture of the leg. Died May 29.
23	John Urbin, .....	Hungarian, .....	Miner, .....	38	M.	1	2	Oneida No. 3, .....		Killed by a fall of coal.
31	Frank McHugh, .....	Irish, .....	Miner, .....	29	S.	.....	.....	Buck Mountain, .....		Killed by a fall of slate.
June 15	Simon Feller, .....	American, .....	Miner, .....	45	M.	1	1	L. C. & N. Co. No. 10,		Killed by a fall of coal.
17	John Swain, .....	American, .....	Miner, .....	48	M.	1	.....	Silver Creek, .....		Killed by a fall of slate.
17	Ben. Fleming, .....	American, .....	Driver, .....	18	.....	.....	.....	L. C. & N. Co. No. 12,		Fatally injured. Fell under the dumper and crushed. Died same day. Outside.
July 21	George Moscow, .....	Slavonian, .....	Miner, .....	39	M.	1	3	Maryd, .....		Fatally injured; fell down counter chute, dislocated spine. Died September 21.
24	Thomas Bowen, .....	Welsh, .....	Miner, .....	46	M.	1	.....	Silver Creek, .....		Fatally injured by a piece of slate falling on him. Died in Pottsville Hospital same day.
Aug. 1	Michael Ondago, .....	Slavonian, .....	Driver, .....	15	.....	.....	.....	Bell, .....		Fatally injured by falling into sprocket wheel of scraper line while in motion. Died August 6. Outside.
18	Amandas Fry, .....	American, .....	Laborer, .....	40	M.	1	3	L. C. & N. Co. No. 10,		Killed by falling down water shaft.
Sept. 2	Patrick Toew, .....	American, .....	Pump engineer,	44	M.	1	3	Middle Lehigh, .....	Schuylkill,	Fatally injured. Caught between mine car and colts, coming up the slope. Died same day.
12	Steve Unlek, .....	Slavonian, .....	Driver, .....	21	S.	.....	.....	L. C. & N. Co. No. 8,		Fatally injured. Fell under mine car. Died same day. Outside.
20	Constanti Stempkofski, .....	Polish, .....	Spragger, .....	18	S.	.....	.....	Silver Creek, .....		Killed. Caught on bottom of shaft by descending cage.
Oct. 2	Mike Lorzack, .....	Russian, .....	Laborer, .....	36	M.	1	7	Honey Brook No. 5,		Fatally injured. Struck by a rock rolling down face of stripping. Died October 4. Outside.
19	Michael Connelly, .....	American, .....	Miner, .....	46	M.	1	7	Silver Creek, .....		Fatally injured by an explosion of gas. Died October 21.
31	Joseph Frank, .....	Austrian, .....	Miner, .....	39	M.	1	1	Oneida No. 3, .....		Fatally injured by a fall of slate. Died same day.
Nov. 27	Jos. Shopnisky, .....	Lithuanian, .....	Miner, .....	29	M.	1	.....	Buck Mountain, .....		Fatally injured by a fall of coal.
Dec. 6	George Fisher, .....	American, .....	Laborer, .....	36	M.	1	4	Buck Mountain, .....		Killed by a fall of top rock.
12	George Skernon, .....	Lithuanian, .....	Laborer, .....	30	S.	.....	.....	Buck Mountain, .....		Killed by an explosion of gas in breast.
23	Simon Harango, .....	Slavonian, .....	Bottom man, .....	24	S.	.....	.....	Audenried No. 4		Killed. Struck by mine car that had become detached from chain coming down the slope.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 6	Charles Whittkus, .....	Lithuanian,....	Miner, .....	24	S.	Bell, .....		Hands burned by an explosion of powder in heading. Head and neck being thrown down the manway of breast.
11	William Liscavage, .....	Polish, .....	Miner, .....	31	M.	Kaska William, ...		Hands and face burned by gas. Went up in his breast after firing a shot, with a naked lamp on his head.
11	George Demerling, .....	American, .....	Miner, .....	24	M.	Kaska William, ...		Hands and face burned by gas. Accident from the same cause as above.
24	John Shernice, .....	Lithuanian,....	Miner, .....	41	M.	Vulcan, .....		Hands burned by gas. Went up in his breast with a naked lamp on his head after firing a shot. Left his safety lamp on the gangway.
27	John Baddock, .....	Polish, .....	Pumpman, ...	31	M.	Morea, .....		Hands scalded by hot water and steam. Was opening the tapped head of steam-pump, and hot water and steam rushed out.
Feb. 1	Andrew Coleman, .....	American, .....	Driver, .....	21	M.	Kaska William, ...		Skull fractured. Caught between mine car and mule.
3	Andrew Stelmo, .....	Lithuanian,....	Miner, .....	45	M.	Back Mountain,...	Schuylkill,	Back bruised. Struck by a piece of coal from blast.
9	James Deeney, .....	American, .....	Miner, .....	50	M.	L. C. & N. Co. No. 12.		Leg fractured. A piece of coal fell off the face of breast and struck him.
10	Daniel Jones, .....	Welsh, .....	Miner, .....	56	M.	Vulcan, .....		Burned by gas. Disobeyed order of mine-boss by working with naked lamp.
10	Joseph Gremer, .....	Lithuanian,....	Laborer, .....	27	S.	Vulcan, .....		Burned by gas. Cause of accident same as above.
13	John Savaces, .....	Polish, .....	Miner, .....	38	M.	Honey Brook No. 5.		Leg fractured. He was standing on the platform of his breast when a piece of coal rolled down and struck him.
14	Angelo Doforgo, .....	Italian,.....	Miner, .....	45	M.	Honey Brook No. 5.		Hand smashed. Was forcing dynamite back in a hole with an iron bar in No. 10 stripping and it exploded. Outside.
15	George Brode, .....	German, .....	Miner, .....	45	M.	L. C. & N. Co. No. 8.		Leg broken. A piece of coal fell on him from face of breast.
18	Patrick J. Boyle, .....	American, .....	Miner, .....	45	M.	L. C. & N. Co. No. 10.		Body bruised by fall of coal in chute.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Feb. 20	John Eldash, .....	Slavonian, .....	Laborer, .....	43	M.	Greenwood, .....		Hips and ribs injured. A piece of frozen dirt fell on him on culm bank. Outside.
20	Elot Lacoiski, .....	Polish, .....	Miner, .....	35	M <sub>g</sub>	Silver Creek, .....		Eye destroyed and three fingers of left hand blown off. Cut his fuse too short in firing a blast.
20	Harry O'Brine, .....	American, .....	Bank Boss, .....	46	M.	L. C. & N. Co.		Rupture of the urethra; struck by the gate of dirt dumper. Outside.
28	Mike Ruthuna, .....	Polish, .....	Miner, .....	46	M.	Middle Lehigh, ...		Leg broken by a fall of rock in gangway.
March 1	Anthony Verbitsky, .....	Polish, .....	Miner, .....	34	S.	Vulcan, .....		Hands and face burned by gas. He opened his safety lamp to light his pipe; his partner barred a piece of top coal down which brought the gas in contact with the open lamp.
1	William Jones, .....	American, .....	Driver, .....	18	S.	Vulcan, .....		Arm injured; twisted while spragging cars.
3	Mart. Maheelsky, .....	Polish, .....	Miner, .....	27	M.	Morea, .....		Hand partly blown off; head and neck cut. A stick of dynamite and cap exploded in his hand.
3	Chas. Cotchure, .....	Hungarian, ...	Laborer, .....	24	S.	Eagle Hill, .....	Schuylkill,	Skull fractured. Fell from platform in shaft; his head struck the pump at the bottom.
7	Joseph Bullit, .....	Polish, .....	Miner, .....	40	S.	Silver Creek, .....		Head cut and leg bruised. A piece of top slate fell on him in breast.
18	William McAnaney, .....	American, .....	Loss loader, ...	31	S.	Silver Creek, .....		Hand and face burned by gas. Went up hatch and to push down, gas and lit the gas. Miners were not at work.
29	Osic Haddock, .....	Polish, .....	Miner, .....	30	....	Audenried No. 4, ...		Fracture of right femur. A piece of slate fell on him in breast.
30	George Satamake, .....	Polish, .....	Laborer, .....	23	M.	Audenried No. 4, ...		Collar bone broken. In running to a place of safety to escape a trip of cars coming back on No. 11 slope after the hitching plate had pulled out, he collided with an empty car standing on turnout.
April 6	Mike Buffork, .....	Slavonian, .....	Driver, .....	20	....	Middle Lehigh, ...		Leg broken. Slipped on rail and fell under car.

April	14	Joseph Sabuska, .....	Lithuanian, .....	Miner, .....	33	S.	Kaska William, ..	Body bruised. Fell down manway of his breast.
	15	Anthony Gregite, .....	Polish, .....	Slatepicker, ..	14	S.	Kaska William, ..	Knee cap injured. One of the breaker boys pushed him over the coal pocket and he fell to the ground. Outside.
	27	William Gallagher, .....	Irish, .....	Miner, .....	46	M.	Honey Brook No. 5,	Ribs broken. Fell while running to a place of safety from a shot he was firing in face of gangway.
	25	Stincy Powder, .....	Polish, .....	Laborer, .....	33	M.	Eagle Hill, .....	Head and arms cut. He was assisting the miners to tamp a hole in gangway when blast exploded.
May	3	Anthony Savaloskey, ..	Lithuanian, .....	Miner, .....	35	S.	Vulcan, .....	Rib fractured. Struck by flying coal from a blast. He cut his fuse too short.
	3	William Balley, .....	American, .....	Fireman, .....	21	S.	Honey Brook No. 5,	Face burned by gas. He put fresh coal on the fire under the boilers and neglected to put on the stack blower. The gas accumulated under the boilers and exploded outside.
	8	Herbert Gerber, .....	American, .....	Loco. engineer, ..	19	S.	Greenwood, .....	Legs dislocated, head cut. Collision between the locomotive and dirt bank caused pipe to break allowing steam to escape. Outside.
	10	Ambrose Cambel, .....	American, .....	Slatepicker, ...	15	....	Silver Creek, .....	Wrist dislocated. Fell out of box car to the ground under breaker. Outside.
	11	Mike Smith, .....	Slavonian, .....	Miner, .....	45	M.	L. C. & N. Co. No. 10.	Face and hands burned by gas. Some person unknown closed a door on the gangway which forced the gas down out of a chute. It came in contact with his naked lamp while on his way out of the gangway, going home.
	11	Ignes Matcavish, .....	Slavonian, .....	Laborer, .....	28	S.	L. C. & N. Co. No. 10.	Hands and face burned by gas. Was with Smith when the gas exploded.
	11	Stincy Yahabet, .....	Slavonian, .....	Laborer, .....	24	S.	L. C. & N. Co. No. 10.	Hands and face burned by gas. Was with Smith.
	12	George Shadrine, .....	American, .....	Miner, .....	40	S.	L. C. & N. Co. No. 10.	Hands and face burned by gas. Was with Smith.
	12	Rodger McMulligan, .....	American, .....	Miner, .....	42	S.	L. C. & N. Co. No. 10.	Hands and face burned by gas. His partner struck a match while gas was traveling through the heading they were sitting in and ignited the gas.
	12	Thomas Long, .....	American, .....	Miner, .....	46	S.	L. C. & N. Co. No. 10.	Hands and face burned by gas. He struck a match while gas was traveling through the heading he was sitting in and ignited it.
	13	Steve Dominion, .....	Hungarian, .....	Laborer, .....	34	S.	Audenried No. 4, ..	Hands and face burned by gas in heading. Hands and face burned by gas in heading.
	13	Thomas Brennan, .....	American, .....	Slatepicker, ..	15	S.	Silver Creek, .....	Head crushed. Caught between the turn table and frame of mine car.
	15	Andrew Sernetsky, .....	Slavonian, .....	Laborer, .....	48	M.	Audenried No. 4, ..	Bruise of the testicles. He fell on the edge of a slate box in the breaker. Outside.
	15	John Kennedy, .....	American, .....	Engineer, .....	28	S.	Oneida, .....	Head cut and great toe broken. A piece of rock fell from the top in the gangway. Ankle sprained. He fell down a pair of steps in the breaker.

Schuykill,

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
May	15 John Kline, .....	American, .....	Statepleker, ..	15	....	Silver Creek, .....		Thigh broken. He was struck by an empty car while gravitating from top of breaker to top of shaft. Outside. Bruised knee cap. In removing the box of a dumper from one truck to another, it slipped and fell on him. Outside.
	17 Mike Conrack, .....	Russian, .....	Laborer, .....	32	M.	Audenried No. 4, ..		Leg broken. He was riding on a mine car that upset and fell on him. Hands, face and back burned by gas. He went up in his breast in the morning with a shank in his head.
	18 Mike Ruba, .....	Slavonian, .....	Driver, .....	25	M.	Audenried No. 4, ..		Hands, face and eye injured. Charge of dynamite exploded before he had time to seek a place of safety.
	26 Joseph Soven, .....	Polish, .....	Miner, .....	26	S.	Silver Creek, .....		Scalp wounded. A piece of coal struck him on head.
	26 Peter Sheridan, .....	Irish, .....	Miner, .....	55	M.	Audenried No. 4, ..		Hands and face burned by gas. Went into his breast in the morning with naked lamp on his head.
	29 Alex. Simersko, .....	Hungarian, ....	Laborer, .....	42	M.	Honey Brook No. 5, ..		Leg broken. A piece of top coal fell and struck him on the leg at face of breast.
	29 Anthony Semark, .....	Slavonian, ....	Miner, .....	30	M.	Morea, .....	Schuylkill,	Foot crushed. Wheel of ash truck ran over it. Outside.
June	5 Jacob Stoner, .....	Polish, .....	Miner, .....	35	S.	Silver Creek, .....		Head cut and body bruised. Fell down the manway of his breast.
	12 Lewis Marva, .....	Hungarian, ....	Laborer, .....	24	S.	Audenried No. 4, ..		Head and back cut by a fall of coal while removing pillars.
	14 Frank Sholla, .....	Lithuanian, .....	Miner, .....	29	M.	Kaska William, ...		Finger cut off. Hand caught between the piston and head of cylinder of pump. Outside.
	14 Philip Stetts, .....	Polish, .....	Miner, .....	42	M.	Vuican, .....		Contusion of the head. He was cutting a hitch for a prop and fell down the manway of breast.
	17 Lynn Houser, .....	American, .....	Fireman, .....	24	M.	Oneida, .....		Back bruised. A piece of coal fell on him and face and body bruised.
	27 John Loktus, .....	Lithuanian, .....	Miner, .....	23	S.	Audenried No. 4, ..		Head and body bruised. Fell down the manway of the breast.
	27 John Sunadofski, .....	Polish, .....	Miner, .....	42	M.	Eagle Hill, .....		
	27 John Gustitis, .....	Lithuanian, .....	Miner, .....	25	S.	Kaska William, ...		



June	27	Elmer Evans, .....	American, .....	Jig runner, .....	16	S. Kaska William, .....	Arm broken. Clothes caught in the scraper line and dragged him. Outside.
	28	Michael Lipco, .....	Slavonian, .....	Laborer, .....	33	M. Onelda, .....	Head and back bruised. Fell off a plank the breaker a distance of nine feet. Outside.
July	10	Neal V. Gallagher, .....	American, .....	Fire boss, .....	31	M. Audenried No. 4, .....	Hands and face burned by gas. He stepped up on the platform of the inside chute in East Buck Mountain gangway to light his safety lamp and ignited the gas.
	11	Caleb D. Thomas, .....	American, .....	Driver boss, .....	27	M. L. C. & N. Co. No. 10, .....	Leg broken. A piece of timber on which he was standing was disturbed and he fell off and broke his leg.
	14	Lawrence Novaeks, .....	Slavonian, .....	Laborer, .....	19	S. Maryd, .....	Leg broken. A piece of slate fell on him at face of gangway.
	20	George Shaughnessy, .....	American, .....	Engineer, .....	21	S. Audenried No. 4, .....	Fingers cut. In lifting a lump of coal into the car his hand was caught on top rail. Outside.
	29	Ignot Sloboda, .....	Slavonian, .....	Laborer, .....	26	S. L. C. & N. Co. No. 10, .....	Hands and face burned by gas. Gas was ignited from a shot he fired in the breast and burned him while sitting in the heading some distance away.
	29	James O'Donnell, .....	American, .....	Miner, .....	41	M. L. C. & N. Co. No. 10, .....	Hands and face burned by gas. Same as above accident.
Aug.	4	William Botts Kumis, .....	Polish, .....	Miner, .....	30	M. Eagle Hill, .....	Hands and face burned by gas. He struck a match to light his safety lamp in breast and ignited the gas.
	5	Al. Peassey, .....	Tyrolean, .....	Miner, .....	31	M. Kaska William, .....	Fingers blown off. He rammed an iron bar into a hole containing dynamite that had failed to explode from a former blast.
	8	Charles E. Coley, .....	American, .....	Pump engineer, .....	35	S. Greenwood, .....	Hand crushed. He was working at the valve while the pump was in motion and his hand was caught with plunger. Outside.
	17	Joseph Pelarchuck, .....	Polish, .....	Miner, .....	24	S. Morea, .....	Collar bone broken. He had lighted two holes in the breast and thought both went off. When he returned the second hole exploded and the flying coal struck him.
	17	Daniel Preloor, .....	American, .....	Driver, .....	21	S. L. C. & N. Co. No. 10, .....	Hand crushed. Caught between the bumpers of the cars on the bottom turn out.
	19	John Kurtze, .....	Polish, .....	Laborer, .....	24	S. Vulcan, .....	Hands and face burned by gas. He went with naked lamp to remove gas from the face of breast by brushing it with a crowbar.
	24	Mike Undago, .....	Slavonian, .....	Miner, .....	40	M. Maryd, .....	Back bruised. A piece of top coal fell on him in breast.
Sept.	1	John Iresko, .....	Slavonian, .....	Miner, .....	30	S. Maryd, .....	Face cut and scalp wounded. A piece of top coal fell on him at face of breast.
	8	Daniel M. Galloway, .....	American, .....	Laborer, .....	20	S. L. C. & N. Co. No. 10, .....	Foot crushed. He stepped into the chute to start the battery when a piece of coal rolling down caught his foot against the break stick.

Schuykill,

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Sept. 12	Dominick Meskinis, .....	Lithuanian, .....	Miner, .....	29	S.	Kaska William, ..		Body bruised, thumb and two fingers blown off. He charged a hole in face of breast and stooped down to gather his tools to put them in a place of safety; the flame of his lamp touched the squib and set the blast off.
12	Alex. Adamovitch, .....	Polish, .....	Miner, .....	51	M.	Honey Brook No. 5.		Leg fractured. A piece of slate fell on him at face of breast.
13	Cormac Kennedy, .....	American, .....	Loco. patcher, ..	17	....	Onelda, .....		Fingers bruised in trying to adjust a coupling while trip of cars was in motion. Outside.
16	Frank Singley, .....	American, .....	Laborer, .....	41	M.	Onelda, .....		Head cut. Struck by a nut flying from a bolt he was cutting. Outside.
16	Andrew Sweigard, .....	Slavonian, .....	Charge man, ..	45	M.	Maryd, .....		Leg broken. A piece of top coal fell on him in Orchard Vein gangway, new shaft hole in leg broken. He was sitting in blank heading in pillar breast No. 6 and No. 7 breast East 7-foot vein. The miner in No. 7 breast fired a shot which blew through to the side where he was sitting and the flying coal struck him.
26	David T. Davis, .....	Welsh, .....	Miner, .....	57	M.	Vulcan, .....	Schuykill,	Body bruised. Caught between empty and loaded mine cars on turnout at bottom of shaft.
Oct. 3	Mike Ferris, .....	Polish, .....	Loader, .....	28	M.	Silver Creek, .....		Head cut by a piece of coal flying from a blast.
11	Andrew Mosek, .....	Polish, .....	Loader, .....	24	S.	Vulcan, .....		Face and hands burned by gas. He punctured the gauze of his safety lamp with a pick, allowing the gas to enter the lamp and ignite.
11	Ed. Martin, .....	Irish, .....	Miner, .....	48	M.	Vulcan, .....		Face and hands burned by gas. Jeglis went up in the morning with a naked lamp on his head, disobeying orders of fire-boss.
14	Andrew Jeglis, .....	Polish, .....	Miner, .....	28	S.	Silver Creek, .....		
14	George Rames, .....	Polish, .....	Miner, .....	32	S.	Silver Creek, .....	Schuykill,	

Leg crushed; first car of trip of mine cars jumped the track and caught him leading gangway necessary.

Head bruised. Caught between mine cars and team of mules turning on turnout.

Arm broken and head cut. Thrown down manway of breast by rush of coal from corner of heading he was driving.

Thumb on right hand smashed. Caught between bumpers of mine cars.

Arm fractured. In making room for a set of timber on the gangway, a piece of coal fell and struck him.

Hands and face burned by gas. He put his light in a hole over the gangway above the line of air current and ignited some gas that had accumulated there.

Ribs fractured; caught between mine cars and timber.

Ankle broken. He was starting a heading in breast pillars when a piece of top coal fell on him.

Hand blown off. He was in the act of battering off a blast of dynamite in a gallery when the flame of his lamp ignited the powder in the squib setting off the blast prematurely.

Shoulder blade dislocated. Caught between mule and mine car.

Leg bruised. Caught between chute and box car under the breaker. Outside.

Lacerated face and eye injured. He returned after lighting the fuse to set off a blast, to find out why it was delayed, when it exploded.

Arm broken. Caught between top rail of car and rock on low side of gangway.

Face cut. He had charged a hole with black powder and put dynamite in the back of it. The black powder exploded.

When he returned to see what execution had been done, the dynamite exploded.

Hand crushed. He was putting a board around the cog wheels to piece, persons passing in the machinery.

Hand and got caught in the machinery. Outside.

Hand smashed. Caught between the bumper of mine cars.

Face cut. Kicked by a mule.

Shoulder dislocated. He was starting coal on the sheet iron in breast No. 56 East Bottom branch No. 3 plane when he slipped and fell.

Oct.	18	Charles McGhee, .....	American, .....	Driver, .....	26	S. Audenried, .....	Leg crushed; first car of trip of mine cars jumped the track and caught him leading gangway necessary.
	21	John L. Loyd, .....	American, .....	Driver, .....	19	S. Morea, .....	Head bruised. Caught between mine cars and team of mules turning on turnout.
	21	Joseph Kovoloski, .....	Polish, .....	Miner, .....	31	M. Silver Creek, .....	Arm broken and head cut. Thrown down manway of breast by rush of coal from corner of heading he was driving.
	21	Ed. Gerzara, .....	Polish, .....	Driver, .....	17	Vulcan, .....	Thumb on right hand smashed. Caught between bumpers of mine cars.
Nov.	4	Jacob Hallabaugh, .....	American, .....	Miner, .....	25	S. Buck Mountain, ..	Arm fractured. In making room for a set of timber on the gangway, a piece of coal fell and struck him.
	9	Frank Patrick, .....	Slavonian, .....	Timber man, ..	45	M. L. C. & N. Co. No. 10,	Hands and face burned by gas. He put his light in a hole over the gangway above the line of air current and ignited some gas that had accumulated there.
	13	Mike Horning, .....	Slavonian, .....	Laborer, .....	38	M. Kaska William, ..	Ribs fractured; caught between mine cars and timber.
	14	Thomas Swaycofski, .....	Slavonian, .....	Laborer, .....	30	M. Eagle Hill, .....	Ankle broken. He was starting a heading in breast pillars when a piece of top coal fell on him.
	24	Joseph Shenko, .....	Lithuanian, .....	Starter, .....	24	S. Kaska William, ..	Hand blown off. He was in the act of battering off a blast of dynamite in a gallery when the flame of his lamp ignited the powder in the squib setting off the blast prematurely.
	28	Ignot Simanavage, .....	Polish, .....	Laborer, .....	30	S. Buck Mountain, ...	Shoulder blade dislocated. Caught between mule and mine car.
	28	Anthony Frost, .....	Polish, .....	Laborer, .....	24	S. Silver Creek, .....	Leg bruised. Caught between chute and box car under the breaker. Outside.
Dec.	2	Mike Rutha, .....	Polish, .....	Miner, .....	40	M. Morea, .....	Lacerated face and eye injured. He returned after lighting the fuse to set off a blast, to find out why it was delayed, when it exploded.
	2	Andrew Herman, .....	Slavonian, .....	Driver, .....	20	S. Silver Creek, .....	Arm broken. Caught between top rail of car and rock on low side of gangway.
	12	Lewis Augustine, .....	Lithuanian, .....	Miner, .....	33	S. Buck Mountain, ..	Face cut. He had charged a hole with black powder and put dynamite in the back of it. The black powder exploded.
	18	Ignot Colan, .....	Polish, .....	W a t c h m e n rolls.	16	S. Kaska William, ..	When he returned to see what execution had been done, the dynamite exploded.
	18	John Gladdish, .....	Polish, .....	Driver, .....	23	M. Honey Brook No. 5,	Hand and got caught in the machinery.
	18	Howard Snyder, .....	American, .....	Driver, .....	28	M. Vulcan, .....	Hand smashed. Caught between the bumper of mine cars.
	13	Anthony Youkitis, .....	Lithuanian, .....	Miner, .....	27	S. Silver Creek, .....	Face cut. Kicked by a mule.

Schuykill,

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

No. 10 Colliery, Lehigh Coal and Navigation Company.—February 18, Charles O'Donnel, miner, was fatally injured February 18 and died next day. He was driving a chute in the pillar between No. 6 and No. 7 breasts East Forty Foot vein. He heard some coal fall below him in the chute, and he and his partner made a dash to get down to a place of safety. They had reached a distance of twenty feet from where they were working, when three sets of timber swung out of the places, on account of extra pressure from the side, and the timber and falling coal, caught them both. O'Donnel's partner was not seriously injured.

No. 8 Colliery, Lehigh Coal and Navigation Company.—April 13, John Mulhallock, miner, was killed in East Mammoth vein, No. 8 slope. He was robbing pillars and taking out the stumps to the gangway. He was down to within twelve feet of the gangway with the stump and had made room for a set of timber to start a chute back to the top rock to get the top coal over the gangway. Before he could get his timber in place the top and upper side broke down and let the loose gob fall on him. He was smothered before they could release him.

Vulcan Colliery.—April 22, Anthony Margalis was killed by a fall of coal in No. 32 breast, East Bottom Split, No. 1 gangway. He had fired a blast on the top of his inside manway before going home the evening previous, and when he started to work to trim the loose pieces of coal down, a rush of coal came from the face of the breast and caught him against the prop, on the top of the manway.

Oneida No. 3 Colliery, Coxe Brothers and Company, Inc.—May 16, Michael Cupina, miner, was killed at face of breast by a piece of coal falling on him. He was drilling a hole in face of breast, and a slip of coal shaped like the letter V, fell from the top bench on his back. His partner had told him he did not think it was safe to work under it, but Cupina took his pick and tested it and pronounced it all right.

Oneida Colliery, Coxe Brothers and Company, Inc.—May 23, John Urbin was killed by a fall of coal in breast 892, No. 1 West Counter No. 6 slope. He returned after firing a shot in the face of breast. A piece of coal fell from the middle bench, struck him on the head and knocked him down. He fell on a sharp piece of coal which penetrated his skull.

No. 10 Colliery, Lehigh Coal and Navigation Company.—June 15, Simon Feller, miner, was killed. He was driving a narrow chute through the center of the pillar for the purpose of robbing it back. The fire-boss told him to put some relief timber to secure his place. After putting a set in he went to drive a plank over an old set to act as a force pole, and in doing this he forced the collar off the legs, letting the coal fall on him. He was buried under it for several hours.

Buck Mountain Colliery, Mill Creek Coal Company, November 27.—Joseph Shopinsky, miner, was fatally injured November 27 by a piece of coal falling on him at face of breast and knocking him



down the mauway, a distance of thirty feet. He was taken to the Miners' Hospital in Ashland, where he died.

Oneida No. 3 Colliery, Coxe Brothers and Company, Inc., April 6.—Albert Eisenhower, miner, was fatally injured by a fall of slate. He was assisting the company men to stand a prop in a breast on a light angle, when a piece of slate fell and struck him on the head. The accident seemed so trifling that his father, who worked with him, did not think it necessary to accompany him home. He died April 8 from paralysis.

Green Mountain Tunnel, No. 5, Honey Brook Colliery, April 14.—Michael Gladdish, miner, was killed in East Lykens vein. The accident occurred in No. 9 chute, where the vein dips at an angle of 80 degrees. At the point where the chute holed into the heading the dip changed to 90 degrees, and the nature of the bottom slate also changed becoming faulty, with sulphur boulders running through it. Gladdish was in the act of making room for a prop when one of the boulders in the bottom turned out and fell on him, burying him under it in the soft dirt. His rescuers could hear him talk long after the accident occurred. He remained in the chute for three hours and died before he could be released.

Bell Colliery, May 13.—Charles Kohlmire, miner, was killed in Breast No. 38, East Holmes vein. He had fired a hole three feet from the rib in the breast and returned to dress it down. The last prop in the breast was close to the face. In getting into the breast over this prop a piece of bone, forming a slip, turned out and caught him against the prop and killed him.

Buck Mountain Colliery, May 13.—John Valingo, miner, was killed by a piece of slate falling on him in No. 9 breast East Skidmore vein, No. 4 lift. He had started to drive a heading in the pillar from No. 9 to No. 8 breast, where a piece of clod or slate 8 inches thick extended out over the face of the breast. When he took away the coal that was supporting this slate it fell on him killing him instantly.

Silver Creek Colliery, May 22.—Henry Procasko, laborer, was killed by a piece of slate falling on him at the face of West 7 foot gangway. He was laboring for his father in the gangway and was in the act of drilling a hole to bring up the level for the purpose of advancing his track to put up a set of timber. A piece of sulphur ball and slate mixed, fell on him, killing him instantly. His father claimed that he sounded it a short time before and considered it safe to work under.

Audenried No. 4 Colliery, May 23.—Charles Smith, miner, was fatally injured by fall of slate in breast No. 9 West Gamma vein No. 2 plane. The vein had been flat and it was about to increase in pitch. Smith was drilling a hole in the bottom slate when a piece of slate 3 feet by 2 feet 6 inches thick fell down from the top, first striking the gob he had built on the side, then turning over and striking him on the leg, causing a compound fracture. He was taken to the Hazleton Hospital and died May 29.

Buck Mountain Colliery, May 31.—Frank McHugh, miner, was killed instantly in No. 14 breast, No. 6 lift, East Buck Mountain vein. He was sitting back about fifteen feet from the face of the breast, close to the pillar, sharpening his drill, when a piece of slate that had been weakened by starting a heading in the pillar, fell on

him. The fire boss claims that he had ordered him to take it down that morning.

Silver Creek Colliery, June 17.—John Swain, miner, was instantly killed. He was driving a narrow hole from the face of No. 75 breast, West Seven Foot vein, No. 1 plane, for the purpose of ventilation. He had fired a shot in the face of hole and returned to dress down the loose coal when a piece of top slate fell on him.

Silver Creek Colliery, July 24.—Thomas Bowen, miner, was fatally injured by a fall of slate. He was working in No. 1 breast West Bottom Split, No. 4 plane, and was preparing to put down a sheet iron when a piece of slate from the middle of the vein fell and rolled over and caught him against the pillar breaking his leg and almost severing his arm. He was taken to the Pottsville Hospital and died the same day.

Oneida Colliery, October 31.—Joseph Frank, miner, was killed in No. 6 slope. He had taken down the top coal and before loading it should have taken down the clod that was between the top coal and main roof, as it would be inconvenient to do it after the loose coal had been loaded up. His partner wanted him to do it in that way, but he insisted on loading a car first. Before the car was loaded a piece of the clod fell on him, and he died before being taken out of the breast.

No. 5 Honey Brook Colliery, October 2.—Michael Lorzack, laborer, was fatally injured in No. 8 stripping. He was drilling a hole at the bottom of the stripping when a piece of rock rolled from the top of the bank and struck him on the head. He was taken to the Miners' Hospital at Hazleton and died October 4.

Buck Mountain Colliery, December 6.—George Fisher, laborer, was instantly killed by a fall of roof. He was sent with a miner and another laborer to put some timber in the stable and to enlarge it. There is a chute leading from the gangway up to the stable and in this chute there were two props standing which were in the way of the work they were about to do. The miner was cutting out the props, and as Fisher was passing by him to go up into the stable a piece of roof fell on him. The miner claims that the props were not holding up the roof and that he had tested it a short time before the accident occurred and considered it safe to work under.

### Mine Cars.

No. 11 Colliery, Lehigh Coal and Navigation Company, May 1.—Christ Krell, laborer outside, was fatally injured. He was driving a team of mules at the bottom of the fuel plane. In pulling an empty car from the bottom of the plane he unhitched his team from the car and thought to pass between the moving car and a car that was standing on the turnout. He was caught between the bumpers and fatally injured. He died at his home same day.

No. 12 Colliery, Lehigh Coal and Navigation Company, June 17.—Benjamin Fleming, driver, was fatally injured on dirt bank. He was standing on the front of the dirt dumper coming in from the end of the bank. A light chain was attached to the spreader for the purpose of throwing the hook out of the eye bolt of the truck of the dumper. When not in use it was lying loose across the bumper. The hook slipped out of the eye bolt and in pulling the small chain



it caught his foot and pulled him off. He fell in front of the dumper and was injured internally. He died the same day.

Middle Lehigh Colliery, Mill Creek Coal Company, September 2.—Patrick Toew, pump man in No. 3 slope, was fatally injured. The men who were working on the night turn had come to the surface and were resting in the engine house. Toew signaled to the engineer to hoist the car but when the car came to the surface the engineer could see no one, but thought he heard some one moan. He found Toew unconscious in the car. It is supposed that he was riding on the front of the car and was caught by a low collar on the slope and dragged into the car.

No. 8 Colliery, Lehigh Coal and Navigation Company, September 12.—Stephen Unick, driver, was injured September 12. He was driving on the rock bank and was standing on the front bumper of the empty dumper coming in from the end of the bank. He slipped and fell between the rails and was rolled under the truck for some distance. He died September 27.

Silver Creek Colliery, September 30.—Constanti Stempkowski, spragger on the bottom of the shaft, was instantly killed. He was standing on the west side of the shaft. The last car of coal on West turnout having been put on the cage on the south side, he made an attempt to go over to the east side to put a loaded car on the descending cage on the north side. He delayed too long before crossing and was caught under the descending cage.

Audenried No. 4 Colliery, December 23.—Simon Harango, bottom man, was killed on the bottom of No. 4 slope. He was standing on the bottom after preparing the car to be hoisted and was about five feet from a safety hole. The empty car coming down the trestle, before entering the timber at the mouth of the slope, jumped the track and caught him against a prop, severing his head from his body.

### Explosions of Gas.

Silver Creek Colliery, October 19.—Michael Connelly, miner, was fatally burned by gas. He had fired a blast in his breast and on account of the coal working heavily he remained in the monkey heading for two hours. When the coal ceased working, he kept his naked lamp burning on his head, and went up the manway. Before reaching the face of his breast he met a body of gas which he ignited with his naked lamp. He died October 24 in the Miners' Hospital.

Buck Mountain Colliery, December 12.—George Skermon, laborer, was killed by an explosion of gas in No. 24 breast. No 6 lift East Buck Mountain vein. The fire boss in making his rounds in the morning found gas in the breast, removed it and notified the miner what he had done. The miner was driving a heading at the face of his breast in the pillar towards No. 23 breast. The heading was almost through and he left his own breast and went into No. 23 breast and drilled a hole to blow it through when he was ready to fire the blast. He says he told the laborer to go down to the lower heading, but he did not go. When the blast went off it blew through, as he expected, and ignited the gas which had accumulated at the face of the breast. The concussion of the blast threw Skermon against the pillar, killing him.

No. 10 Colliery, Lehigh Coal and Navigation Company, March 20.—John Skoa, miner, was suffocated by gas in East Forty Foot vein. He was working in No. 6 chute. The fire boss had reported to him that morning that there was gas in his place and told him not to go up to the face to work, but to start down from the face 200 feet and put in some relief timber. He went to the face of the chute, it is supposed, for some tools to work with. He penetrated the gas for a distance of twenty feet, where he fell and was suffocated.

### Explosions of Powder

Bell Colliery, January 6.—Peter Farber, miner, was fatally injured by an explosion of powder. He died January 7 in the Miners' Hospital at Ashland. He had gone to the heading close to the face of the breast with a naked lamp to prepare a cartridge to make a blast, and in some way ignited a keg of powder.

### Blasts.

Oncida, March 6.—Angelo Sartori, miner in No. 3 slope, was injured by being struck by a piece of coal from a blast. He died in the Hazleton Hospital April 16.

Eagle Hill Colliery, April 25.—Adam Bellulis, miner, was killed by a premature blast of dynamite in a hole he was charging in the West Seven Foot gangway. He had drilled a hole in the bottom slate of the gangway, and it appears that the bit of the drill was worn down, making the diameter of the hole smaller than the cartridge. He had put four sticks of dynamite in the hole, and in forcing the last piece with an iron scraper the dynamite exploded.

### Falling into Shafts, Slopes, etc.

Morea Colliery, April 27.—Theodore Matczyz was killed by falling down the shaft. He was sent down from the first level to the second, to take the cage on the shaft to go down to the third level where he was to work at loading coal. When he got to the bottom of the traveling way on the second level he was at the east side of the shaft. He saw some men standing on the west side and in attempting to reach them he fell down the shaft, a distance of 115 feet in the sump.

Lehigh Coal and Navigation Company, August 18.—Amandas Fry, laborer, was killed by falling down No. 10 Water Shaft. He was removing the pipe of a small pump that was used while sinking the shaft, and fell down the shaft into thirty-two feet of water, a distance of 272 feet. After searching for three hours his body was recovered.

Maryd Colliery, July 21.—George Moscow, miner, was fatally injured by falling down the counter chute in No. 2 drift back basin. He was working in the West Counter Mammoth vein. In going over the top of the counter chute he slipped on the sheet iron and slid or rolled down the chute for a distance of 75 feet. He was taken to the Miners' Hospital and died the same day.

## Mules

Silver-Creek Colliery, January 9.—Joseph Tirpot, loader, was fatally injured by being kicked by a mule. He died January 10. He had opened the door on the gangway to allow the driver to pass through with a trip of mine cars, and stood on the low side of the gangway with his body close to the edge of the door to keep it open. When the mule passed him it had its leg over the traces and without any warning kicked with the foot that was over the trace, and struck Tirpot on the forehead.

## Machinery.

West Lehigh Breaker, February 9.—Elmer Schretrom, occupation, feeding the coal into the screen, was killed in a large belt wheel. The belt that was turning the counter screen jumped off the pulley and the machinery was stopped to put it on. When the belt was put on the pulley Schretrom told the engineer to start up. The engineer called back to know if it was all right and Schretrom answered as if he was in a hurry. He wanted to get the coal out of the screen so that it would not freeze by standing over night. That was the last heard from him. He was next seen in the pit of the large belt wheel entangled in the inner circle of the wheel.

Bell colliery, August 1.—Michael Ondago, driver, was fatally injured. He was employed hauling culm with a horse and cart and dumping it in the pit of the scraper line to be conveyed by the scraper up to the breaker. In dumping the cart the tail-board fell into the pit and in trying to recover it he lost his balance and fell into the pit. He became entangled in the sprocket wheel, and his arm and several ribs were broken. He died August 6 at the Miners' Hospital.

## Miscellaneous.

Greenwood Tunnel, January 10.—Lewis Pfeil, miner, was opening West Mammoth gangway. He was struck by coal flying from his pick. Blood poison set in and he died January 22.

No. 5 Honeybrook Colliery, February 3.—Paul Bustan, laborer, on stripping at Green Mountain was fatally injured and died in Hazleton Hospital February 11. He was standing in front of a locomotive heating an iron bar in the fire box to drill a hole in a frozen clay bank. The place where he stood was but a few feet from the bank. A second locomotive moved up behind, bumped the one he was standing in front of, and caught him against the bank.

No. 10 Southeast Stripping, March 6.—Joseph Real, jackman, was killed by a piece of rock rolling down the face of the stripping. They were stripping the top rock of Mammoth-vein. The rock was shaken with a heavy charge of powder and was lying in its natural position at an angle of 50 degrees. The steam shovel box had filled itself and was swinging around to dump in the car. Real was standing at the left when a piece of rock rolled down the face of the cut, a distance of 12 feet and struck him.

## CONDITION OF COLLIERIES AND IMPROVEMENTS

## LEHIGH COAL AND NAVIGATION COMPANY

No. 8 Colliery.—A 600 H. P. battery of water-tube boilers has been installed to increase the capacity of the steam plant.

No. 10 Colliery.—A new breaker has been put in successful operation and the old breaker has been torn down; 2,400 H. P. boilers have been erected, making a total of 4,800 horse power. A pair of 30 by 60 hoisting engines has been erected at the new coal shaft and the shaft is now in operation.

A pair of 42 by 60 hoisting engines has been erected at the water-shaft and the pumps have been abandoned. An additional pair of 42 by 60 engines is in process of installation at the water-shaft to provide ample capacity during times of high water.

No. 11 Colliery.—Two batteries of boilers, 250 H. P. each, have been added to the breaker steam plant.

No. 14 Colliery.—A railroad has been graded, and the sinking of a two-compartment coal shaft and four-compartment water-shaft has been commenced at No. 14 Colliery about one mile east of Tamaqua on the north side of the Valley. The coal shaft is now down about 400 feet and the water-shaft about 300 feet.

A 600 H. P. battery of Sterling boilers has been erected, and an air compressor, with compound air cylinders installed.

No. 15 Colliery.—A washery has been erected on the site of the old No. 10 breaker, to handle the old No. 10 banks and provide fuel for the Company's mining operations from that source. This plant will be put in operation in the Spring of 1906. Condition of colliery is good.

## PHILADELPHIA AND READING COAL AND IRON COMPANY

Silver Creek Colliery.—The tunnel on No. 1 Plane to Windy Harbor Basin, mentioned in last year's report, is still being driven. A vein of coal 8 feet 9 inches on North Dip was cut, at 452 feet from Mammoth vein on South Dip, at 501 feet a vein 3 feet thick on North Dip was cut, at 577 feet a 10 foot vein was cut, on South Dip a second vein 11 feet 6 inches was cut, on South Dip at 660 feet a third vein 13 feet thick on South Dip was cut at a distance of 737 feet.

The tunnel is being extended to cut Skidmore and Buck Mountain vein, the total distance at closing of the year was 800 feet.

Tunnel has been completed on No. 3 Plane between Holmes and Primrose vein, a distance of 412 feet.

Tunnel completed on No. 4 Plane between Bottom and Top bench of Mammoth vein, a distance of 143 feet.

Tunnel on No. 4 Plane from East Skidmore vein to connect with tunnel from Bottom to Top Bench is now being driven. Condition of colliery is good.

Eagle Hill Colliery.—A tunnel from Seven Foot vein to Bottom Bench on West Side, has been completed; length 18 yards.

Tunnel from Primrose to Holmes vein has been driven; length 47 2-3 yards.

The New Shaft commenced in December, 1903, is now completed;



total depth of shaft 1,250 feet. A level is now being turned at a distance of 1,050 feet from the surface. From this level a tunnel will be driven north, cutting several veins of coal. Condition of colliery is good.

#### MILL CREEK COAL COMPANY

Buck Mountain Colliery.—The tunnel on the No. 4 level commenced in 1903 from the North Dip of the Buck Mountain vein, cutting the several veins on North and South Dip, has been completed by cutting the Bottom Split of Mammoth vein on the South Dip; total length of tunnel 1,166 feet.

A compressed air locomotive has been installed on the 6th level No. 3 Slope. Condition of colliery is fair.

Vulcan Colliery.—A tunnel and Rock Plane has been driven from the Top Split of Mammoth vein to the basin of the Primrose vein, on 3rd level; length of tunnel 200 feet; length of plane 98 feet, on South Dip 25 feet.

A tunnel is now being driven on the 4th level from the Bottom Split on North Dip to Top Split on South Dip. This tunnel has cut the Middle and Top Split on North Dip and will have to be driven 150 feet more to cut the Top Split on South Dip.

The tunnel on No. 5 level from Buck Mountain vein on North Dip to Skidmore on North Dip has been completed; length of tunnel 243 feet. This tunnel will be continued to the basin of the Bottom Split of Mammoth vein. A new Goyne pump has been installed on 4th lift to meet future emergencies.

A new lift has been sunk on No. 1 slope from the 5th to the 6th level, and they are now turning off the bottom, east and west of the slope.

Drainage is poor; ventilation fair, except in Top Split on South Dip in 3rd lift.

Middle Lehigh Colliery.—The new breaker at this colliery is finished and rail tracks are completed. They are ready to resume work when inside workings are in proper shape.

Two large Jeanesville compound pumps were installed on the first and two on the third lift.

They commenced pumping water from this slope September 1, 1904, and on August 16, 1905, the mine was free from water. Work was commenced to re-open the gangways.

#### LEHIGH AND WILKES-BARRE COAL COMPANY

##### Honey Brook Division.

No. 4 Colliery.—Turnout tunnel, from No. 4 Lift tunnel to foot of proposed Gamma Power Plane; length 185 feet.

Tunnel from Buck Mountain to Gamma, No. 1 Basin; length 71 feet.

Tunnel, Gamma to Gamma, No. 11 Slope; length 109 feet.

Installed a 10 inch by 16 inch by 18 inch Jeanesville Condenser at No. 4 pumping plant.

New breaker and new hoisting engine house completed.

500 H. P. B. and W. boilers nearly complete.

No. 5 Colliery.—New separator or dump chute at Green Mountain Slope.

Railroad cut-off three quarters of a mile long, eliminating sharp curves and heavy grades, on road to Green Mountain.

New engine and boiler houses at No. 20 Slope.

No. 20 Slope was sunk 750 feet across pitch below No. 8 tunnel level. Condition of colliery is good.

#### TRUMAN M. DODSON COAL COMPANY

Kaska William Colliery.—The tunnel in the Seven Foot Level of the No. 2 Shaft has been extended north to the Seven Foot Vein, on the South Dip, cutting the Seven Foot vein at a distance of 195 feet north from Shaft.

A tunnel 85 feet in length has been driven on the Orchard level No. 2 Shaft from the North to the South Dip on the Orchard vein.

A new rock plane 113 feet long on a pitch of 15 degrees has been driven south from the South Tunnel in No. 1 Slope to the Orchard vein.

A rock chute on a pitch of 35 degrees is also being driven from the West Skid gangway, No. 1 Slope, to connect with the No. 2 Slope.

No. 4 Slope.—A tunnel 7 feet by 12 feet by 85 feet long has been driven south from the Bottom Split of the Mammoth vein to the Skidmore vein, and gangways have been turned east and west.

A single track slope is being driven up on the Skidmore vein and is now a distance of 180 feet from the gangway.

The retimbering of the No. 1 Shaft has been completed.

#### Outside.

A pair of 30 feet by 48 inches first motor hoisting engines installed at the No. 2 Shaft. 4 return tabular boilers of 200 H. P. each has been installed, and new boiler house built over land. (42 feet by 52 feet.)

New timber plane built to hoist timber from the railroad to top of shaft.

Condition of colliery is fair.

#### DODSON COAL COMPANY

Morea Colliery.—No. 3 slope extended to the basin, a total depth of 365 feet.

No. 4 slope, extended to third level, a total depth of 385 feet.

A pair of 14 inches by 28 inches geared engines, with 8 feet drum was erected on the surface to sink to the basin. Engine is on concrete foundation. A 30 inch by 48 inch first-motion engine, 8 feet drum, was erected on concrete foundation 150 feet west of shaft head frame, as a water hoist. A new head frame was erected at the shaft, as the old one was not considered strong enough for the work.

A new compound duplex Jeanesville pump, 27 inches by 50 inches by 14 inches by 48 inches was installed at bottom of shaft, designed to deliver 2,500 gallons per minute to the surface. Pump is set on a concrete bed. The pump room is 27 feet by 50 feet, roofed with 15 inch I beams, set on concrete pillars and lagged with T rails, top and sides. A 13 inch column line 700 feet long, and an 8 inch steam line 1,700 feet long, were put in to serve this pump. A rock



chute, 20 yards in length was driven from the 2nd level Seven Foot gangway, west, reaching the basin of the Mammoth. The flume was completed early in the year.

250 feet of scraper line east of the breaker to stock No. 2 buck.

All dwelling houses painted.

Ventilation and drainage at this colliery have been improved during the year.

#### MARYD COAL COMPANY

Maryd Colliery.—Breaker 90 by 160, capacity 1,200 tons daily, complete. Breaker engines, double reversing 16 by 30.

12 inch cast iron water line 4,500 feet long laid from Little Creek to breaker, for water for washing coal and boiler supply.

16 foot fan built on Middle-Split vein air hole at No. 1 Slope.

Town of 36 blocks completed.

4-compartment shaft, 33 by 15, sunk 197 feet, total of 514 feet. 1st level tunnel on Orchard vein.

No. 1 Slope on Bottom-split on Mammoth sunk 250 feet, total of 1,000 feet.

Tunnel in No. 1 Drift from Primrose, north 303 feet, total of 432 feet, cutting Bottom-split of Mammoth.

First level of No. 1 Slope tunnel 7 by 10 by 125, cutting Top-split of Mammoth.

Second level tunnel 7 by 10 by 150, cutting Middle-split of Mammoth.

A slope is being sunk on the Diamond vein, South Dip, No. 2 Basin.

Segara's old Primrose slope is being pumped out.

Condition of colliery is fair.

#### Mine Foremen's Examinations

The annual examination for mine foremen and assistant mine foremen was held in the Court House, Pottsville, April 26 and 27. The Board was composed of the following members:

John Curran, Mine Inspector, Pottsville; James Tinley, Superintendent, Tamaqua; Nicholas Murrey, Cumbola; John W. Richards, New Philadelphia.

The following named persons were recommended for certificates:

#### Mine Foremen

William Moses, Buck Mountain; Maurice Friel, New Boston; John Bowen, Seek; Reese Williams, Tamaqua; John T. Davis, Lansford; Ulysses Adams, Kaska.

#### Assistant Mine Foremen

John J. Cantwell, Eagle Hill; Cornelius Dougherty, Tuscarora; Charles Shore, Audenried; James Boyle, Kaska; Thomas McLaughlin, Patterson; James Derby, Tamaqua.



# Fourteenth District

NORTHUMBERLAND COUNTY

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Mt. Carmel, Pa., February 22, 1906.

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

Sir: I have the honor to transmit herewith my third annual report as Inspector of Mines for the Fourteenth Anthracite District, for the year ending December 31, 1905.

Respectfully submitted,

BENJAMIN I. EVANS,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	24
Number of mines, .....	55
Number of mines in operation, .....	54
Number of tons of coal shipped to market, .....	4,194,138
Number of tons used at mines for steam and heat, .....	593,635
Number of tons sold to local trade and used by employes, .....	107,924
Number of tons produced, .....	4,895,697
Number of persons employed inside of mines, .....	9,823
Number of persons employed outside, .....	5,385
Number of fatal accidents inside of mines, .....	42
Number of fatal accidents outside, .....	7
Number of non-fatal accidents inside of mines, .....	33
Number of non-fatal accidents outside, .....	4
Number of tons of coal produced per fatal accident inside, .....	116,564
Number of persons employed per fatal accident inside, .....	234
Number of persons employed per fatal accident outside, .....	769
Number of persons employed per non-fatal accident inside, .....	297
Number of persons employed per non-fatal accident outside, .....	1,346
Number of wives made widows, .....	28
Number of children orphaned, .....	45
Number of steam locomotives used outside, .....	29
Number of compressed air locomotives used inside, .....	3
Number of electric motors used inside, .....	5
Number of fans in use, .....	54
Number of gaseous mines in operation, .....	26
Number of non-gaseous mines in operation, .....	28
Number of new mines opened, .....	2

TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company, . . . .	2,405,803
Susquehanna Coal Company, . . . . .	1,027,596
Mineral Railroad and Mining Company, . . . . .	583,909
Excelsior Coal Company, . . . . .	228,418
Shipman Coal Company, . . . . .	160,838
Greenough Red Ash Coal Company, . . . . .	119,471
Lehigh Valley Coal Company, . . . . .	97,668
Enterprise Coal Company, . . . . .	71,859
Llewellyn Mining Company, . . . . .	69,631
White and White, . . . . .	26,109
Buck Ridge Coal Company, . . . . .	104,395
Total, . . . . .	<u>4,895,697</u>

## Production by Counties

Northumberland, . . . . .	4,895,697
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	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		Number of employees outside		
	Inside	Outside	Total	Inside							Outside	per fatal accident	per non-fatal accident	per fatal accident	per non-fatal accident
Philadelphia and Reading Coal and Iron Co.....	16	.....	16	10	.....	150,362	240,580	4,581	2,139	6,720	286	.....	.....	.....	
Susquehanna Coal Co.....	9	.....	11	14	.....	114,177	73,339	2,310	1,358	3,668	257	.....	.....	.....	
Mineral Railroad and Mining Co., .....	11	.....	11	3	.....	53,082	194,636	1,459	663	2,092	135	.....	.....	.....	
Excelsior Coal Co., .....	1	.....	1	1	.....	100,838	100,838	351	248	341	123	.....	.....	.....	
Shipman Coal Co., .....	1	.....	1	1	.....	147,688	119,471	247	143	341	143	.....	.....	.....	
Lehigh Valley Coal Co., .....	1	.....	1	1	.....	197,688	.....	247	291	558	277	.....	.....	.....	
Enterprise Coal Co., .....	3	.....	2	1	.....	23,953	71,859	106	109	298	35	.....	.....	.....	
Llewellyn Mining Co., .....	.....	.....	.....	2	.....	.....	31,815	146	104	250	.....	.....	.....	.....	
Buck Ridge Coal Co., .....	.....	.....	.....	1	.....	.....	.....	40	40	40	.....	.....	.....	.....	
Miscellaneous companies, .....	.....	.....	.....	.....	.....	.....	.....	197	102	299	.....	.....	.....	.....	
Totals and averages for district.....	42	7	49	33	4	116,564	148,354	9,823	5,385	15,208	234	769	297	1,346	



TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Falls of coal, .....					1	1					1	2	5	11.90
Falls of slate, .....	2	1	2	1					1	1	1	1	9	21.43
Falls of roof, .....					2			2	1	2			7	16.67
Mine cars, .....	1			1		1		1	1			2	7	16.67
Explosions of gas and dust, .....										1	4	5	10	11.90
Suffocation by gas, etc., .....											1	1	2	2.38
Falling into slopes, etc., .....			1			1		1		3		6	14	14.29
Miscellaneous, .....				1						1			2	4.76
Totals, .....	3	1	3	3	3	3		4	3	6	3	10	42	100
Causes of Accidents Outside														
Cars, .....											1		1	14.29
Machinery, .....				1		1							2	28.57
Suffocation in chutes, etc., .....		2											2	28.57
Miscellaneous, .....				1						1			2	28.57
Totals, .....		2		2		1				1	1		7	100
Grand totals inside and outside, .....	3	3	3	5	3	4		4	3	7	4	10	49	.....

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Falls of coal, .....			1										2	6.06
Falls of slate, .....		1					3		1	3		3	11	33.34
Falls of roof, .....						1							1	3.03
Mine cars, .....		1		1	1				1	1	1	1	7	21.21
Explosions of gas and dust, .....			1							1	1	2	4	12.12
Explosions of powder and dynamite, .....										1			1	3.03
Premature blasts, .....							1	1			2		4	12.12
Falling into slopes, etc., .....					1								1	3.03
Miscellaneous, .....						1			1				2	6.06
Totals, .....		2	2	1	2	2	4	1	3	5	5	6	33	100
Causes of Accidents Outside														
Cars, .....			1										1	25.00
Machinery, .....		1											1	25.00
Miscellaneous, .....											1	1	2	50.00
Totals, .....		1	1								1	1	4	100
Grand totals inside and outside, .....		3	3	1	2	2	4	1	3	5	6	7	37	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....	2	1	3	1	3	2	3	1	4	3	5	3	23
Miners' laborers, .....	1			1				1			1	1	4
Drivers and runners, .....						1						1	2
Doorboys and helpers, .....				1				1	1			1	4
Company men, .....									1	1			2
All other employes, .....													3
Totals, .....	3	1	3	3	3	3	4	3	6	3	10		42
Outside													
Blacksmiths and carpenters, .....				1		1			1				2
Statepickers (boys), .....													1
All other employes, .....		2		1									4
Totals, .....		2		2		1			1	1			7
Grand totals inside and outside, .....	3	3	3	5	3	4	4	3	7	4	10		49

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Fire bosses and assistants, .....									1				1
Miners, .....		1	2		1	1	4	1	2	3	4	5	21
Drivers and runners, .....		1			1	1				1	1	1	7
Doorboys and helpers, .....								1					1
Totals, .....		2	2	1	2	2	4	1	3	5	5	6	33
Outside													
Blacksmiths and carpenters, .....		1											1
All other employes, .....			1								1	1	3
Totals, .....		1	1								1	1	4
Grand totals inside and outside, .....		3	3	1	2	2	4	1	3	5	6	7	37

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	2	1	.....	2	1	2	.....	1	1	2	2	3	17
Welsh, .....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1
Irish, .....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
German, .....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	1
Polish, .....	1	.....	2	3	.....	2	.....	.....	1	2	.....	3	14
Italian, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1
Slavonian, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Lithuanian, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Austrian, .....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2
Russian, .....	.....	1	1	.....	1	.....	.....	3	.....	.....	1	3	10
Totals, .....	3	3	3	5	3	4	.....	4	3	7	4	10	49

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	.....	3	1	1	1	1	.....	.....	2	3	2	.....	14
Irish, .....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	1
German, .....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	2
Polish, .....	.....	.....	1	.....	1	.....	3	1	.....	1	1	3	11
Hungarian, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Italian, .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	2
Lithuanian, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	3
Austrian, .....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Russian, .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	2
Totals, .....	.....	3	3	1	2	2	4	1	3	5	6	7	27

TABLE I.—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 person

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 minute provided for each person	
Philadelphia and Reading Coal and Iron Co.																	
Alaska No. 2	Shaft	Non-gas.	Fan	21	1	6.3	80	2.5	Guibal		4	100,000	98,000	97,650	740	252	
Alaska No. 1	Shaft	Non-gas.	Fan	14	4.8	5.9	52	.7	Peerless		5	89,800	88,400	88,170	523	235	
Beliance Mammoth, East	Slope	Non-gas.	Fan	15	5	5.6	70	.9	Guibal		2	45,800	44,070	44,000	523	235	
Beliance Mammoth, West	Slope	Non-gas.	Fan	18	5.6	5.6	90	.7	Guibal		4	81,000	79,170	79,170	344	230	
Leucost Gap, East	Slope	Non-gas.	Fan	12	4	4.6	75	1.5	Guibal		4	55,000	53,000	54,000	344	230	
Leucost Gap, West	Slope	Non-gas.	Fan	15	4	3.6	101	1.5	Guibal		2	27,400	26,000	26,100	641	373	
Locust Spring No. 1	Slope	Gaseous.	Fan	12	4	3.6	92	1.3	Guibal		2	128,170	128,170	126,700	641	373	
Locust Spring No. 2	Slope	Gaseous.	Fan	12	4	3.6	92	1.3	Guibal		2	115,500	114,100	113,000	324	302	
Henry Clay No. 1	Shaft	Gaseous.	Fan	21	7	6.3	80	2.3	Guibal		6	45,000	42,160	42,160	309	228	
Henry Clay No. 2	Shaft	Gaseous.	Fan	14	4.8	5.5	103	.8	Guibal	Steam	1	55,400	55,000	55,100	309	228	
Big Mountain No. 1	Slope	Gaseous.	Fan	12	4	3.6	75	1.5	Guibal		3	35,070	33,170	33,740	316	316	
Big Mountain No. 2	Slope	Gaseous.	Fan	18	6	5.6	75	2.2	Guibal		5	38,400	37,350	38,130	316	316	
Bear Valley	Shaft	Gaseous.	Fan	18	5.9	4.9	90	2.2	Guibal		7	125,470	124,000	124,780	510	312	
Burnside	Shaft	Gaseous.	Fan	12	1.5	4.6	12	1.7	Guibal		5	95,000	93,180	93,240	260	489	
Burnside	Drift	Non-gas.	Fan	12	5	4.6	75	1.1	Guibal		3	82,000	81,000	81,550	260	489	
Sterling No. 1	Slope	Gaseous.	Fan	18	6	5.4	70	.9	Guibal		4	52,000	50,700	51,111	46,000	469	
Sterling No. 2	Slope	Gaseous.	Fan	21	7.2	6	60	1.5	Guibal		4	47,000	45,000	46,000	60,000	469	
Sterling No. 3	Slope	Gaseous.	Fan	15	4.6	4.3	65	1.1	Guibal		3	35,000	34,000	34,000	60,000	469	
North Franklin No. 1	Slope	Non-gas.	Fan	13	4.3	5	60	1.1	Guibal		3	61,800	60,000	60,000	60,000	286	286
North Franklin No. 2	Slope	Non-gas.	Fan	13	4.3	5	60	1.1	Guibal		2	43,000	42,170	43,140	60,000	286	286
North Franklin No. 3	Drift	Gaseous.	Fan	18	5.6	6	72	.2	Guibal		4	31,510	49,540	49,000	60,000	286	286
Susquehanna Coal Co.																	
Pennsylvania																	
No. 10 Vein, N. D.	Slope	Gaseous.	Fan	14	3.5	3.5	102	.8	Vulcan	Steam	1	42,280	39,410	41,400	686	276	
No. 10 Vein, S. D.	Slope	Gaseous.	Fan	18	4.5	4.1	114	.9	Mullen		2	61,770	57,670	60,000	686	276	
No. 10 Vein, S. D.	Slope	Gaseous.	Fan	18	3.5	3.5	85	.8	Vulcan		3	55,110	51,670	53,220	686	276	
Shaft	Slope	Gaseous.	Fan	18	6.3	5.11	85	1.1	Mullen		3	44,355	40,500	43,110	686	276	

Richards, N. D.,	Slope.....	Gaseous,	Fan.....	18	7.2	5.2	85	2.1	Vulcan.....	Steam..	5	103,000	107,400	102,110	786	360
Richards, S. D.,	Slope.....	Gaseous,	Fan.....	19.4	6.8	6.4	80	2.5	Vulcan.....		6	116,400	115,470	115,470		
Richards No. 4,	Slope.....	Non-gas.	Fan.....	16	4.5	4.5	82	1.6	Mullen.....		4	25,600	25,600	25,170		
Richards No. 5,	Slope.....	Non-gas.	Fan.....	10	4.5	3.10	120	1.6	Survvt.....		2	26,740	26,000	26,240		
Hickory Ridge No. 5,	Slope.....	Non-gas.	Fan.....	17	4.10	4.3	135	1.1	Vulcan.....		4	45,000	44,000	44,600		316
Hickory Ridge No. 6,	Slope.....	Non-gas.	Fan.....	15	4.10	4.3	90	.6	Guibal.....		2	38,000	37,000	37,000		
Hickory Ridge No. 7,	Slope.....	Non-gas.	Fan.....	12	4	3.90	90	.6	Vulcan.....		2	27,900	27,000	27,000		
Hickory Swamp,	Slope.....	Non-gas.	Fan.....	16	5.5	4.5	38	.5	Mullen.....		4	56,700	56,500	55,500		220
Scott,	Shaft.....	Gaseous,	Fan.....	21	5	5	60	.4	Mullen.....		4	49,440	48,300	48,300		240
Mineral Railroad and Mining Co.																
Cameron No. 7,	Slope.....	Gaseous,	Fan.....	18	7	5.2	72	1.5	Vulcan.....		7	76,580	74,560	75,410		
Cameron No. 9,	Slope.....	Gaseous,	Fan.....	14	3.11	4	85	1.5	Mullen.....		6	59,540	47,670	48,570		232
Cameron No. 11, N. D.,	Slope.....	Gaseous,	Fan.....	18	6	5.2	73	2.6	Guibal.....		8	48,110	46,760	46,000		
Cameron No. 11, S. D.,	Slope.....	Gaseous,	Fan.....	18	7	5	71	2.7	Guibal.....	Steam..	5	49,500	45,480	47,740		
Luke Fidler No. 1,	Shaft.....	Gaseous,	Fan.....	18	7	5	75	2.7			5	63,214	61,000	61,643		257
Luke Fidler No. 2,	Shaft.....	Gaseous,	Fan.....	18	7	5.2	76	2			4	85,643	83,740	83,070		
Excelsior Coal Co.																
Excelsior,	Slope.....	Non-gas.	Fan.....	21	5	5	62	1.5			3	61,700	59,470	60,170		312
Corbin No. 1,	Slope.....	Non-gas.	Fan.....	16	5	5	70	2.6	Beadle.....		2	18,400	17,100	17,000		192
Corbin No. 2,	Slope.....	Non-gas.	Fan.....	14	5	5	75	1.7			2	16,000	15,000	15,400		
Shipman Coal Co.																
Colbert,	Shaft.....	Non-gas.	Fan.....	16	5	4	65	1.2	Guibal.....	Steam..	3	37,840	37,840	37,000		123
Greenough Reef Ash Coal Co.																
Greenough No. 1,	Shaft.....	Non-gas.	Fan.....	12	3.11	3.8	85	1.1	Mullen.....	Steam..	2	30,189	29,000	30,000		242
Greenough No. 2,	Shaft.....	Non-gas.	Fan.....	12	5	4	105	1.8	Mullen.....	Steam..	2	31,840	30,760	30,000		
Lehigh Valley Coal Co.																
Sloux No. 1,	Slope.....	Non-gas.	Fan.....	16	6	5	55	1.5			3	81,000	81,000	80,740		383
Sloux No. 3,	Slope.....	Non-gas.	Fan.....	16	5	5	88	1.1	Guibal.....	Steam..	3	26,740	26,740	25,770		477
Mount Carmel,	Slope.....	Non-gas.	Fan.....	18	4.6	5	70	1.8			4	26,740	26,740	25,770		
Enterprise Coal Co.																
Enterprise No. 1,	Slope.....	Non-gas.	Fan.....	14	3.5	5	82	1.6	Guibal.....	Steam..	3	60,740	59,170	59,400		106
Enterprise No. 2,	Shaft.....	Non-gas.	Fan.....	16	4.5	5	86	.7	Guibal.....	Steam..	3					558
Llewellyn Mining Co.																
Royal Oak,	Slope.....	Non-gas.	Fan.....	18	7	6	55	1.4	Guibal.....	Steam..	2	33,400	32,450	32,176		222
White and White																
Columbus No. 2,	Slope.....	Non-gas.	Fan.....	12	3.8	4.2	63	.8	Guibal.....	Steam..	3	39,400	39,400	38,176		100
Buck Ridge Coal Co.																
Buck Ridge No. 2,	Slope.....	Gaseous,	Fan.....	14	3.8	5	72	1.2	Guibal.....	Steam..	4	21,340	21,340	20,470		97

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
North Franklin, .....						
Bear Valley, .....						
Burnside, .....						
Sterling, .....						
Henry Clay, .....						
Big Mountain, .....						
Locust Gap, .....						
Locust Spring, .....						
Alaska, .....						
Reliance, .....						
Merrilam, .....						
Susquehanna Coal Co.						
Pennsylvania, .....						
Richards, .....						
Hickory Ridge, .....						
Hickory Swamp, .....						
Scott, .....						
Mineral Railroad and Mining Co.						
Cameron, .....						
Luke Fidler, .....						
Excelsior Coal Co.						
Excelsior, .....						
Corbin, .....						
Shipman Coal Co.						
Colbert, .....						
Greenough Red Ash Coal Co.						
Greenough, .....						
Enterprise Coal Co.						
Enterprise, .....						
Lehigh Valley Coal Co.						
Sloux, .....						
Mount Carmel, .....						
Sayre, .....						
	Northumberland, ..	W. J. Richards, ...	Pottsville, .....	Reese Tasker, ....	Pottsville, .....	P. and R.
	Northumberland, ..	Robert A. Quin, ....	Wilkes-Barre, .....	W. R. Reinhardt, ...	Shamokin, .....	Pennsylvania
	Northumberland, ..	Robert A. Quin, ....	Wilkes-Barre, .....	E. A. Rhoads, ....	Shamokin, .....	Pennsylvania
	Northumberland, ..	Robert A. Quin, ....	Wilkes-Barre, .....	E. A. Rhoads, ....	Shamokin, .....	Pennsylvania
	Northumberland, ..	Andrew Robertson, ..	Pottsville, .....	A. D. Robertson, ..	Shamokin, .....	P. and R.
	Northumberland, ..	Andrew Robertson, ..	Pottsville, .....	Geo. W. Robertson, ..	Shamokin, .....	P. and R.
	Northumberland, ..	John B. Corliss, ..	Detroit, Mich., ....	Edward Corliss, ...	Shamokin, .....	Pennsylvania
	Northumberland, ..	Edward Brennan, ..	Shamokin, .....	.....	.....	Pennsylvania
	Northumberland, ..	W. L. Connell, ....	Seranton, .....	.....	.....	P. and R.
	Northumberland, ..	S. D. Warriner, ...	Wilkes-Barre, .....	J. M. Humphreys, ..	Centralla, .....	Lehigh Valley



Llewellyn Mining Co. Royal Oak, ...	Northumberland, Shamokin, .....	William Llewellyn, Shamokin, .....	.....	.....	P. and R.
White and White Columbus No. 2, .....	Northumberland, Mount Carmel, ....	Elifjah White, .....	Alfred White, ....	Mt. Carmel, .....	Lehigh Valley
Buck Ridge Coal Co. Buck Ridge No. 2, .....	Northumberland, Phillipsburg, .....	George Scott, .....	D. H. McGee, .....	Minersville, .....	P. and R.
Buck Ridge washery, .....	Northumberland, Phillipsburg, .....	George Scott, .....	D. H. McGee, .....	Minersville, .....	P. and R.





TABLE 2.—PART 2.

Names of Operators	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	Steam	Air								Electric
Philadelphia and Reading Coal and Iron Co. . . . .	Northumberland	40	1,200	102	15,420	16,620	9	3	2	160	23,410	46	36,845	33,945	8	
Susquehanna Coal Co. . . . .		2	40	68	8,540	8,540	10	.....	.....	91	9,658	19	15,725	5,000	5	
Mineral Railroad and Mining Co. . . . .		38	1,180	17	4,315	4,355	5	.....	.....	35	6,216	11	4,738	4,738	1	
Excelsior Coal Co. . . . .		.....	.....	.....	.....	1,180	3	.....	.....	17	596	3	1,068	490	.....	
Shipman Coal Co. . . . .		.....	.....	6	645	645	.....	.....	.....	9	695	3	1,700	850	.....	
Greenough Red Ash Coal Co. . . . .		.....	.....	4	600	600	.....	.....	.....	5	290	1	250	250	1	
Lehigh Valley Coal Co. . . . .		29	720	16	3,275	3,995	2	.....	.....	50	5,218	8	7,285	2,640	.....	
Enterprise Coal Co. . . . .		.....	.....	16	1,900	1,900	.....	.....	.....	14	1,389	4	3,274	1,500	.....	
Llewellyn Mining Co. . . . .		.....	.....	3	450	450	.....	.....	.....	8	400	1	150	100	.....	
White and White. . . . .		4	100	1	60	160	.....	.....	.....	10	180	.....	.....	.....	.....	
Buck Ridge Coal Co. . . . .		.....	.....	7	1,050	1,050	.....	.....	.....	22	780	.....	.....	102	.....	
Totals. . . . .		.....	104	3,240	240	36,255	39,495	29	3	5	421	48,682	96	71,235	49,615	6

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators and Col- lieries	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employes
Philadelphia and Reading Coal and Iron Co.		1	1	4	220	98	35	4	2	63	104	531	1	13	20	39	17	3	189	282	813
North Franklin, .....		1	1	3	170	122	18	7	23	23	46	392	2	6	21	58	18	2	128	295	628
Bear Valley, .....		2	1	6	262	86	37	12	39	63	510	2	10	29	150	14	3	3	166	374	884
Burnside, .....		1	5	3	139	57	14	5	23	31	260	1	4	5	.....	.....	.....	1	18	29	289
Sterling, .....		1	1	5	99	66	24	10	37	81	324	2	8	26	63	5	.....	1	111	224	548
Henry Clay, .....		1	1	2	146	52	21	5	54	29	309	1	1	16	.....	.....	.....	1	44	62	371
Big Mountain, .....		1	1	3	138	46	15	3	38	96	344	1	1	.....	.....	.....	.....	.....	.....	.....	344
Locust Gap, .....		2	8	287	88	41	16	5	61	133	641	2	15	58	81	10	5	248	419	1,060	
Locust Spring, .....		1	1	5	410	84	64	31	53	87	740	1	10	31	75	9	3	160	259	1,029	
Alaska, .....		1	1	4	284	61	27	9	31	101	523	1	2	8	23	75	.....	.....	59	732	2,099
Reliance, .....		1	1	1	.....	.....	.....	.....	2	.....	6	.....	1	.....	11	.....	.....	.....	4	16	22
Merriam, .....		12	4	44	2,130	760	296	102	35	424	774	4,581	15	74	240	547	73	23	1,167	2,139	6,720
Totals, .....		2	4	10	366	110	53	23	10	.....	208	786	1	1	24	42	112	5	163	399	1,155
Susquehanna Coal Co.		1	4	11	312	137	42	10	14	.....	135	686	1	1	34	55	95	6	125	314	1,000
Richards, .....		1	4	3	180	70	22	1	6	.....	87	374	1	1	21	30	152	12	6	82	385
Pennsylvania, .....		1	1	5	121	53	19	6	5	.....	81	358	1	1	5	17	58	10	4	62	161
Hickory Ridge, .....		1	1	1	70	40	6	4	2	.....	81	206	1	1	19	21	74	5	99	229	435
Hickory Swamp, .....		1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....
Scott, .....		6	14	30	1,049	396	142	44	37	.....	592	2,910	1	5	103	141	466	71	545	1,358	3,608
Totals, .....		6	14	30	1,049	396	142	44	37	.....	592	2,910	1	5	103	141	466	71	545	1,358	3,608





Enterprise Coal Co. Enterprise, .....	2	...	4	13	4	...	39	196	1	1	8	2	24	17	2	114	132	298			
Llewellyn Mining Co. Royal Oak, .....	...	1	2	85	22	13	4	2	16	1	146	...	2	5	8	34	2	51	104	259	
White and White Columbus No. 2, .....	1	...	2	45	10	10	...	2	30	109	1	1	3	15	...	1	14	36	136		
Buck Ridge Coal Co. Buck Ridge No. 2, .....	1	...	1	61	14	3	1	1	12	97	1	1	3	5	11	...	1	44	66	163	
Buck Ridge washery, .....	...	...	...	...	...	...	...	...	...	...	...	1	1	4	2	...	1	30	40	40	
Grand totals, .....	30	26	111	4,559	1,632	660	188	100	573	1,994	9,823	11	35	284	575	1,588	226	80	2,586	5,385	15,298

TABLE 3.—Recapitulation

Philadelphia and Reading Coal and Iron Co., .....	12	4	44	2,130	760	296	102	35	424	774	4,581	...	15	74	210	547	73	23	1,167	2,139	6,720
Susquehanna Coal Co., .....	6	14	20	1,049	396	142	44	37	...	5	2,310	1	5	103	141	466	71	26	54	1,358	3,668
Mineral Railroad and Mining Co., .....	2	8	22	676	226	109	29	9	...	408	1,489	2	3	32	62	255	6	12	231	693	2,002
Excelsior Coal Co., .....	2	4	...	170	100	26	1	1	35	18	357	2	2	13	16	51	14	2	85	185	542
Miscellaneous companies, .....	8	6	15	534	150	37	12	18	1	142	1,056	6	10	62	116	269	62	17	558	1,100	2,186
Totals, .....	30	26	111	4,559	1,632	660	188	100	573	1,994	9,823	11	35	284	575	1,588	226	80	2,586	5,385	15,298





TABLE 4.—Fatal accidents inside and outside of mines

Date of accident.	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 4	Wally Slavinski, ....	Polish,.....	Miner, .....	50	M.	1	6	Greenough, .....		Killed instantly. He went to work under a piece of slate that he had been trying to bar down and it fell on him. Killed by cars. While running a loaded car out of a breast he got bumped between the car and a car standing on the main gangway. Fatally injured by fall of slate. Died January 30. Killed by rush of coal. While loading coal a rush came and smothered him Outside. Killed by rush of coal. While washing dirt into a trough with a line of hose a rush came and smothered him. Outside. Killed by fall of slate. While cutting out a prop a piece of slate that the prop was holding up fell on him. Killed by fall of slate at face of gangway. Killed by falling down a breast manway. Killed by fall of slate in chute. Killed by falling through breaker. While hammering on a shaft he missed his blow and fell head first through the breaker to the ground. Outside. Killed by fall of slate in breast. Killed instantly. While tightening a nut on the air compressor the engine started suddenly and caught him between the crank and rod. Outside. Killed by being caught between the cage and shaft timber. He was tightening a nut on the cage at bottom of shaft when the cage started away and caught him.
5	William Herb, .....	American,....	Driver, .....	19	S.	.....	.....	Hickory Ridge, ..		
26	Mark Rodman, .....	American,....	Miner, .....	62	M.	1	.....	Burnside, .....		
9	John Celela, .....	Russian,....	Laborer, ...	37	M.	1	1	Enterprise, .....		
12	Andrew P. so, .....	Austrian,....	Laborer, ...	35	M.	1	.....	Richards, .....		
25	Mike McGuire, .....	American,....	Miner, .....	54	M.	1	.....	Locust Spring,....		
March 1	Anthony Welcome,...	Polish,.....	Miner, .....	46	S.	.....	.....	Richards, .....	Northumberland	
9	Mike Comdracavitch,...	Polish,.....	Miner, .....	33	M.	1	.....	Richards, .....		
27	Mike Topolski, .....	Russian,....	Miner, .....	50	M.	1	.....	Enterprise, .....		
April 3	Joseph Gartner, .....	American,....	Carpenter, ..	19	S.	.....	.....	Scott, .....		
16	Thomas Powell, .....	American,....	Miner, .....	24	S.	.....	.....	Hickory Swamp, ..		
19	John Herbert, .....	Polish,.....	Laborer, ...	46	M.	1	.....	Enterprise, .....		
21	Jacob Racofski, .....	Polish,.....	Footman, ...	50	M.	1	4	Enterprise, .....		

March	25	James Faleski, .....	Polish, .....	Doorboy, .....	S. ....	Alaska, .....	Killed by being run over by locomotive and trip of loaded cars.
May	9	John Coniff, .....	Irish, .....	Miner, .....	M. 1	Locust Spring, .....	Killed by fall of top coal.
	11	James Mowrey, .....	American, .....	Miner, .....	M. 1	Burnside, .....	Killed by fall of rock.
	13	Lewis Waskonis, .....	Russian, .....	Miner, .....	S. ....	Alaska, .....	Killed by fall of rock.
	15	Raymond Burke, .....	American, .....	Stateplecker, .....	S. ....	Greenough, .....	Killed by falling into scraper line. Outside.
June	24	Frank Damanski, .....	Polish, .....	Miner, .....	M. 1	Richards, .....	Killed by falling down an empty breast.
	30	Charles Gurich, .....	Polish, .....	Repairman, .....	M. 1	Alaska, .....	Killed by being run over by a mine car.
	30	John Billman, .....	American, .....	Miner, .....	M. 1	Hickory Ridge, .....	Killed by fall of coal. Died on Squeezed between car and prop.
	22	William T. Shopp, .....	American, .....	Driver, .....	S. ....	Cameron, .....	August 26.
Aug.	23	Paul Grippo, .....	Russian, .....	Miner, .....	S. ....	Cameron, .....	Killed by falling down breast manway.
	23	Nicholas Popo, .....	Russian, .....	Miner, .....	M. 1	Alaska, .....	Killed by fall of rock in a breast.
	25	Charles Wangh, .....	Russian, .....	Miner, .....	M. 1	Alaska, .....	Killed by fall of rock in a breast.
	26	Sicero Tamanini, .....	Austrian, .....	Miner, .....	M. 1	Locust Spring, .....	Killed by fall of rock in gangway.
	18	Frank Ragorski, .....	Polish, .....	Laborer, .....	S. ....	Enterprise, .....	Killed by fall of slate in a chute.
	23	William Kellerman, .....	American, .....	Stable boss, .....	M. 1	Sterling, .....	Killed by being run over by mine cars on the slope.
	Oct.	2	August Lerofski, .....	Polish, .....	Miner, .....	S. ....	Bear Valley, .....
4		Frank Male, .....	Polish, .....	Laborer, .....	S. ....	Luke Fidler, .....	Killed by fall of rock at face of breast.
6		George Wagner, .....	American, .....	Miner, .....	M. 1	Cameron, .....	Killed by falling down breast manway.
9		Anthony Ondo, .....	Slavonian, .....	Miner, .....	M. 1	Richards, .....	Killed by falling down empty breast.
11		George Matthewson, .....	American, .....	Machinist, .....	S. ....	Locust Spring, .....	Killed by falling down slope.
21		George Kostunbander, .....	German, .....	Carpenter, .....	M. 1	Sayre, .....	Fatally injured. While putting up a gangway collar on the legs the platform broke and the collar fell on him. Died the same night.
27		John J. Jenkins, .....	Weish, .....	Miner, .....	M. 1	Mount Carmel, .....	Killed by fall of coal at face of breast.
Nov.	13	Bartley Uchinski, .....	Russian, .....	Miner, .....	S. ....	Alaska, .....	Killed by explosion of gas. He entered
	15	Tizl Bellfonti, .....	Italian, .....	Miner, .....	M. 1	Pennsylvania, .....	Killed by explosion of gas. He entered a coal breast with a naked light on his head.
Dec.	17	William Kramer, .....	American, .....	Miner, .....	M. 1	Burnside, .....	Leg broken and otherwise injured by fall of slate. Died December 30.
	25	Willard Rosser, .....	American, .....	Message boy, .....	S. ....	Buck Ridge No. 1	Killed by being run over by a locomotive. Outside.
	2	William Motlavitich, .....	Russian, .....	Miner, .....	M. 1	Cameron, .....	Smothered by gas; the face of chute ran away.
	4	John Schnader, .....	American, .....	Miner, .....	M. 1	Locust Spring, .....	Killed by fall of top coal.
Northumberland, ..	13	Jeseph Mazeski, .....	Lithuanian, .....	Miner, .....	M. 1	Locust Spring, .....	Burned by explosion of gas. Died on 14th.
	13	Benjamin Grego, .....	Russian, .....	Laborer, .....	S. ....	Richards, .....	Burned by explosion of gas. Died on 15th.
	13	Frank Mattis, .....	Polish, .....	Laborer, .....	S. ....	Luke Fidler, .....	Burned by explosion of gas. Died on 27th.
	13	Joseph Grobeck, .....	American, .....	Driver, .....	S. ....	Richards, .....	Burned by explosion of gas. Died on 27th.
	16	Adam Osavage, .....	Russian, .....	Miner, .....	M. 1	Cameron, .....	Killed by fall of slate.
	16	Mike Shuck, .....	Polish, .....	Loader, .....	M. 1	Pennsylvania, .....	Killed by being caught between car and high side of rib.
	Northumberland	22	Frank Vollneavage, .....	Polish, .....	Miner, .....	M. 1	Colbert, .....
28		Henry Saunders, .....	American, .....	Doorboy, .....	S. ....	Cameron, .....	Instantly killed. He tried to jump between the cars and fell under them.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident.	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Feb. 16	Morris Wetzel, .....	American, .....	Miner, .....	49	M.	Henry Clay, .....		Leg broken. While working at face of breast a piece of slate fell on his leg.
25	Ralph Henninger, .....	American, .....	Driver, .....	18	S.	Burnside, .....		Leg broken by being bumped between cars.
25	H. M. Romberger, .....	American, .....	Carpenter, .....	45	M.	Pennsylvania, ....		Leg broken. While unloading machinery a shaft fell on his leg. Outside.
March 15	Joseph Toberchewski, ..	Polish, .....	Miner, .....	37	M.	Cobert, .....		Burned by gas. He entered a chute with a naked light on his head.
16	William Clave, .....	American, .....	Miner, .....	44	S.	Greenough, .....		Leg broken. While dressing a shot a piece of coal fell on him.
16	Theo. Mulchulskie, .....	Russian, .....	Laborer, ...	40	M.	Mount Carmel, ...		Leg broken. While riding between the engine and dumper he fell under the dumper and broke his leg. Outside.
April 17	John Meredith, .....	American, .....	Driver, .....	20	S.	Richards, .....		Injured internally. While trying to extinguish his lamp, which was adre, he was caught between the car and chute.
May 16	John Lowrey, .....	American, .....	Miner, .....	41	M.	Locust Spring, ...	Northumberland	Skull fractured. While crossing the top of chute on a plank he missed his step and fell head first down the chute.
17	John Wertness, .....	Polish, .....	Spragger, ...	18	S.	Royal Oak, .....		Injured internally. He was trying to couple cars in motion and was caught between the side looks.
June 19	Wally Heavey, .....	American, .....	Driver, .....	26	M.	Richards, .....		Injured internally. While bringing a trip of loaded cars out the chute spreader caught in a frog, catching the driver between mule and wagon.
23	Charles Conaghan, .....	Irish, .....	Miner, .....	40	M.	Richards, .....		Skull fractured by fall of rock off the rib while pulling off old plank in an empty breast.
July 14	John Teery, .....	Italian, .....	Miner, .....	27	M.	Hickory Ridge, ...		Arm broken. While trying to bar down a piece of coal a piece of slate fell on his arm.
18	Andrew Socha, .....	Polish, .....	Miner, .....	30	M.	Big Mountain, ...		Back and head seriously injured by fall of slate.
22	Frank Condrascki, .....	Polish, .....	Miner, .....	35	M.	Rellance, .....		Injured about the head by a shot, which blew through from another breast.



July	24	Walter Hesler, .....	Polish, .....	Miner, .....	37	M.	North Franklin, ..	Ribs fractured by a piece of slate falling on him.
Aug.	28	John Benzerofski, .....	Polish, .....	Miner, .....	45	M.	Richards No. 4, ...	Leg broken by a shot. He had been tampering with a squib and could not reach a place of safety in time.
Sept.	7	Mike Delaney, .....	American, .....	Miner, .....	43	M.	Reliance, .....	Ribs broken. While barring down a piece of slate he slipped under it as it was falling.
	7	Richard Daranatli, .....	Austrian, .....	Doorboy, ...	17	S.	Richards, .....	Injured internally. After opening the door he went to high side of gangway and was caught between the cars and high side.
	14	John Zerby, .....	American, .....	Miner, .....	59	M.	Richards, .....	Foot broken. A piece of coal rolled down a chute and caught his foot against a prop.
Oct.	2	Charles Paul, .....	German, .....	Miner, .....	25	S.	North Franklin, ..	Injured about the kidneys. A piece of slate fell on his back.
	6	Martin Nolan, .....	American, .....	Driver, .....	20	S.	Richards, .....	Badly squeezed. While walking alongside of the trip he was caught between the frame of car and car.
	7	Jacob Glessner, .....	American, .....	Fire boss, ...	56	M.	Reliance, .....	Knees and broken by fall of slate.
	27	Philip Pribes, .....	Polish, .....	Miner, .....	30	S.	Scott, .....	Burned by powder. A spark from his lamp fell on his leg.
	27	Matthew Lloyd, .....	American, .....	Miner, .....	27	M.	Hickory Swamp, ..	Leg broken by a piece of slate falling on it.
Nov.	2	Charles Weary, .....	American, .....	Miner, .....	47	M.	Bear Valley, .....	Leg broken and burned by gas in a breast that he entered with a naked light on his head.
	2	Andrew Selock, .....	Polish, .....	Miner, .....	32	M.	Pennsylvania, ...	Leg broken. He shortened the squib and shot went off before he reached a place of safety.
	6	Joe Winters, .....	American, .....	Machinist, ..	28	S.	Scott, .....	Sprained his back by falling a distance of twenty-five feet in the breaker. Outside.
	11	Anthony Blusius, .....	Lithuanian, ...	Miner, .....	28	M.	Luke Fidler, .....	Head, body and leg injured by premature blast.
Dec.	17	Charles Anton, .....	Italian, .....	Miner, .....	27	S.	Hickory Swamp, ..	Leg broken by fall of top coal.
	23	George Brilliant, .....	Hungarian, ...	Driver, .....	32	S.	Pennsylvania, ...	Foot crushed between car and rib.
	23	Stany Lipinski, .....	Polish, .....	Miner, .....	34	M.	Corbin, .....	Leg broken by fall of slate at face of breast.
	2	Andrew Shesti, .....	Polish, .....	Miner, .....	50	M.	Royal Onk, .....	Back broken by fall of slate.
	5	George Kochmerick, .....	Russian, .....	Miner, .....	23	M.	Hickory Ridge, ...	Leg broken by fall of slate.
	13	William Grinavitch, .....	Lithuanian, ...	Miner, .....	28	M.	Luke Fidler, .....	Burned by explosion of gas.
	13	Anthony Wable, .....	Lithuanian, ...	Miner, .....	30	M.	Luke Fidler, .....	Burned by explosion of gas.
	22	Lewis Mattis, .....	Polish, .....	Driver, .....	20	S.	Enterprise, .....	Thigh broken by falling under a trip of cars.
	28	William Haupt, .....	German, .....	Driver, .....	50	M.	Enterprise, .....	Leg broken. The team ran away and threw him under the wagon. Outside.

Northumberland

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof.

January 1.—Wally Slavinski, miner, was instantly killed by a fall of slate. He had been trying to bar down a piece of slate and failed. Instead of blasting it down, or propping it, he went to work under it again, when it fell on him.

January 3.—Mark Rodman, miner, was injured so severely by a fall of slate in a breast that he died three days after. He had neglected to timber his working place.

February 4.—John Celela, laborer, outside, was instantly killed. While loading stock coal, the top of which was frozen and undermined, it rushed on him.

February 12.—Andrew Peso, laborer, outside, was smothered by a rush of coal. He was washing the coal into a trough with a line of hose and went too close to the bank; and when it rushed he failed to get out of the way.

February 8.—Mike McGuire, an old practical miner, was instantly killed by a fall of slate. He was in the act of cutting a prop down from under a piece of slate when it fell on him. He should have blasted the prop out, as the mine law directs.

March 10.—Anthony Welcome, miner, was instantly killed by a fall of slate. He had neglected to timber his gangway as he had been directed to do by the foreman.

March 27.—Mike Topolski, miner, was instantly killed by a fall of slate in a chute. He had neglected to timber his chute, and while drilling a hole at the face, the slate fell on him.

April 10.—Thomas Powell, miner, was killed by a fall of slate. He had fired a shot which displaced a prop, and while cleaning out the prop hole to replace the prop the slate fell on him.

May 9.—John Coniff, miner, was instantly killed. After firing a shot in the breast, he went back to the face and sat down without making an examination, when a piece of top coal fell on him.

May 11.—James Mowrey, miner, was instantly killed by fall of top rock, while putting up a prop.

May 13.—Lewis Waskonis, miner, was killed by fall of rock while putting up a set of timber at face of breast.

June 30.—John Billman, miner, was killed by fall of coal. After firing a hole in the bottom coal he returned to his working place, and a piece of coal fell on him.

August 26.—Nicholas Popo, miner, killed by fall of rock. After firing a shot off the pillar that he was skipping, he went back to examine the place, and while drilling another hole a piece of rock which extended five feet over the pillar fell on him and his partner, killing both of them.

August 26.—Charles Wangin, miner, killed with Nicholas Popo.

September 2.—Cicero Tamaiani, miner, was instantly killed. While working at face of gangway a piece of rock fell on him. He had neglected to timber his gangway close enough to the face.

September 18.—Frank Ragorski, laborer, was instantly killed. He fired a shot which displaced a prop and while making room to reset the prop a piece of clod fell on him. This was a case of neglect on the part of the miner.

October 2.—August Lecofski, miner, was killed by a fall of rock. He had neglected to timber his gangway close enough to the face.

October 4.—Frank Male, miner, was killed by a fall of rock. After firing a shot at face of breast he went back to examine his place, and while so doing a piece of rock fell on him.

November 13.—Bartley Uchinski, miner, was killed by fall of top coal while going back to face of breast to fire the second hole.

November 17.—William Kramer, miner, leg broken and otherwise injured by a fall of slate in the gangway. He died December 20. He had neglected to timber his working place.

December 4.—John Schnader, miner, was killed by fall of top coal while in the act of starting coal in a chute in the Mammoth seam.

December 16.—Adam Osavage, miner, was killed by fall of slate off the pillar which he was skipping.

December 22.—Frank Volineavage, miner, was instantly killed while mining under a slip of coal. The accident could have been avoided if he had used a drill instead of a pick.

### Explosions of Gas.

November 15.—Tizi Bellfonti, miner, was killed by an explosion of gas. He had been warned by the fire boss that there was gas in the inside breast, and that he should not go in to his work until he (the fire boss) returned, but he disregarded the orders.

December 2.—William Motlavitch, miner, was smothered by an outburst of gas. He was driving up a chute when this occurred, and could not retreat fast enough.

December 13.—Joseph Mazeski, Benjamin Grego, Frank Mattis, Joseph Grobeck were so severely burned by an explosion of gas that they died a few days later. The explosion was caused through an outburst of gas from a breast, under a great pressure, which drove it to the gangway on top of the men and in some unaccountable manner the gas was ignited. All men at this colliery worked with locked safety lamps. Later on some cigarette paper and tobacco were found on the gangway, and it is supposed that one of the men was in the act of lighting a cigarette at the time.

### Cars.

January 5.—William Herb, driver, was killed. While in the act of removing a car out of a breast to main gangway, another driver ran his car out of another breast at the same time and ran into the first car, striking Herb.

April 25.—James Faleski, door boy, was killed. The supposition is that this boy was sleeping at his door when the engine and trip ran into the door and struck him as he was in the act of opening it.

June 30.—Charles Gurich, repairman, was killed by being run over by an empty car at bottom of slant. The driver had taken up two empty cars on the slant. The first car got off the track at a branch. The driver unhitched his mule and got two miners to help him put the car on, which they did, and the cars ran away down the slant. The driver should have spragged his last car before proceed-

ing to put the other car on. By so doing this accident would have been avoided.

August 22.—William T. Shoppy, driver, was killed. While riding on front end of trip a sudden jerk threw him down, and he was caught between cars and high side of gangway.

September 23.—William Kellerman, stable boss, was killed. While riding up the slope it is supposed that he had an attack of heart failure, to which he was a subject, and fell off the cars, which passed over him.

December 16.—Mike Shuck, loader, was killed. While sleeping on high side of gangway in the dark, he was caught between a loaded trip and rib, and his skull was crushed.

December 28.—Henry Saunders, door boy, was instantly killed. While trying to jump between the cars he fell under them, the trip passing over him.

### Falling into Shafts, Slopes and Manways.

March 9.—Mike Condracavitch, miner, was killed by falling down a breast manway. He was retreating from a shot when he missed his foothold and fell a distance of 150 feet on a pitch of 78 degrees.

April 3.—Joseph Gartner, carpenter, outside, was killed. He was working at the erecting of the Scott breaker, and while hammering on the end of a shaft he missed his blow and fell head first to the ground, a distance of 90 feet.

June 24.—Frank Damanski, miner, was robbing pillars and had built a battery across the breast 200 feet up from the gangway on a pitch of 76 degrees; while working on this battery one of the props, which he had not given heading enough, fell through and he went with it to the bottom of the breast.

August 23.—Paul Gripp, miner, was killed by falling down breast manway. While retreating from a shot he missed his foothold and fell down the breast manway, a distance of 250 feet, pitch of 70 degrees.

October 6.—George Wagner, miner, was killed by falling down a breast manway. His partner stated that he was hurrying down the manway in front of him, when he missed his foothold and fell a distance of 120 feet, pitch 70 degrees.

October 9.—Anthony Ondo, miner, was robbing pillars and had built a battery across the breast 200 feet up from the gangway on a pitch of 76 degrees. While working on this battery one of the props, which he had not given heading enough, fell through and he went with it to the bottom of the breast.

October 11.—George Matthewson, machinist helper, was killed by falling down slope. The front end of the gunboat jumped the track and he got off on the slope and missed his foothold, falling to the bottom.

October 26.—George Kosunbender, carpenter, was killed. While trying to get a stick out from under a pile, the top part of the pile rolled on him.

October 27.—John J. Jenkins, miner, was killed by gangway collar falling on him. He and his laborer were putting up a gangway collar on the legs, when a frail platform which he had built broke and precipitated him to the floor of the gangway, and the collar fell on him.



## Machinery.

April 19.—John Herbert, laborer, was instantly killed. While tightening a nut on the eccentric of the air compressor the engine suddenly started and caught him between the crank and side rod. The cause of the sudden start of the engine was a defective steam valve, causing the steam to leak into the cylinder. Outside.

April 21.—Jacob Racofski, footman, was killed. While tightening a nut on the cage at the bottom of shaft the engineer suddenly started to hoist and caught this man between the cage and timber. The engineer claimed that he had a signal to hoist.

June 23.—Raymond Burke, slatepicker, was killed by falling into scraper line. He had been walking around the breaker, away from his work, and in some unaccountable manner he fell into the machinery, which was fenced in according to law. Outside.

November 25.—Willard Rosser, messenger, was killed by being run over by a locomotive. He was trying to cross the track in front of the engine when he was run down.

## CONDITION OF COLLIERIES AND IMPROVEMENTS

## PHILADELPHIA AND READING COAL AND IRON COMPANY

Locust Spring, West.—Sanitary condition of colliery is good. No improvements worth noting.

Locust Gap, West.—Sanitary condition of colliery is good.

Locust Gap, East.—This colliery was set on fire May 5, 1904, and five lives were lost. I am very glad to say that after a siege of about eighteen months, the fire has been conquered and put out. The slopes that were slushed have been opened to second level, where the fire originated, and are timbered and cleaned up preparatory to resuming operations.

Locust Spring Shaft.—Sanitary condition of colliery is good. Road beds in good condition. No improvements worth noting.

Reliance Colliery.—Ventilation and drainage are fairly good. Road beds are kept in good condition.

Alaska Colliery.—Drainage is good, but the ventilation could be improved. No improvement worth noting.

Bear Valley.—Sanitary condition of colliery is good. Road beds are kept in good condition.

Henry Clay.—Sanitary condition of colliery is good. Road beds are well kept.

North Franklin.—Sanitary condition of colliery is good. Road beds are up to the standard.

Big Mountain Colliery.—Sanitary condition of colliery is fairly good.

Burnside.—Sanitary condition of colliery is fairly good.

Sterling.—Sanitary condition of colliery is good.

## SUSQUEHANNA COAL COMPANY

Richards.—Sanitary condition of colliery is fairly good. No improvements worth noting.

Pennsylvania.—One 18-foot fan and a concrete fan house have been erected; also one set return tabular boilers installed. Sani-

tary condition of colliery inside is good, and the road beds are well kept.

Hickory Ridge.—Sanitary condition of colliery is fairly good. Road beds are kept in fair condition.

Hickory Swamp.—Sanitary condition of colliery is fairly good.

Scott.—This colliery started operations on August 1. There are two shafts; one shaft with four compartments for hoisting coal; the other shaft with two compartments for hoisting water. The seams that are being mined are the Buck Mountain seam, and the two members of the Mammoth, or No. 8 and 9 seams.

#### MINERAL RAILROAD AND MINING COMPANY

Cameron.—Sanitary condition of colliery is fairly good. Road beds are kept in fair condition.

Luke Fidler.—Sanitary condition of colliery is fairly good. Road beds are in good condition.

#### EXCELSIOR COAL COMPANY

Excelsior.—Sanitary conditions are good, and the roads well kept. Very few improvements have been made at this colliery.

Corbin.—Ventilation and drainage are good. Road beds are well kept.

#### SHIPMAN COAL COMPANY

Colbert.—Sanitary condition of colliery is fairly good.

#### GREENOUGH RED ASH COAL COMPANY

Greenough Colliery.—There has been an electric plant installed at this colliery for haulage purposes and lighting up the breaker. A cement block building has been erected 25 x 30 for the engine and dynamo. Size of engine 16 x 16, and 168 horse power dynamo, 100 kilowatts. A new breaker has also been erected, the old one having been burned down last August. The sanitary condition of the colliery inside is good.

#### ENTERPRISE COAL COMPANY

Enterprise.—Sanitary condition of colliery is good.

#### LLEWELLYN MINING COMPANY

Royal Oak.—Sanitary condition of colliery is fairly good in some parts; in other parts it could be improved. The road beds are poorly kept.

#### LEHIGH VALLEY COAL COMPANY

Sioux Colliery.—Sanitary condition of colliery is fair.

Mount Carmel Colliery.—Ventilation and drainage of colliery are fair.

#### WHITE AND WHITE

Columbus No. 2.—Sanitary condition of colliery is fairly good.



## Mine Foremen's Examinations

The following candidates were recommended for certificates of qualification:

## Mine Foremen

William F. Quinn, George Davies, John Crawford.

## Assistant Mine Foremen

Thomas Allen, William McHale, George Schnee, Michael McHale, George Deitrich, John O'Neil, J. E. Jefferson, John Sauler, Elmer Wolfgang, Samuel Schoffstall, James Foley, Peter Bonowitz, Robert John, John Berger, William Aubrey, Harrison Haslop, Stewart Madara, William J. Davies, William Reese, Michael Manning, Patrick Quigley, Jonathan Butts, A. B. Straussen, Goodwin Howard, Oliver Tasker, M. J. Burke, William Ruffing, Patrick Boyle, Harry Willard, Michael Carroll, A. B. Carroll, John Madara, Patrick Buggie, Frank Zerambo, Thomas Neary, William R. Spatz, Thomas Johnson, Thomas Davies, John Powell, Lemuel Williams, John Smith.



# Fifteenth District

COLUMBIA AND DAUPHIN COUNTIES

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Centralia, Pa., February 17, 1906.

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

Sir: I have the honor of transmitting herewith the annual report of the Fifteenth Anthracite District for the year ending December 31, 1905.

Statistics regarding production, employes, condition of collieries, etc., are given in accordance with the requirements of the law.

Respectfully submitted,

JAMES A. O'DONNELL,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	5
Number of mines, .....	20
Number of mines in operation, .....	19
Number of tons of coal shipped to market, .....	1,452,871
Number of tons used at mines for steam and heat, .....	253,395
Number of tons sold to local trade and used by employes, .....	37,326
Number of tons produced, .....	1,743,592
Number of persons employed inside of mines, .....	2,917
Number of persons employed outside, .....	1,618
Number of fatal accidents inside of mines, .....	12
Number of non-fatal accidents inside of mines, .....	21
Number of non-fatal accidents outside, .....	6
Number of tons of coal produced per fatal accident inside, .....	145,299
Number of persons employed per fatal accident inside, ..	243
Number of persons employed per non-fatal accident inside, ..	139
Number of persons employed per non-fatal accident outside, .....	270
Number of wives made widows, .....	6
Number of children orphaned, .....	15
Number of steam locomotives used inside of mines, .....	1
Number of steam locomotives used outside, .....	19
Number of electric motors used inside, .....	5
Number of fans in use, .....	19
Number of gaseous mines in operation, .....	19

## TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Midvalley Coal Company, .....	423,702
Lykens Valley Coal Company, .....	358,556
Philadelphia and Reading Coal and Iron Company, .....	358,235
Lehigh Valley Coal Company, .....	316,007
Summit Branch Mining Company, .....	287,092
Total, .....	<u>1,743,592</u>

## Production by Counties

Columbia, .....	1,097,944
Dauphin, .....	645,648
Total, .....	<u>1,743,592</u>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	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									
Midvalley Coal Co., .....	1	.....	1	1	.....	2	423,702	6 48	222	870	648	.....	.....	648	222
Bykens Valley Coal Co., .....	3	.....	3	8	.....	10	119,518	898	343	1,236	298	.....	.....	112	172
Philadelphia and Reading Coal and Iron Co., ..	4	.....	4	2	.....	2	44,819	427	306	733	107	.....	.....	214	.....
Philadelphia Valley Coal Co., .....	1	.....	1	.....	.....	10	89,539	486	200	746	243	.....	.....	61	130
Senigh Branch Mining Co., .....	2	.....	2	2	.....	3	198,004	457	474	931	229	.....	.....	229	474
Miscellaneous companies, .....	.....	.....	.....	2	1	.....	143,546	6	13	19	.....	.....	.....	.....	.....
Totals and averages for district, .....	12	.....	12	21	6	27	145,999	2,917	1,613	4,535	243	.....	.....	139	270



TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Falls of coal, .....						1							1	8.33
Falls of roof, .....		1						1					2	16.67
Mine cars, .....				1			1		1				3	25.00
Explosions of gas and dust, .....		1											1	8.34
Explosions of powder and dynamite, .....						1							1	8.33
Falling into slopes, etc., .....	2		1										3	25.00
Crushed at batteries, .....												1	1	8.33
Totals, .....	2	2	1	1		2	1	1	1			1	12	100
Grand totals inside and outside, .....	2	2	1	1		2	1	1	1			1	12	.....

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

Causes of Accidents Inside	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Falls of coal, .....		1	1					2					4	19.05
Falls of roof, .....			1	1			1	1					4	19.05
Mine cars, .....		1			1		1					1	4	19.05
Explosions of powder and dynamite, .....								1	1				2	4.76
Premature blasts, .....								2	1				3	14.29
Falling into slopes, etc., .....								1					1	4.76
Crushed at batteries, .....						2		1					3	14.28
Miscellaneous, .....					1								1	4.76
Totals, .....	2	2	1	2	2	2	6	3				1	21	100
Causes of Accidents Outside														
Cars, .....					1						1	1	3	50.00
Machinery, .....							1						1	16.67
Miscellaneous, .....	1					1							2	33.33
Totals, .....	1				1		2				1	1	6	100
Grand totals inside and outside, .....	1	2	2	1	3	2	4	6	3		1	2	27	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants, .....		1											1
Miners, .....	1					1							2
Miners' laborers, .....	1	1	1					1					4
Doorboys and helpers, .....				1									1
Company men, .....									1				1
All other employes, .....						1						1	2
Totals, .....	2	2	1	1		2	1	1	1			1	12
Grand totals inside and outside, ....	2	2	1	1		2	1	1	1			1	12

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, .....		1	2	1		1	1	5					11
Miners' laborers, .....					1				2			1	4
Drivers and runners, .....		1			1	1	1						4
All other employes, .....							1	1					2
Totals, .....		2	2	1	2	2	2	6	3			1	21
Outside													
All other employes, .....	1				1		2				1	1	6
Totals, .....	1				1		2				1	1	6
Grand totals inside and outside, ....	1	2	2	1	3	2	4	6	3		1	2	27

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, .....	2	1	1	.....	.....	1	1	.....	.....	.....	.....	1	7
Scotch, .....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Irish, .....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
German, .....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	2
Polish, .....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
Totals, .....	2	2	1	1	.....	2	1	1	1	.....	.....	1	12

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, .....	.....	2	1	1	2	2	3	2	.....	.....	1	1	15
English, .....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	1
Irish, .....	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	.....	3
German, .....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
Polish, .....	.....	.....	1	.....	.....	.....	.....	1	2	.....	.....	.....	4
Hungarian, .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Italian, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Slavonian, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Totals, .....	1	2	2	1	3	2	4	6	3	.....	1	2	27

TABLE I.—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 person 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 minute provided for each person
Midvalley Coal Co.	Slope.....	Gaseous..	} 2 fans.....	25	8	7	80	2¼	Vulcan.....	Steam....	15	160,000	157,000	164,000	648	242
Midvalley No. 1, .....	Drift.....	Gaseous..														
Midvalley No. 2, .....	Slope.....	Gaseous..														
Lykens Valley Coal Co.	Slope.....	Gaseous..	} 3 fans.....	25	8	7	120	2	Gulbal.....	Steam....	14	198,000	196,000	200,000	893	218
Short Mountain No. 1, .....	Slope.....	Gaseous..														
Short Mountain No. 2, .....	Drift.....	Gaseous..														
Short Mountain No. 2, .....	Drift.....	Gaseous..														
Short Mountain, Bear Gap, ..	Tunnel...	Gaseous..														
Philadelphia and Reading Coal and Iron Co.	Slope.....	Gaseous..	} 4 fans.....	18	6	4½	120	2½	Whiting.....	Steam....	12	190,000	186,000	194,000	427	435
Potts, Primrose, .....	Slope.....	Gaseous..														
Potts, Mammoth, .....	Slope.....	Gaseous..														
Lehigh Valley Coal Co.	Slope.....	Gaseous..	} 5 fans.....	20	6.8	5.10	100	2¾	Gulbal.....	Steam....	16	190,000	177,000	184,000	486	364
Centralia, .....	Shaft.....	Gaseous..														
Continental, .....	Tunnel...	Gaseous..														
Pig Mine Run, .....	Tunnel...	Gaseous..														
Logan, .....	Slope.....	Gaseous..														
Summit Branch Mining Co.	Slope.....	Gaseous..	} 5 fans.....	20	8	7	110	2¾	Gulbal.....	Steam....	14	180,000	176,000	183,000	457	385
Williamstown, Big Lick, .....	Slope.....	Gaseous..														
Williamstown, No. 3, .....	Slope.....	Gaseous..														
Williamstown, Bear Valley, ..	Shaft.....	Gaseous..														
Williamstown No. 1, .....	Shaft.....	Gaseous..														

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Midvalley, ..... Midvalley Coal Co.	Columbia, ....	John S. Wentz, ...	Philadelphia, .....	T. E. Snyder, .....	Wilburton, .....	Lehigh Valley
Short Mountain, ..... Lykens Valley Coal Co.	Dauphin, .....	R. A. Quin, .....	Wilkes-Barre, .....	Hood McKay, .....	Lykens, .....	Pennsylvania
Philadelphia and Reading Coal and Iron Co. ....	Columbia, ....	W. J. Richards, ...	Pottsville, .....	Reese Tasker, .....	Pottsville, .....	P. & R.
Potts, ..... Lehigh Valley Coal Co.	Columbia, ....	S. D. Warriner, ...	Wilkes-Barre, .....	J. M. Humphrey, ...	Centralla, .....	Lehigh Valley
Centralla, ..... Locust Run, ..... Summit Branch Mining Co.	Columbia, ....	R. A. Quin, .....	Wilkes-Barre, .....	Hood McKay, .....	Lykens, .....	Pennsylvania
Williamstown, .....	Dauphin, .....					

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County.	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked (Totals are averages, 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
Midvalley, .....	Columbia, .....	404,016	17,000	2,686	423,702	250	870	1	2	5,176	90,693	125
Lykens Valley Coal Co. ....	Dauphin, .....	294,806	48,331	15,329	358,553	294	1,236	3	10	3,400	15,235	153
Philadelphia and Reading Coal and Iron Co. ....	Columbia, .....	304,817	46,919	6,439	358,235	269	733	4	2	11	96,321	85
Lehigh Valley Coal Co. ....	Columbia, .....	277,711	30,458	7,838	316,007	222	746	2	10	3,053	123,630	79
Locust Run, * .....	Columbia, .....	.....	.....	.....	.....	.....	19	.....	.....	.....	36	2
Summit Branch Mining Co. ....	Dauphin, .....	171,431	110,627	5,634	287,092	262	931	2	3	2,583	42,158	81
Williamstown, .....	.....	1,452,871	253,395	37,226	1,743,592	239	4,555	12	27	15,183	368,073	325
Grand totals, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\*Pumping plant.



TABLE 2.—PART 2.

Names of Operators	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	Steam	Air							
Midvalley Coal Co.	Columbia,	.....	.....	10	2,400	2,400	9	.....	16	829	5	4,820	4,820	.....	1
Syrens Valley Coal Co.	Dauphin,	.....	180	20	3,790	3,790	4	.....	40	3,220	2	2,320	1,456	.....	1
Pyrites and Reading Coal and Iron Co.	Columbia,	.....	575	14	3,820	3,820	.....	.....	14	2,596	4	4,720	4,500	.....	.....
Lehigh Valley Coal Co.	Columbia,	.....	.....	17	2,700	2,255	.....	.....	61	8,423	1	3,072	1,536	.....	.....
Summit Branch Mining Co.	Dauphin,	.....	3,000	22	5,805	8,405	.....	.....	24	2,700	11	8,107	5,479	.....	.....
Totals,	.....	81	3,725	90	16,615	20,350	20	.....	155	17,788	24	24,059	17,801	.....	4

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										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	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employes	Total outside
Midvalley Coal Co.	Columbia, ..	2	2	6	275	190	83	14	4	60	12	648	1	2	15	24	50	25	5	100	222	870
Lytkens Valley Coal Co.	Dauphin, ..	1	4	6	302	116	98	53	17	152	144	893	1	1	26	46	71	.....	7	191	343	1,236
Short Mountain, Philadelphia and Reading Coal and Iron Co.	Columbia, ..	2	.....	8	111	41	34	26	4	105	96	427	.....	2	10	23	83	20	3	165	306	733
Lehigh Valley Coal Co.	Columbia, ..	5	1	5	212	67	46	2	2	.....	146	486	.....	3	13	33	49	.....	3	154	260	746
Centralia, Locust Run, Summit Branch Mining Co.	Columbia, ..	.....	.....	.....	.....	.....	.....	.....	2	.....	4	6	.....	1	.....	6	.....	.....	6	.....	13	19
Williamstown, ..	Dauphin, ..	2	4	4	162	22	27	4	19	57	166	457	2	2	17	85	63	.....	4	301	474	931
Grand totals, ..	.....	12	11	29	1,062	436	283	99	43	374	558	2,917	4	11	86	217	316	45	22	917	1,618	4,535

TABLE 3.—PART 2.

Names of Operators	County	Number of Days Worked in Breaker												Total	
		January	February	March	April	May	June	July	August	September	October	November	December		
Midvalley Coal Co., .....	Columbia, .....	22	12	20	21	22	24	26	20	22	23	22	22	22	250
Jykens Valley Coal Co., .....	Dauphin, .....	24	23	27	23	26	25	22	27	23	26	25	23	23	264
Philadelphia and Reading Coal and Iron Co., ..	Columbia, .....	22	19	26	23	26	22	19	24	23	24	21	20	20	269
Lehigh Valley Coal Co., .....	Columbia, .....	21	9	18	22	24	23	15	16	16	20	17	21	222	
Summit Branch Mining Co., .....	Dauphin, .....	21	20	24	21	23	22	20	24	22	22	22	21	22	262

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 19	John Rissinger, .....	American, .....	Laborer, .....	19	S.	.....	.....	Potts, .....	Columbia, .....	Killed by falling down the slope.
28	Edward Curley, .....	American, .....	Miner, .....	30	M.	.....	.....	Potts, .....	Columbia, .....	Fatally injured by falling down a manway.
Feb. 1	Joe Rinochl, .....	American, .....	Laborer, .....	52	M.	1	2	Short Mountaln, .....	Dauphin, .....	Killed by a fall of rock.
14	Robert Graham, .....	Scotch, .....	Fire boss, .....	52	M.	1	.....	Williamstown, .....	Dauphin, .....	Killed by an explosion of gas.
March 15	Charles Buflington, .....	American, .....	Laborer, .....	24	S.	.....	.....	Williamstown, .....	Dauphin, .....	Killed by falling down the slope.
April 17	Gustavus Martin, .....	German, .....	Door tender, .....	74	S.	.....	.....	Short Mountaln, .....	Dauphin, .....	Killed by an electric motor.
June 17	John Reilly, .....	Irish, .....	Starter, .....	35	M.	1	.....	Potts, .....	Columbia, .....	Killed by an explosion of dynamite.
21	Dennis Gaughlin, .....	American, .....	Miner, .....	24	M.	1	2	Centralia, .....	Columbia, .....	Killed by a fall of coal.
July 17	James Carr, .....	American, .....	Door tender, .....	16	S.	.....	.....	Centralia, .....	Columbia, .....	Killed by an electric motor.
Aug. 26	Walley Balabosky, .....	Polish, .....	Laborer, .....	35	M.	1	5	Mulvalley, .....	Columbia, .....	Killed by a fall of rock.
Sept. 18	John Windisham, .....	German, .....	Laborer, .....	18	S.	.....	.....	Mulvalley, .....	Dauphin, .....	Killed by mine cars.
Dec. 4	Anthony Reilly, .....	American, .....	Starter, .....	38	M.	1	3	Short Mountaln, .....	Columbia, .....	Killed by a rush of coal in a battery.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 9	Nick Rouse, .....	Italian, .....	Laborer, .....	23	S.	Centralia, .....	Columbia, ...	Arm fractured by falling off a timber car. Outside.
Feb. 3	John Snyder, .....	American, .....	Driver, .....	19	S.	Potts, .....	Columbia, ...	Knee crushed by being bumped between cars.
March 6	Ezrahus Miller, .....	American, .....	Miner, .....	28	M.	Williamstown, .....	Dauphin, ...	Two ribs fractured by a fall of coal.
March 9	Adrian Williams, .....	American, .....	Miner, .....	24	M.	Short Mountain, .....	Dauphin, ...	Left leg fractured by a fall of rock.
March 21	Charles Frachak, .....	Polish, .....	Miner, .....	27	S.	Centralia, .....	Columbia, ...	Back bruised by a fall of coal.
April 24	Daniel J. Welker, .....	American, .....	Miner, .....	33	S.	Short Mountain, .....	Columbia, ...	Right leg fractured by a fall of rock.
May 10	Edward Gaughn, .....	Irish, .....	Laborer, .....	69	M.	Centralia, .....	Columbia, ...	Left leg mangled by cars; amputation necessary. Outside.
May 13	James L. Coles, .....	American, .....	Driver, .....	18	S.	Williamstown, .....	Dauphin, ...	Collar bone fractured by being caught between car and mine.
May 18	August Braner, .....	American, .....	Laborer, .....	24	M.	Short Mountain, ...	Dauphin, ...	Collar bone and two ribs fractured by a falling prop.
June 10	Harry Esterline, .....	American, .....	Driver, .....	26	M.	Short Mountain, .....	Dauphin, ...	Skull fractured while starting a battery.
June 30	John Blaker, .....	American, .....	Miner, .....	49	M.	Centralia, .....	Columbia, ...	Leg fractured by a rush of coal in a battery.
July 10	Stuart Falster, .....	American, .....	Oiler, .....	19	S.	Williamstown, .....	Dauphin, ...	Right arm crushed by being caught in machinery. Outside.
July 11	Fred Klink, .....	American, .....	Driver, .....	19	S.	Short Mountain, ...	Dauphin, ...	Two ribs fractured by being caught between car and chute.
July 14	Michael Hensey, .....	Hungarian, .....	Laborer, .....	38	S.	Midvalley, .....	Columbia, ...	Leg fractured by a rock falling on him. Outside.
Aug. 14	George Smith, .....	American, .....	Miner, .....	33	M.	Short Mountain, ...	Dauphin, ...	Right leg fractured by a fall of rock.
Aug. 4	John Gulliver, .....	English, .....	Miner, .....	53	M.	Centralia, .....	Columbia, ...	Leg fractured by a fall of coal.
Aug. 5	Charles Klager, .....	German, .....	Miner, .....	42	M.	Centralia, .....	Columbia, ...	Hip dislocated by a fall of coal.
Aug. 9	Edward O'Neil, .....	Irish, .....	Starter, .....	39	S.	Potts, .....	Columbia, ...	Leg fractured by falling down a chute.
Aug. 22	Arthur Blackway, .....	American, .....	Miner, .....	24	M.	Short Mountain, .....	Dauphin, ...	Collar bone fractured by flying coal.
Aug. 23	Lewis Trookes, .....	Polish, .....	Miner, .....	32	M.	Centralia, .....	Columbia, ...	Back bruised by flying coal from a blast.
Aug. 28	Jacob Shiley, .....	American, .....	Miner, .....	49	M.	Short Mountain, .....	Dauphin, ...	Leg fractured by a fall of rock.
Sept. 28	Martin Caulfield, .....	Irish, .....	Starter, .....	54	M.	Short Mountain, .....	Dauphin, ...	Hand blown off by a blast.
Sept. 29	John Smith, .....	Polish, .....	Laborer, .....	21	S.	Centralia, .....	Columbia, ...	Burned by powder.
Sept. 25	William Postcavage, .....	Polish, .....	Laborer, .....	44	M.	Midvalley, .....	Columbia, ...	Ankle dislocated by a rush of coal.
Nov. 1	Chart's Warman, .....	American, .....	Runner, .....	45	S.	Centralia, .....	Dauphin, ...	Collar bone fractured. Struck by a car. Outside.
Dec. 9	John Karable, .....	Slovakian, .....	Laborer, .....	35	M.	Centralia, .....	Columbia, ...	Arm fractured by cars.
Dec. 16	Charles Shoemper, .....	American, .....	Runner, .....	29	M.	Short Mountain, ...	Dauphin, ...	Leg fractured by being struck by a car. Outside.

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

Short Mountain Colliery, February 1.—Joe Rinochl, laborer, was instantly killed by a fall of rock.

Centralia Colliery, June 21.—Dennis Gaughin, miner, was instantly killed by a fall of coal while barring down top coal.

Midvalley No. 1 Slope, Skidmore vein, August 26.—Walley Balabosky, laborer, was instantly killed by a fall of rock. He was pushing a car into the face of the gangway when a large piece of rock fell from the roof.

Mammoth vein, Potts Colliery, December 4.—Anthony Reilly, starter, was fatally injured by a rush of coal. He was in the act of drilling a hole in a piece of coal in a blocked battery when the coal rushed and caught him against one of the chute props.

## Cars

Short Mountain Drift, April 17.—Gustavus Martin, doortender, was instantly killed by an electric motor. He was on the wrong side of the door when the motor returned with a loaded trip and did not hear it. The motor ran through the door, was derailed and ran over Martin.

Centralia Colliery, July 17.—James Carr, doortender, was instantly killed by a motor and trip of cars. The motor had empty cars in front and behind. The cars in front prevented the motorman from seeing the door or the light of the doortender, the door for some reason being closed. The trip crashed through it and the doortender was found under the motor.

Short Mountain, September 18.—John Windishman, laborer, was instantly killed on the turnout at the bottom of slope by a trip of cars pushed by a locomotive. Being in the way of the cars he was warned of the danger but either he did not heed the warning or became bewildered, and got in the way of the cars.

## Explosions of Powder and Dynamite

Potts Colliery, June 17.—John Reilly, starter, was instantly killed by an explosion of dynamite in the Primrose slope. He evidently had the dynamite in his bosom when it some way it was exploded, as his body was cut in two. No one was near him when the accident occurred.

## Falling Down Shafts, Slopes, Etc.

Potts Colliery, January 19.—John Rissinger, outside laborer, was instantly killed by falling down the Primrose slope. The bridge over which timber cars are run was lowered at the wrong time and Rissinger, who was standing on the end of bridge, fell into the slope.

Potts Colliery, January 28.—Edward Curley, miner, was fatally injured by falling down a breast manway. He was descending the manway when he slipped and fell.



Williamstown Colliery, March 15.—Charles Buffington, laborer, was instantly killed by falling down No. 3 slope. He, with two other men was lowered in a car to the second level. When getting out of the car he slipped and fell to the bottom of the slope.

### By Explosions of Gas

Williamstown Colliery, February 14.—Robert Graham, fire boss, was instantly killed by an explosion of gas in Bear Valley shaft. He had examined the working places with a safety lamp. After making the examination he lighted his naked lamp and entered an air lock which he had passed through twice before. Evidently there was accumulation of gas in the air lock which he ignited when he entered with the naked lamp.

## CONDITION OF COLLIERIES

### MIDVALLEY COAL COMPANY

Midvalley.—Ventilation fair. Roads and drainage fair. Condition as to safety good.

### LYKENS VALLEY COAL COMPANY

Short Mountain.—Ventilation fair. Roads and drainage good. Condition as to safety good.

### PHILADELPHIA AND READING COAL AND IRON COMPANY

Potts.—Ventilation good. Roads and drainage good. Condition as to safety good.

### LEHIGH VALLEY COAL COMPANY

Centralia.—Ventilation fair. Roads and drainage fair. Condition as to safety good.

### SUMMIT BRANCH MINING COMPANY

Williamstown.—Ventilation good. Roads and drainage good. Condition as to safety good.

## IMPROVEMENTS

### LEHIGH VALLEY COAL COMPANY

At Centralia colliery at the foot of No. 2 slope a new pump room has been excavated in the top rock, and a new tandem compound duplex pump installed, 26 inch and 42 inch steam cylinders, and 14 inch plungers, and 48 inch stroke, to furnish wash water for the breaker. A new 15 foot fan has been placed on the south side of the coal basin.

## SUMMIT BRANCH MINING COMPANY

At Williamstown No. 2 shaft, they have installed a pair of 36 inch by 60 inch, and a pair of 36 inch by 48 inch double hoisting engines, and have built new engine house for each pair of engines. A water basin has been made around the new No. 2 shaft, and 1,900 feet of 12 inch steam line connecting No. 2 boiler house with Bear Valley slope engines.

## LYKENS VALLEY COAL COMPANY

At Short Mountain colliery two pairs of 12 inch by 36 inch duplex pumps have been placed.

## Mine Foremen's Examinations

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in the court house at Pottsville, April 26 and 27.

The Board of Examiners was James A. O'Donnell, Inspector; T. E. Snyder, Superintendent; Peter Haley and Patrick Quigley, Miners. The following named persons, having passed a satisfactory examination, received certificates:

## Mine Foremen

Anthony Rowan, Edward Martin, William Singelton, Michael Kane, John Carr, Anthony McAndrew, Obed F. Riegel.

## Assistant Mine Foremen

Henry Prichard, Benjamin Greene, Frank Richter, John L. Brennan, David Watkeys, David Samuels.

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