

Average Number of Days Worked and Tons of Coal Mined Per Day for Each Person Employed.

NAME OF COMPANIES.	Days worked.	Tons mined per employé.
Pennsylvania Coal Company,	192.90	2.05
Lehigh Valley Coal Company,	154.14	2.34
Delaware, Lackawanna and Western Railroad Company,	186.00	1.43
Delaware and Hudson Canal Company,	198.00	1.89
Butler Coal Company,	151.71	2.30
Wyoming Valley Coal Company,	250.55	1.43
Miscellaneous coal companies,	180.68	2.04
All coal companies,	187.71	1.94

COLLIERY IMPROVEMENTS DURING 1885.

The Pennsylvania Coal Company.

At the Barnum Shaft, No. 2 was sunk from the Ross to the Red Ash vein, a distance of two hundred and thirteen feet. This improvement opens a large area of good coal for this company.

Pennsylvania Coal Company.

Shaft No. 14, located in Jenkins township, having reached the Fourteen-Foot vein, at a depth of three hundred and sixty-five feet. This shaft cuts the Seven Foot vein at a depth of two hundred and fifty-six feet. Its use will be for hoisting coal. The size is 12'×52'. They are sinking the second opening, and have reached the Seven Foot vein, at a distance of two hundred and forty-six feet. The breaker is completed all but putting in the machinery.

Lehigh Valley Coal Company.

At the Wyoming Colliery a tunnel was driven from the lower to the upper split of the Baltimore vein, to be used for ventilation.

Delaware, Lackawanna and Western Railroad Company

Are sinking the second opening to the Pettebone shaft. There is no work doing in the mine shaft, as it has reached the vein they intended to work some time ago.

Delaware and Hudson Canal Company.

At the Pine Ridge Colliery, two shafts were sunk, one in the Baltimore vein, to a depth of one thousand feet. The size is 7½'×12', with a gradient of ten degrees. The other is sunk in the Hillman vein, to a depth of

by natural ventilation by driving openings to the surface. A new breaker was erected to prepare the coal from these openings. It is a substantial building with first-class machinery. All the dangerous parts are fenced and boxed off. The breaker started to prepare coal in the month of November, 1886.

The Pennsylvania Coal Company built a new breaker at Port Griffith, in Jenkins township, to prepare the coal from shafts Nos. 4 and 7, slope No. 4 and tunnel No. 1. It is a large breaker and has the latest improved machinery. It has a capacity for cleaning a large amount of coal per day. The breaker started up in November, 1886.

Colliery Improvements During 1886.

The improvements made in the different collieries of this district have been somewhat more extensive this year than last. Some of the collieries are old ones, and have been worked very extensively; therefore, it has caused the companies to sink to lower veins to get their collieries in condition to maintain the present shipments of coal from them.

Pennsylvania Coal Company.

This company sunk a new shaft, in Old Forge township, Lackawanna county, to the bottom of the Powder Mill vein, a depth of 145 feet, sectional area, 384 feet. It is used to hoist coal, which is taken to the Old Forge breaker for preparation for market. A new inside plane was driven at the bottom of the shaft, 125 feet in length, with a sectional area of 208 feet, and a grade of $12\frac{1}{2}$ degrees.

In No. 10 shaft, a new slope was sunk (600) six hundred feet, and driven up a new plane, a distance of (150) one hundred and fifty feet, to maintain the present out-put of coal

No. 14 breaker, situated in Jenkins township, was burned down on the evening of November 18, 1886, with all the surrounding buildings. The breaker was a new one, and started up on August 7, 1886. The fire is supposed to have started in the boiler-room. The night engineer had occasion to go to look after a pump some distance from the boiler-house; when he came back the fire had got such headway that he could not put it out. One of the boilers had a defective sheet next the fire, which sprung a leak, throwing the fire out of the furnace door and setting fire to the building.

Delaware and Hudson Canal Company.

At the Laurel Run colliery, a tunnel was driven from the bottom split of the Baltimore vein to the top split, a distance of 110 feet, to be used to transport coal; sectional area, 70 feet. They are now driving their second opening for the same purpose.

Lehigh Valley Coal Company.

At the Mineral Spring colliery, a tunnel was driven from the bottom

Examination of Applicants for Mine Foreman's Certificates.

The annual examination of applicants for mine foreman's certificates in the Second district, was held in the Welsh Hill school building, Pittston, Pa., June 25th and 26th. The examiners were H. McDonald, inspector, A. G. Mason, superintendent, both of Pittston, Pa., and Archie McQueen, of Pleasant Valley, Pa.

The following fourteen were successful, John W. Reid, Samuel M. Johnson, James R. Walsh, John Marian, Richard Beer, William J. Thomas, Patrick S. Coyne, Stephen McLinarie, James Blease, James Wilson, Mathew D. Macky, John Hastie, David D. Davis and Evan H. Reese.

James Waddell, of Kingston, Pa., applied for a certificate of service and was recommended to receive one.

General Condition of the Mines.

The mines of this district are in comparatively good condition as regards ventilation with the exception of a few which are not in the condition that the law requires, but I am happy to state that these mines are now being attended to, so that in a short time they will be in such condition as to give all the air to the workmen that is required by law.

The drainage in the mines has been improved more than in former years, yet there is room for improvement in this regard. Likewise the timbering is receiving its share of attention. As there has not been one accident in this district this year attributable directly to the neglect of timbering or propping.

Mine Improvements during 1888.

Pennsylvania Coal Company.—In shaft No. 6 of this company two underground tunnels were driven from the Pittston to the Marcy seam, a distance of one hundred and twenty, and three hundred feet respectively, which opens up an extensive lift of good coal.

At shaft No. 11 of this company, a new underground slope was sunk in the Pittston seam, a distance of five hundred and twenty-two feet. The engines are located on the surface and the ropes pass down through the air shaft.

A new tunnel was driven by this company about one mile south of **No. 14 shaft**, from the surface, cutting the Pittston seam at a distance of two hundred feet. The coal is of a good quality and is taken by a small locomotive to **No. 14 breaker**, to be prepared for market.

A new shaft was sunk by this company close to old No. 4 shaft, in Pittston borough, from the surface to the Powder Mill seam, a distance of four hundred and sixty-four feet. Size of shaft twelve by thirty-two feet. It will be used for hoisting coal.

Lehigh Valley Coal Company.—At Coal Brook slope an air shaft was sunk to the Red Ash seam, and a new fan twenty feet diameter

D-11114

Undoubtedly the cause of the explosion was that when the gas became ignited from the previous blast, a small feeder was left burning unseen behind the brattice and the brushing brought the gas down in contact with it. The quantity of gas which exploded in the place was very small, but the place being narrow, the men received all there was of it, with no chance of escaping.

RECORD OF COLLIERY IMPROVEMENTS DURING 1893.

Pennsylvania Coal Company.

The new Barnum breaker, which was mentioned in my last report as being in course of construction, was completed and started to prepare coal for market in June, 1893. It is a large and commodious structure, having all the latest improved machinery.

At No. 7 colliery of this company a new air shaft, 12x12 feet, was sunk from the surface a distance of 331 feet to the checker seam, to be used for ventilation. A rock tunnel was also driven from the Pittston to the Marcy seam, a distance of 80 feet, for transportation of coal. In the Hoyt shaft a rock tunnel was driven from the Marcy to the Pittston vein, a distance of 480 feet, sectional area, 91 feet, to be used for the transportation of coal.

At No. 10 shaft a new exhaust fan, 20 feet in diameter was erected on the air shaft, in place of the one removed, it being too small; it will ventilate the workings of the red ash seam.

In **No. 14 breaker** an 8-foot fan was erected to take the coal dust from the breaker, which was greatly needed, as the coal coming to this breaker was very dry, so that the men and boys were terribly annoyed by the dust.

Lehigh Valley Coal Company.

This company has sunk an underground slope in their Oakwood shaft from the Checker to the red ash vein, a distance of 631 feet, on a grade of 30 degrees; sectional area, 10x13 feet. This slope opened up a large field of good coal in this vein, which is 14 feet in height.

In the Maltby Colliery the company has put in the "tail rope" system on their inside slope, which works very satisfactorily. A pair of first motion engines are situated close to the foot of the shaft which does the hoisting on the slope. The breaker has been rebuilt and enlarged, so that it will have a capacity of 1,500 tons of coal per day. The most approved machinery has been placed in it to clean and prepare the coal. An endless chain haulage, of about 500 yards in length, has been placed on the outside from the breaker to the shaft, which does away with all mules that were used heretofore.

A rock tunnel was driven in the Wyoming Colliery of this company from the five-foot to the Hillman seam, a distance of 195 feet, with a sectional area of 8x12 feet, to be used for transporting coal.

On the morning of January 3, 1901, David J. Williams, mine boss and William Morgan, Martin Fortune and Wm. Earley, fire bosses of Laurel Run colliery went into the mine about 9 A. M., in company with a rock contractor, by the manway and descended to the Checker vein inside slope to locate a rock shaft which is as I understand to be sunk to Red Ash vein. After the contractor went out the above four men went down to the third lift to make an examination, and proceeded through some of the workings which were the returns from the fire, and when they found that they were so badly affected by damp they turned to go back and had reached the slope when they all fell, with the exception of Williams who started up the slope for help but failed to reach the top. Towards evening the outside foreman, Seaman Stucker became alarmed and sent for some of the workmen to look for them. When they were found about 9 P. M., Williams and Morgan were dead, Fortune and Earley after considerable exertion by the doctors were restored to consciousness in a few hours. Fortune died on the 10th of January, from the effects, but Earley fully recovered. What induced Mr. Williams to go into the mine after having been ordered to keep out is hard to say, as he was naturally bright and had filled the position of mine foreman for years before for other companies.

Burning of No. 14 Breaker.

On February 18, 1901, the large No. 14 Breaker of the Pennsylvania Coal Company located in Jenkins township, caught fire and was burned to the ground, and the employes were idle for some time until room in the other collieries of the company could be made for them. A new breaker has been built and the machinery is now being installed, with expectation of commencing to prepare coal by April 1, of this year. The breaker has a capacity of 3,000 tons per day and will have all the latest improved machinery. A new washery has been built in connection with the breaker to prepare all the refuse from it.

In January, 1901, the large "Babylon breaker" and washery of the Temple Iron Company were destroyed by fire. How it originated remains a mystery; the colliery has been idle since, the company having declined to rebuild. All the coal will be taken to the Lawrence breaker for preparation for market as soon as roads are built.

Improvements by the Lehigh Valley Coal Company During the Year 1901.

Prospect Colliery...The Prospect shaft was completed to the Red Ash vein and the hosting engines have been equipped with spools

March 9, Number 8 Washery, Michael Sabbott, Italian, culmman, was smothered by a rush of culm on the bank.

March 9, Number 14 Colliery, Joseph Sarnella, Italian, and John Russian, Polish, ashmen, were asphyxiated while loading a car with ashes under the boiler room. Outside.

Miscellaneous, Outside

April 7, Ewen Washery, Isaac Weil, Hebrew, and Michael Marwell, Italian, company laborers, were fatally burned by an explosion of steam and hot coal on culm bank, caused by throwing water on burning bank from a hose. Weil died April 11. Marwell died April 17.

July 27, Laurel Run, George Yale, American, and John Geary, American, company men, were fatally injured while taking down the old trestle-work to breaker. The trestle fell and the men fell with it. Geary died July 28. Yale died August 2.

December 11, Number 14 Colliery, Sanford Apt, machinist, was instantly killed by throwing himself into the shaft from the surface landing. He came to the head of the shaft and opened the gate. The head tender, John Jordan, who was oiling the opposite cage, ordered him away. He took hold of Apt, put him outside of the gates, and returned to his work. Looking over in the distance of the opening he saw Apt in the act of throwing himself into the shaft. This is not considered by the Inspector as chargeable to coal mining. It was a case of suicide.

CONDITION OF COLLIERIES AND IMPROVEMENTS

PENNSYLVANIA COAL COMPANY

Number 14 Colliery.—At Number 14 Breaker the washery was enlarged by an addition of 12 feet by 92 feet, and they are now making buckwheat coal in the washery instead of the breaker. A brick addition enlarging the wash house 18 feet by 30 feet was built.

An 8 inch bore hole was drilled from the surface to Pittston vein for slushing purposes.

The old Chapman slope abandoned for many years has been opened up the Hillman, from which the company expects to withdraw the pillars in the near future. An 8 inch x 16 inch self-contained engine and boiler has been installed to hoist the coal.

At Number 14 tunnel a new set of B. and W. boilers, 300 horse power, has been installed, and the boiler house enlarged 28 feet x 50 feet.

A new air shaft 12x12 feet was sunk from the surface to Marcy vein, a distance of 41 feet, with a 20 foot diameter Guibal fan placed therein for ventilation. Condition of colliery is good.

A new opening called the Cartright Slope is in course of sinking half a mile south of No. 14 Shaft in Plainsville, to tap the Diamond vein; a pair of 15x36 inch engines has been installed to hoist the coal, and a brick boiler house, 56x86 feet, was built in which was placed three boilers of 250 horse power of the locomotive type.

A new air shaft 12x12 feet was sunk 117 feet from the surface to the Diamond vein, and a 20 foot Guibal fan is in course of erection.

DELAWARE AND HUDSON COMPANY

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

TRADERS' COAL COMPANY

Ridgewood Slope.—Ventilation and drainage fair. Condition as to safety good.

IMPROVEMENTS

PENNSYLVANIA COAL COMPANY

No. 14 Colliery.—Marcy vein engine house, 23'x41'x12' high. 1 15"x36" single engine to run fan. 1 pair Gerard engines, 15"x36".

Courtright Slope.—1 Brick fan and engine house, 38'x28'x14'. 1 20' fan, 6'x6'7". 1 Pair 17"x36" engines and house, 23'x41'x12' high. 3 250 H. P. Locomotive boilers, asbestos covered. 1 Feed pump, 12x8x12. 1 Heater completed. 1 Fuel conveyor, 390' centers, 10 1-8" pitch chain complete. 1 6"x8" Horizontal engine to run conveyor line. 1 Brick powder house, 12'x14' 8 feet high.

Courtright Slope, Inside.—The slope in the Hillman vein has been sunk 400 feet during the year. From Hillman vein to Diamond vein, rock slope, about 700 feet. Sectional area, 7'x12' pitch 20 per cent.

Drifts, Inside.—The slope in the Diamond vein from the surface down 1,000 feet. Lifts have been opened to the right and left. Sectional area, 7'x12', pitch 10 per cent.

In the D. and H. tunnel, Big vein, the slope has been extended 400 feet, sectional area, 12'x10', pitch 15 per cent.

Big Vein Shaft, Inside.—New slope from south pitch to back basin has been extended 600 feet.

Checker Vein Shaft, Inside.—Slope from west level heading down No. 3 slope, 600 feet engine plane is extended 700 feet.

Breaker, Outside.—1 30'x18' Brick addition to miners' shifting shanty. 1 12'x12'x10' high, brick addition to compressor house, used as a pump house. 1 Hoisting engine house from Big vein, brick, 45'x37'x12' high, with separator annex, 10'x11'x10' high. 30'x30'x14' high, brick addition to machine shop. 21'x46'x14' high, brick addition to carpenter shop. 1 friction hoist ash plane at breaker with iron fire-proof building. 1 Electric light engine and house 13'x38', with McEwen horizontal type 600 light generator engine. 1 New outside barn (frame) 22'x75'.

No. 9 Colliery.—One shifting shanty, oil house and record building, size 16'x100', made of brick. One general foreman's office, size 26'x50', made of brick. One oil house, size 14'x16', made of brick. One powder house, size 14'x14', made of brick. The oil house is equipped with the modern self measuring oil tanks.

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. Rooms, Pittston, May 14 and 15.

**EXPLOSION OF GAS IN NO. 14 SHAFT, PENNSYLVANIA
COAL COMPANY**

March 2, Charles Richardson, American miner, Thomas Fleming, American Runner, John Ruscavage, Polish bratticeman, Bernard Coyle, American Co. laborer, Erico Copiteia, Italian laborer, and Anthony Tardo, American driver, were fatally burned by an explosion of gas in Branagans inside slope, No. 14 shaft, Pittston vein, Pennsylvania Coal Company. On the morning of the 2nd William Hughes, the fire boss, made his examination of the workings, and discovered a foot of gas in breast No. 299. This breast is the outside one adjoining the slope extension up the anticlinal, and is driven some distance up from the last cross-cut. All the other places being found free from gas. Hughes, after arriving at the foot of shaft, directed his men how to work, holding the men out of breast No. 299 until the gas would be removed and the place made safe. He directed his bratticeman, John Ruscavage, and Bernard Coyle, the helper, to put up a brattice in breast No. 299 to remove the gas, saying that he would go in after he had eaten his breakfast and start the men to work. He gave Ruscavage and Coyle safety lamps to work with. Ruscavage sent his helper for brattice cloth and he went in to work. About 8.00, A. M. he arrived in breast No. 299 leaving his lunch pail and sat close to a mine car that had been taken up the breast that morning by the driver to the cross-cut and left there, as it is evident the driver stopped when he came to the danger mark placed across the track. Coyle came up the breast with the brattice cloth just as Ruscavage was climbing off the car unto the gob. He said Ruscavage had an open light on his head and a safety lamp in his hand. He said he saw the gas ignited by the open light, causing an explosion, and that a few minutes after another terrific explosion took place by which the men were burned as they rushed for the slope to get out and were caught at the foot of the slope. The workings in this slope were well ventilated, the intake being on the right of the slope going down and ventilating a few places on the right and up the slope extension on the anticlinal and across the face of the workings on the left of the slope, returning up on the left of slope to the lift above. Had the men gone up the return those who worked on the left of the slope would have escaped injury.

Victor Scuzka and Jacob Scuzrick lost their lives by the above explosion, by being suffocated by the after damp before the rescuers could reach them, although every effort was made to do so. When they were found life was extinct. They had only been employed a few days in this part of the mine, and being in the dark sat down and were overcome by the after-damp.

No. 8 Shaft.—A new engine house was erected and a new hoisting engine installed to handle the coal from the Clark and Babylon veins. A Guibal fan, 20 feet in diameter, was erected to take the place of the old one.

A large brick building was erected at No. 8 shaft, size 100 x 20 x 12 feet, to be used as Mine Foreman's office and shifting shanty and oil house combined.

At the No. 9 boiler plant, an additional battery of Sterling boilers, 622 horse power, was installed.

At No. 10 shaft a new engine house was built and engine installed to handle the coal from the Pittston and Marcy veins.

At No. 10 shaft two rock tunnels, 7 x 12 feet and 300 feet long and 7 x 12 feet and 125 feet long, were completed from the Marcy to the Clark veins, on the East Level heading.

No. 6 Colliery.—A rock tunnel, 7 x 12 feet and 200 feet long, was driven from the Marcy to the Pittston vein, in the basin of the entire workings, to take care of the body of water in the Pittston vein and mine out the pillars. A new pump was erected in the Marcy vein, size 24 x 48 x 16 x 48 inches, by the Scranton Steam Pump Company, to pump the water by bore holes to the surface. A tunnel, 7 x 12 feet and 100 feet long, was driven in No. 11 shaft from the Pittston to the Marcy vein, in the Laflin basin. A saw-mill has been built at this colliery to cut the mine timber by steam power.

Ewen.—In the Hoyt shaft a rock slope, 7 x 12 feet and 200 feet long, was driven from the Pittston to the Pittston vein through the anti-clinal on the west side of the river. A rock plane, 7 x 12 feet and 125 feet long, was driven from the Checker to the Checker vein, for the purpose of mining the coal, which was found to be considerably above the regular level.

At No. 4 shaft a large Jeanesville pump was installed in the Pittston vein, to pump the excess water to the surface. A saw-mill was built at this colliery to cut the prop timber with a steam saw.

No. 14 Colliery.—At the Cortright slope a new brick office, emergency hospital, and shifting shanty, were erected. Connections have been made with the Marcy vein and No. 14 shaft and tunnel.

HUDSON COAL COMPANY

Pine Ridge.—No. 14 plane in the Hillman vein was driven 600 feet; No. 11 plane in the Rock vein was driven 650 feet; No. 21 slope in the Checker vein was driven 900 feet; No. 22 slope in the Rock vein was driven 350 feet from Checker to the Red Ash vein. Two 8-inch bore holes were drilled from the surface to the Hillman vein, a distance of 135 feet, for flushing purposes. Two new steam boilers of 250 horse power were erected.

LEHIGH VALLEY COAL COMPANY

Mineral Spring.—The No. 3 air shaft from the surface to the upper Baltimore vein was lined with concrete. A new building was constructed to examine the mine cars for refuse in the coal.

No. 8 slope was sunk through a rock fault, and No. 9 slope graded. The silting operations in the Red Ash were extended to the west side of the slope.

CONDITION OF COLLIERIES

PENNSYLVANIA COAL COMPANY

Barnum No 9, Ewen No. 6 and No. 14.—Ventilation, drainage and condition as to safety, good.

HUDSON COAL COMPANY

Pine Ridge and Laffin.—Ventilation, drainage and condition as to safety, good.

HILLSIDE COAL AND IRON COMPANY

Butler.—Ventilation, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Heidelberg No. 1. and Mineral Spring.—Ventilation, drainage and condition as to safety, good.

DELAWARE AND HUDSON COMPANY

Delaware.—Ventilation, drainage and condition as to safety, good.

YOST MINING COMPANY

Yost.—Ventilation, drainage and condition as to safety, good.

McCAULEY COAL COMPANY

Pickaway.—Ventilation fair. Drainage and condition as to safety, good.

IMPROVEMENTS

PENNSYLVANIA COAL COMPANY

Barnum Colliery.—A rock tunnel 7x12 feet, was driven from the Marcy to the Pittston vein, a distance of 300 feet, to mine the coal under the city of Pittston.

Number 9 Colliery.—The No. 3 shaft on Broad street, Pittston, was concreted from the surface to rock, and is now being sunk to the Red Ash vein, to be used as a second opening for No. 1 shaft and for ventilation; size of shaft, 10x20 feet.

At Leadville shaft a horizontal, triplex expansion, direct-acting wood-lined plunger pump was installed to deliver 2,500 gallons of water per minute against a head of 500 feet.

Number 14 Colliery.—A new slope 7x12 feet was sunk from the surface to the Diamond vein, and is driven in the vein 700 feet. A concrete arch has been put in from the surface to the vein. A new air shaft 12x12 feet has been sunk from the surface to the Diamond vein and concreted from the surface to the rock. A new concrete and steel air bridge, to connect the slope airway to the air shaft, has been completed.

Two new shafts have been in progress of sinking from the surface to the Red Ash vein. No. 1 shaft 12x16 feet is down to the Marcy vein and is concreted from the surface to rock a depth of 50 feet. No. 2 shaft 12x22 feet is down 90 feet to the rock and is concreted the whole distance.

The new air shaft 12x12 feet in progress of sinking in 1910, from the surface to the Checker vein and Pittston vein, has been completed and concreted from the surface to a point about 30 feet below the Hillman vein, making 90 feet of concrete.

The Chapman slope which was abandoned by the Irondale Coal Company in the year 1849, was reopened by the Pennsylvania Coal Company to recover the pillars left. The coal is taken to Number 14 breaker, over land 1,000 feet, and prepared for market.

LEHIGH VALLEY COAL COMPANY

Mineral Spring Colliery.—The new steel breaker, to replace the one destroyed by fire in March, 1910, was completed and resumed operations April 3. In connection with the breaker, an Ottumwa box car loader was installed, and a new breaker engine house, containing hoisting engine, breaker engine and jig engine, was built. The loading of the coal into railroad cars is done by means of a 36-inch rubber belt, which conveys the coal from the pockets to the cars. A Barney plane for hoisting the coal up into the breaker was installed. The empty car plane was dismantled and the cars from the breaker are now run by gravity over a steel trestle to the head of the Red Ash shaft and Baltimore slope. The entire yard surrounding the breaker was graded and terraced and retaining walls built at the foot of these terraces. An 8-inch bore hole 77 feet deep was drilled to drain the water from the box car loader pit to the Baltimore vein. An 8-inch bore hole was drilled from the surface to the Red Ash vein for silting; which is to be used in the event of the hole now in use becoming blocked. An 8-inch bore hole for rope was put down from the surface to the head of the Red Ash No. 5 plane. A pair of 20x48-inch first motion engines was installed on the surface, east of the reservoir, to operate this plane. The Coal Brook coal will be lowered by these engines to the shaft level. Work was started on the reconstruction of the mule barn to make it absolutely fireproof. The timber at the head of the Baltimore slope was removed and a reinforced concrete mouth constructed.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen, was held at the Y. M. C. A. Hall, Pittston, April 4 and 5. The Board of Examiners was composed of Thomas J. Williams, Mine Inspector; Henry T. McMillan, Superintendent; David P. Williams and James Martin, Miners.

The following persons passed a satisfactory examination and were granted certificates:

Mine Foremen

John Burke, John E. Phillips, John Cosgrove, Avoca; Robert Metcalf, Duryea; John J. Mattick, Hudson; Michael Cavanaugh, Hughestown; David J. Jenkins, West Pittston.

Assistant Mine Foremen

William Owens, Richard M. Hughes, Thomas Daley, Avoca; Thomas Jones, Hughestown; George C. Ayers, William Mattick, Hudson; William Palmer, Samuel May, Pittston; James Gardiner, Plains; George Fairclough, Laffin; Thomas L. Williams, Duryea; Edward J. Quinn, Yates.

in the Red Ash vein, 3,000 feet. A fireproof mule barn to hold 17 mules was built in Red Ash vein, and one was also built in Marcy vein.

Number 14 Colliery.—A new fireproof mule barn 87 by 114 feet, was built on the outside at the tunnels, to accommodate 54 mules.

At the Courtright slope, a brick building 10 by 12 feet was erected outside for the use of blacksmith.

Two new shafts, one 12 feet by 16 feet 5 inches by 608 feet, and one 12 feet by 22 feet by 585 feet, were sunk from the surface to the Red Ash vein, for the purpose of working the veins below the Marcy.

A rock tunnel 7 feet by 12 feet by 250 feet was driven through the anticlinal in the Pittston vein for transportation.

A fireproof mule barn, to accommodate 45 mules, was built in the Checker vein.

HUDSON COAL COMPANY

Pine Ridge Colliery.—A rock slope was sunk from the Cooper to Red Ash vein, a distance of 900 feet, size 7 feet by 14 feet. The second opening was driven to the Laurel Run workings, a distance of 1,700 feet.

HILLSIDE COAL AND IRON COMPANY

Butler Colliery.—Built a new washery, pockets of concrete and the balance of yellow pine, size 110 feet by 65 feet by 90 feet high. Washery is equipped with the latest machinery to prepare coal.

One-half battery 150 H. P. of B. and W. dutch oven type boilers added to the boiler plant.

One brick wash-house, 18 by 42 by 11 feet erected for the firemen, breaker and washery employes.

Thomas shaft. A rock tunnel 7 by 12 by 540 feet, was driven through the anticlinal for haulage road in the Red Ash vein.

A rock slope 7 by 12 feet is being driven from the Red Ash vein to the Butler workings through the fault, to be used as a second opening for the Butler slope Red Ash vein.

Butler Marcy slope. The Pittston water tunnel has been extended to the Marcy vein.

Fernwood slope. A new mule barn of wood has been erected outside to accommodate 20 mules; size 20 by 120 by 12 feet. A new building of corrugated iron was erected for supplies; size 32 by 112 by 12 feet.

LEHIGH VALLEY COAL COMPANY

Mineral Spring Colliery.—Safety over-hoists were placed on the shaft engines. Two powder cars were built for the transportation of powder to Coal Brook tunnel. Two closed passenger cars were constructed for the transportation of men to and from Coal Brook.

A new loading belt was installed in the breaker.

The mule barn in the Red Ash vein was made fireproof. A new concrete hospital was built in the first lift off the Baltimore slope.

The props and timber in No. 39 tunnel for a distance of 60 feet were replaced by concrete and steel beams.

At No. 10 shaft the rock slope, 7 by 12 by 300 feet, was driven from the Marcy to the Clark vein, and a pair of 12 by 24-inch engines installed. An air shaft 10 by 10 by 60 feet was sunk from the Marcy to the Clark vein near foot of the new slope. A rock plane was driven from the Pittston vein to the Abbot slope section of the Barnum, Checker vein, 7 by 12 by 200 feet.

Ewen Colliery: At No. 4 shaft a new brick enginehouse 27 by 40 feet was built, in which was installed a pair of 15 by 36-inch engines for operating the rope haulage in the Red Ash vein. A brick building was erected near No. 7 shaft, 107 by 33 feet, in which was stored hay, feed, lime, cement and sprags.

No. 6 Colliery.—Installed at the Wright slope a ventilating fan 20 feet in diameter, driven by a 4-valve Ridgway engine, 15 by 20 inches, inclosed with a brick building 18 by 48 feet. Erected a brick building 28 by 30 feet, to house the locomotive.

No. 14 Colliery.—Erected a brick locomotive house, 40 by 40 feet, and installed a 20-foot ventilating fan driven by a 12 by 14-inch Ridgway simplex side crank engine at Diamond slope. Built a brick supply house, 122 by 23 feet, containing loaders' room and cement, lime, feed, hay and sand rooms.

The second opening, 7 by 10 feet, to the New Diamond slope workings to the surface has been finished, a distance of 100 feet.

HILLSIDE COAL AND IRON COMPANY

Butler Colliery.—At the Thomas shaft, installed a Vulcan fan, 14 by 6 feet, operated by an 18 by 20-inch Ridgway engine. Built fan house of steel with concrete connection to shaft, 35 feet 9 inches by 21 feet by 11 feet 2 inches, and brick engine house 12 feet by 25 feet by 11 feet 2 inches in connection with the new air shaft sunk to the Red Ash vein workings. Sunk an air shaft for ventilation 12 feet by 12 feet by 200 feet.

At the Butler Marcy slope completed second opening from the Red Ash vein to Thomas shaft workings. A part of the distance was driven through coal and part through rock. This also serves as a return air course to the new fan erected near Thomas shaft. Extended Pittston water tunnel 1,800 feet beyond the Marcy vein toward the Red Ash vein of Thomas shaft.

HUDSON COAL COMPANY

Pine Ridge Colliery.—No. 19 plane in the Red Ash vein was driven 800 feet to connect No. 23 slope with Millcreek shaft. Remodelled foot of shaft at Cooper vein. All timber having been removed and replaced by steel "I" beams and concrete.

Lafin Colliery.—No. 8 slope, top bench, top split, Red Ash vein, was driven 900 feet.

LEHIGH VALLEY COAL COMPANY

Mineral Spring Colliery.—Outside: The Checker vein fan house was made fireproof by the use of metal lath and plaster. The roof over the Red Ash fan house and over the return airway in the shaft was replaced with fireproof material. Erected a hospital and mine foreman's office. The box car loader at breaker was inclosed in a

Outside. Completed a brick, iron and concrete power house 38 by 96 by 16 feet, and installed therein one 330 H. P. McEwen engine driving D. C. generator to furnish electricity to Nos. 5, 6 and 11 shafts. Also completed a concrete, iron and brick building for sand-dryer, cement-house, lime, hay, feed, hospital and storeroom.

Number 14 Colliery.—At the Red Ash shaft installed a hoisting and a fan engine, and built houses for same. Also built an addition to No. 2 tower. At the Hillman slope installed an engine, and built a house for same.

Ewen Colliery.—Inside: Sunk an air shaft, 12 feet by 14 feet, from surface to the Marcy vein at Hoyt shaft. A new concrete pump-room was built in the Schooley shaft, Pittston vein, and a Jeanesville pump, 24 by 48 by 12 by 36 inches was installed therein.

Outside:—Erected a new concrete and steel breaker and washery to replace the breaker destroyed by fire on December 11, 1914. Installed a 14-foot fan, enclosed in a brick building, to ventilate workings in the Hoyt shaft. At the Schooley shaft, a new washery was erected to prepare coal taken from the culm bank for steam purposes.

DELAWARE AND HUDSON COMPANY

Lafin Colliery.—Extended No. 4 plane, Red Ash vein, a distance of 250 feet.

Delaware Colliery.—Extended No. 14. plane in the Red Ash vein, 350 feet through fault to the workable coal beyond. Completed a tunnel, from No. 7 plane Ross vein, a distance of 500 feet, to cut veins in back basin.

Pine Ridge Colliery.—Completed No. 26 slope, Checker to Bennett vein, and No. 30 slope in Red Ash vein was extended a distance of 250 feet toward the basin.

HILLSIDE COAL AND IRON COMPANY

Butler Colliery.—Completed the water tunnel to Fernwood to take the water to the Pittston water tunnel.

LEHIGH VALLEY COAL COMPANY

Mineral Spring Colliery.—Inside: A fire line was installed in the Red Ash vein.

Outside:—A concrete dam was constructed at the reservoir to increase capacity of same. Completed structural steel work under an empty car trestle. Drilled a bore hole from the surface to the Red Ash vein, a depth of 265 feet, to conduct signal wires from outside engine house to No. 5 plane.

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. Hall, Pittston, May 18 and 19. The Board of Examiners was composed of Hugh McDonald, Inspector; H. T. McMillan, Superintendent, West Pittston; Frank J. Parks, Miner, Pittston; and Michael J. Ford, Miner, Pittston.

The following persons passed a satisfactory examination and were granted certificates:

CONDITION OF COLLIERIES

PENNSYLVANIA COAL COMPANY

Number 14, Ewen, Number 6, Number 9 and Barnum Collieries.—Ventilation, drainage and condition as to safety, good.

HILLSIDE COAL AND IRON COMPANY

Butler Colliery.—Ventilation, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Heidelberg Colliery.—Ventilation, drainage and condition as to safety, good.

McCAULEY COAL COMPANY

Pickaway Colliery.—Ventilation and drainage, fair. Condition as to safety, good.

IMPROVEMENTS

PENNSYLVANIA COAL COMPANY

Number 14 Colliery.—Completed a new slope to Hillman vein, 500 feet long, on a 25 per cent. grade; also a slope to Hillman vein near Red Ash shafts, 450 feet long, on a 25 per cent. grade. These slopes are steam hoist and electric fan. At Checker vein shaft completed five rock tunnels to Top Split Checker vein, each 100 feet long, also five air shafts to ventilate these tunnels, each 15 feet deep.

Outside: Installed two 200 KW. sub-stations at Courtright slope, and erected a brick office building.

Ewen Colliery.—Installed in a new brick building, size 32 by 32 by 16 feet, one AC 320 KW generator, one pair of engines, size 14 by 18 inches, for No. 7 shaft. Also installed one DC 200 KW generator to furnish current to No. 4 shaft, and a 2-stage 2,000-gallon centrifugal pump in the Pittston vein at Hoyt shaft.

Number 9 Colliery.—In No. 1 shaft, Marcy vein, two centrifugal motor driven pumps, 1,200 G. P. M., pumping from the Marcy vein to the surface, were installed to replace two steam pumps at this point.

Outside: At No. 3 shaft, installed two 200 KW generators and one shaft hoist driven by a 52 H. P. motor, to take the place of the old steam engine at this opening. A concrete, brick and steel ventilating fan house was erected, housing a motor-driven Jeffrey fan with a capacity of 175,000 C. F. M. operating at 140 R. P. M.

HILLSIDE COAL AND IRON COMPANY

Butler Colliery.—Built a new brick locomotive house at Thomas shaft, which will hold five locomotives. Built an addition to wash-house, making it twice its former size.

CONDITION OF COLLIERIES

PENNSYLVANIA COAL COMPANY

Number 14, Ewen, Number 6, Number 9 and Barnum Collieries.—Ventilation, drainage and condition as to safety, good.

HILLSIDE COAL AND IRON COMPANY

Butler Colliery.—Ventilation, drainage and condition as to safety, good.

HUDSON COAL COMPANY

Laflin Colliery.—Ventilation, drainage and condition as to safety, good.

QUINN COAL COMPANY

Pickaway Colliery.—Ventilation and drainage, fair. Condition as to safety, good.

IMPROVEMENTS

PENNSYLVANIA COAL COMPANY

Number 14 Colliery.—At the Drifts, a new motor barn was built. A $7\frac{1}{2}$ -ton General Electric storage battery locomotive, equipped with Edison batteries, was installed on the outside to handle the coal from the tunnels. At Cortright Slope, a rock tunnel was driven over basin in the Diamond vein, a distance of 350 feet, to handle coal under the river. At No. 14 Shaft, a new slope in the East Marcy vein was completed and an electric hoist placed on the surface to handle the coal. Erected a new boiler house, which has now in operation eleven sets of boilers, with 3,300-hp., equipped with Coxe traveling grates.

Ewen Colliery.—No 2 Slope has been reopened to mine the Top Checker, Bottom Checker and Pittston veins. Began widening of No. 7 Shaft to the Pittston vein and sinking same to the Red Ash vein for the purpose of installing big cars and hoisting the coal from No. 4 workings at this opening. Erected a steel tower in place of old wooden one. At Schooley Shaft, the foundations were laid for an additional 300-hp. unit to the boiler plant. A fireproof building was erected, which serves as a foreman's office supply room, blacksmith shop and wash-room. The wash-room is equipped with five shower-baths and 114 Durand steel lockers. At the breaker, a fireproof recreation room was erected.

Number 9 Colliery.—Built a brick addition to the power house, 13 by 40 feet, and installed an Ingersoll-Rand Imperial, type 10, duplex steam-driven air compressor, together with 11 large cylinder-type receivers. Also completed an addition to the electric shop, 12 by 24 feet, to be used as armature winding repair shop. Reinforced concrete cribbing was placed in Ravine Shaft from the rock to 8 feet above the surface. Substantial stairs were also built from surface to Pittston vein.