

evolves a small quantity of fire-damp. It has a good traveling road, (made in 1871,) for the ingress and egress of persons employed.

Ventilation.—This mine is well ventilated considering that it is done by natural means, without the assistance of any mechanical or artificial means. No. of persons employed, 120.

A. Nicolls, general superintendent; Wm. M'Gregor, assistant superintendent; Wm. W. Reese, mining boss.

Laurel Run slope.—This mine is located near a small village called Laurel Run, about 2½ miles south-east of Wilkesbarre. There is but one mine between it and the No. 3 Baltimore of the same company. It is a slope on the Baltimore vein, which is split at this point. It has three lifts and has a good traveling road for the ingress and egress of persons employed. The top bed, which is just being opened out, generates explosive gases, but there has not been any discovered in the lower seam as yet.

Condition.—The mine is in a tolerably good condition. The seams are small, 5 or 6 feet in thickness, and take much powder to mine them, thereby requiring a large amount of air to carry off the powder smoke.

All the stoppings along the slope, between the main gangways and their parallel air-ways, are being re-built with stone and mortar instead of wooden brattice, producing very good results.

Ventilation.—Amount of air at inlet, 60,800 cubic feet, and at face of mine, 39,500 cubic feet per minute. Number of persons employed inside, 161.

A. Nicolls, general superintendent; Wm. M'Gregor, assistant superintendent; Hugh M'Donald, mining boss.

Pine Ridge Shaft.—This colliery is located east of Wilkesbarre, and near Milners' station.

It is a shaft 400 feet deep sunk into the lower bed of the Baltimore vein. This mine gives off great quantities of carburetted hydrogen, (fire-damp,) as may be seen from the following:

On the 11th day of May, 1872, an explosion of fire-damp by which four persons named David Davis, David Morgan, Thomas Morgan and Evan Davis were fearfully burned, resulting in the death of David Davis and David Morgan. The other two survived, but are much disfigured and crippled in the hands for life to all appearance. On the 13th I examined that portion of the mine where the accident occurred, in company with John J. Moore and others. We found that one of the workmen at the time of the accident, was in the act of taking down some coal over a check A in tunnel, which caused him to let said check-door open for a short time. In the meantime a party of the company's mine surveyors descended the shaft and not meeting the boss at the foot, they proceeded at once to make their way into that part of the mine where they had been making a survey the days previous. They had no idea of any great danger in traveling this road, as they had been led out over the same road the evening previous by the mine boss, to avoid the inconvenience of passing so many cars on the main road, while they had their surveying instruments to carry with them; but just as they were almost through the air-way on the top vein, and near the main road, the explosion above mentioned took place. We then measured the air passing through the top vein, when the door A in the tunnel was open. We tried it for twenty minutes. Gas accumulated three feet deep for quite a distance along the roof in the air-way—air passing through at the time of its accumulation 9,120 cubic feet per minute. We then closed said door A and found that the gas would ignite in the lamp (safety) for eight or ten minutes at the point where the explosion took place, and that while there were 16,320 cubic feet of air per minute passing.

We then measured all the air passing in through the tunnel at C, a part of which had to pass over the check-door A, the balance through the air-way in top vein just mentioned, at B, and found 33,862 cubic feet of air per minute passing.

We found that if check-door A would be left open, the more air would enter through the under vein D and pass through door frame of A and tunnel C; notwithstanding this, the gas would ignite at the door A from a lamp on a person's head, there being a large gas-feeder in the roof at that point, besides decreasing the quantity passing in at the top vein B, thereby allowing the gas to accumulate therein. The person that was taking down the coal over door A was doing it according to instructions from his boss, neither of whom thought for a moment of any person traveling in through the top vein B, which had such strong gas feeders so that it was not used for traveling; still the air was circulated through and no danger was anticipated, even should any one travel through the same from the shaft, which was only a distance of some 400 or 500 feet.

feet in length. A second opening is effected to another lift, and the coal is twenty feet thick, and of good quality.

At No. 9 shaft, Sugar Notch, two tunnels are now in progress of driving from the Ross to the Red Ash seam, having an area of twelve by seven feet.

The Lance shaft was extended from the Bennett down to the Baltimore seam. The depth of extension was two hundred and thirty-three feet, and the total depth of the shaft, at present, is five hundred and fifty-nine feet from the surface. An air shaft is in progress of sinking, which will constitute a second opening for the other. It was down, December 31, 1881, three hundred and thirty-five feet, and, when completed, will probably be five hundred and thirty feet. There was no coal shipped from this colliery during 1881, but it will be ready to ship coal in the course of a few months, when the second opening will be effected. They have been employing an average of sixty-three persons during the year, effecting the work described.

The Stanton air shaft was down December 31, a depth of six hundred and eight feet and is to be extended to the Baltimore seam; a probable depth of eight hundred and thirty feet. This shaft is intended to improve the ventilation of the Audenreid colliery, and a fan, thirty-five feet diameter, will be erected upon it for that purpose. The shaft is twelve by twenty-five feet; part of it will probably be used to work the Hillman seam, the condition of which appears favorable for that in the shaft. They are employing an average of twenty-five persons and had two fatal accidents during the year just past.

The south Wilkes-Barre shaft was down, December 31, a depth of five hundred and eighty-six feet, and when completed to the Baltimore seam will be about one thousand one hundred feet deep. Its size is twelve by twenty-four feet, and is employing an average of twenty-one persons.

Delaware and Hudson Canal Company.

At the Mill Creek slope a new tunnel was driven from the lower to the upper split of the Baltimore seam. It is two hundred and eighteen feet in length, and has an area of seven by twelve feet. The seam is eight feet thick, and the coal is of good quality.

A new pair of hoisting engines was erected at the top of the slope to supersede the old ones. The dimensions of the steam cylinders are twenty-six by forty-eight inches, and the drum is twelve feet diameter.

At **Laurel run** slope a new tunnel was driven from the bottom to top split of the Baltimore seam, a distance of sixty-feet; seven by ten feet area, and has opened a convenient territory of coal.

The new tunnel in the Baltimore Tunnel colliery, noted in my last report, is completed, and the second opening effected. It is one thousand four hundred and fifty feet in length, and seven by fifteen feet area. The Baltimore seam in this colliery is very nearly exhausted, and this tunnel was driven from that seam to the Red Ash, of which they have a very large territory intact. The coal is of good quality, and fourteen feet thick. A

they have concluded to leave the shaft for the present at this depth, and proceed to work the Hillman seam as soon as a second opening can be effected to the Stanton air-shaft, where it is intended it shall be made.

The Delaware and Hudson Canal Company.

At the **Laurel Run** mine a short tunnel was driven from the lowest split of the Baltimore seam, a distance of 129 feet and 7×12 feet area, to the checkered vein $5\frac{1}{2}$ feet thick, from which that seam will be mined to a more or less extent, and there is a large area of it intact.

At the Conyngham shaft, a pair of new fans $17\frac{1}{2}$ feet diameter was erected to supersede the old one, which proved inadequate for the ventilation required in the mine. These fans are of Mr. Scharar's pattern, and are giving satisfaction.

At the No. 5 shaft, Plymouth, a second opening was effected to the workings of the Cooper seam by sinking a shaft thirty feet depth and sixteen feet area, which can be used as an escape for the men in case it be required.

The Susquehanna Coal Company.

This company has under way a number of improvements, some of which are the following: At the Grand Tunnel, the water was pumped out of the old slope workings, with a view of re-opening them and sink a slope to mine the coal lying below these workings, of which a large area lies intact.

A large air-shaft is in progress of sinking for the purpose of ventilating the No. 4 slope and other workings, which was, at the end of the year, 160 feet deep, having an area of 13×18 feet, upon which, when completed, a pair of double fans will be erected to create the ventilation.

At No. 2 shaft, a new slope was sunk from the level of the shaft to a length of 381 feet, and is still in progress of sinking at this writing. It passed through a series of rolls, but is now opening a track of good coal, in which two lifts have already begun to be mined. A new tunnel is also in progress, and has already reached a length of 672 feet, having an area of 7×15 feet, which is destined to open the Ross and Twin veins at that level.

The No. 4 slope is being extended also, and had reached a depth of 318 feet from the old foot at the close of the year.

The Wyoming Valley Coal Company.

This company bought the Albright Coal Company's colliery, formerly called the Ellenwold, and they have pumped the water out of the shaft and are mining the coal from there since. A new fan was also erected on the air-shaft, a description of which can be seen in the table of New Fans in this report.

The Kingston Coal Company.

Another new shaft is in progress of sinking for the Red Ash seam by this company, the size of which is 10×30 feet; and it was down over 200 feet at the close of the year 1882.

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

was erected thereon. The engine is seventy horse power, connected directly to the shaft of fan. It is used to ventilate the slope workings which were opened the year before.

The Maltby shaft of this company resumed operations in December, 1888, after being idle for four years.

Delaware and Hudson Canal Company.—This company has erected a new breaker at the Delaware shaft, located at Mill Creek. It was started to prepare and ship coal in August, 1888. It is one of the largest and best equipped, with the most improved machinery for the cleaning and preparing of coal that there is in the valley. The shaft workings are ventilated by the old twenty-foot fan that was formerly in operation at Pine Ridge shaft.

At the **Laurel Run** mines of this company an underground tunnel was driven from the bottom to the top split of the Baltimore seam a distance of eighty feet, likewise an air shaft to ventilate the same a depth of twenty-four feet, which will give good ventilation to this portion of the workings.

Butler Colliery Company.—The Mosier shaft of this company has been sunk from the Marcy to the Powder Mill seam, a distance of three hundred and eighty feet. The air shaft was sunk the year previous, so that the both shafts are now connected in the bottom seam, and the ventilation restored in the proper direction.

The Twin main and air shafts of this company have been sunk to the Powder Mill seam, a distance of two hundred and sixty-three feet. A new fan fourteen feet in diameter was erected on the air shaft, connected directly with a horizontal engine of forty horse power.

The Ravine shaft of this company was sunk to the Powder Mill seam, a distance of five hundred and seven feet, which opens up a large field of good coal for this colliery. A new fan twenty feet in diameter was erected on this shaft, connected directly by a horizontal engine of seventy-five horse power to ventilate this seam. A new air shaft was started from the surface and sunk to the Marcy seam connecting both shafts in this vein, the air shaft not having reached the Powder Mill seam yet, the second opening has not been completed in this vein. This company has likewise built a new breaker to prepare and ship the coal mined in the Twin and Ravine shafts. It is situated close to the Susquehanna river, in the borough of Pittston. It is the largest breaker in the district, and has a capacity of fifteen hundred tons of coal per day, having the latest improved machinery for the preparing of coal for market. All the machinery is covered or fenced off according to law. The coal is taken from the shafts, by two locomotives to the breaker, over a trestling one mile long.

Hillside Coal and Iron Company.—At the Consolidated slope a new fan was erected on a new air shaft, sunk for the purpose of ventilation. It is a closed fan twelve feet in diameter, connected with a horizontal engine by belt gearing. This slope was ventilated by a fur-

COLLIERY IMPROVEMENTS DURING THE YEAR 1892.

Pennsylvania Coal Company.

In Barnum No. 1 shaft, a new Guibal fan 18 feet in diameter, has been erected on the site of the one which was destroyed by the fire, which occurred on the evening of July 22, 1892. The old air-shaft of No. 2 Barnum has been enlarged from the surface to the depth of 150 feet, and a pair of double engines placed to hoist the coal through it from the 7 and 14 foot seams.

Lehigh Valley Coal Company.

In the Maltby shaft a rock tunnel was driven from the bottom of the 11-foot slope to the 6-foot vein, with a sectional area 7×14 feet, opening up a large territory of good coal.

Delaware and Hudson Coal Company.

In **Laurel Run** slope a rock tunnel was driven from the Checker vein to the lower Baltimore, a distance of 220 feet, with an area of 60 feet, to be used for transportation.

In the Pine Ridge shaft an air-shaft was sunk a distance of 22½ feet, from the upper to the lower Baltimore seam, to be used for ventilation.

In the Delaware shaft three rock tunnels, 8×10 feet area, were driven between the lower and upper Baltimore seams a distance of 40 feet each, to be used for transporting coal, and a new gravity plane was completed, 400 feet long, 8×10 area, with a gradient of 12°.

Butler Mine Company, Limited.

In the Fernwood shaft an inside slope was sunk a distance of 325 feet in the red-ash seam. A new Guibal fan, 12 feet in diameter, was also erected on the second opening to ventilate the workings, exhausting 22,000 cubic feet of air per minute with a water gauge of 3 inches, working speed of 35 revolutions per minute, driven by a horizontal engine, cylinder 10×24 inches.

In the Chapman shaft the second opening has been completed 130 feet in depth, with an area of 10×12 feet. A new fan, 12 feet in diameter, has been placed thereon to ventilate the workings, exhausting 30,000 cubic feet of air, with a water gauge of 2 inches, running 45 revolutions per minute. The fan is driven by a 20-horse power horizontal engine, cylinder 10×30 inches.

Newton Coal Company.

On the twin shaft a large pair of first motion engines were erected in place of the ones which were destroyed by the fire of September 11, 1892. They were built by the Dixon Manufacturing Company, Wilkes-Barre.

A rock tunnel was driven through an anticlinal from the bottom of the shaft in the Red Ash seam, a distance of 300 feet with an area of 7×16 feet which greatly shortens the transportation of coal to the foot of shaft.

Delaware and Hudson Canal Company.

By this company, **Laurel Run** Colliery, a rock tunnel was driven from the bottom split of the Baltimore to the Checker seam, a distance of 80 feet, with a sectional area of 12x6 feet, to be used for the transportation of coal.

Wyoming Valley Coal Company.

In the Forty-Fort shaft a rock slope, 8x14 feet was sunk from the 11-foot vein to the red ash, a distance of 525 feet, on a grade of 15 degrees. This slope opens up a large field of good coal for this company. A new Guibal fan, 20 feet in diameter, was placed on the air shaft to take the place of the one removed, it having been too small to give the ventilation required.

Keystone Coal Company.

A shaft 12x12 feet was sunk from the surface a distance of 375 feet to the red ash seam to be used for hoisting coal and ventilating the mine.

Raub Coal Company, Limited,

The Louise Colliery, owned and operated by this company, started in the month of September to prepare and ship coal to market. It is located northwest of the Mill Hollow Colliery in the borough of Luzerne. They have opened up the old drifts into the Ross and red ash seams, formerly operated by Thomas Waddell. A small breaker, having a capacity of 300 tons per day, was built to prepare the coal for market, and an air shaft was sunk from the Ross to the red ash seam, a distance of 45 feet, with a sectional area of 120 square feet, to ventilate the workings.

Hillside Coal and Iron Company.

This company has erected a new Guibal fan 14 feet in diameter at their new shaft to ventilate the workings, which exhausts 35,000 cubic feet of air while running 50 revolutions per minute.

Stevens Coal Company.

This company has sunk a new shaft 25x11 feet from the surface to the Pittston seam, a distance of 172 feet, to be used for hoisting coal. It is located south of the breaker, a distance of 500 yards from the slope opening, close to the borough of West Pittston. The coal from this shaft is taken by a small locomotive and hoisted up a plane to the breaker. The second opening was driven from the outcrop in the Checker seam down to the shaft level, a distance of 460 feet on a 4 degree pitch. A rock gravity plane has been started from the Pittston seam to be driven to the Checker above to complete the opening to the bottom. The distance to be driven will be 75 feet on a 20-de-

Laurel Run Coal Company.

A tunnel was driven in the Laurel Run slope from the Hillman to the Rock seam a distance of 70 feet to be used for the transportation of coal.

Miner Mines Colliery.

This is a new colliery opened in 1894 by William B. Miner. The opening consist of a drift in the side of the mountain on the outcrop of the Red Ash seam and located about three quarters of a mile southwest of the old Everheart or Boston colliery in Jenkins township, Luzerne county.

A small breaker with a capacity of 300 tons per day was completed and started in January, 1895, to ship coal to market. The mining of coal was suspended after working eleven days in January and remained so all the year.

Westminster Coal Company.

This company opened a mine on the outcrop of the Red Ash seam in 1894, about one and a half miles southwest of the Miner colliery. It is located in Jenkins township, Luzerne county. It is comprised of two openings driven in the side of the mountain, one of which is used for transporting the coal, the other for ventilation which is furnished by a furnace.

An electric plant is located at the Miner breaker to furnish the power for the locomotive which hauls the coal to the breaker where it is prepared for market. This colliery operated the breaker 161.85 days in 1895. A new underground slope was sunk 600 feet with an area of 60 feet.

Crescent Colliery.

This is a new colliery which was opened by the Crescent Coal Company in 1895. The openings consist of four drifts being driven to the Red Ash seam located south of the Westminster openings in Jenkins township. A new breaker was completed and fully equipped with machinery ready to prepare and ship coal.

Hunt Colliery.

This new colliery was opened by the Wyoming Coal and Land Company and commenced to ship coal in June, 1895. The opening consists of a tunnel driven to the Marcy seam a distance of 450 feet; area, 7x16 feet. An underground slope was sunk 500 feet in the Marcy, and headings and airways were started. The tunnel is situated close to the borough of Wyoming and the coal is taken by a small locomotive to the old Hunt breaker and prepared for market. A new 16 foot fan was erected on a shaft sunk for the purpose of ventilating the workings.

Delaware Mine Fire.

The fire which took place in the Cooper or Top split of the Baltimore vein Delaware shaft located at Hudson, December 13, 1900, mention of which was made in my last report, was successfully extinguished as far as any indications can be discovered by daily examinations of the surrounding territory, by flushing the mine with culm, and the colliery resumed operations in the later part of June, 1902, after being idle for six months. Too much credit cannot be given to those who had charge of the undertaking, and likewise to all the workmen for their persistency in overcoming all the obstacles which were many, as the main roof was crushing and the pillars giving way on the main road to the shaft, and while there was another way for escape, it was such an inconvenient way to bring in supplies, that the main gangway was timbered for a half mile by which they succeeded in holding the gangway open. While this state of affairs prevailed the air current to some extent was destroyed, and the surrounding old workings became filled with the damp from the fire, and between the **Laurel Run** slope workings east of the fire, a large body of explosive gas had accumulated in the old workings, causing grave apprehension in the minds of all, of the roof caving and forcing the body of explosive gas back on the fire and causing an explosion, therefore on December 29, 1900, I sent the following notice to David J. Williams, inside foreman of Laurel Run colliery.

Pittston, Pa., December 29, 1900.

Mr. David J. Williams, Mine Foreman, Laurel Run Colliery, Parsons, Pa.:

Dear Sir: Please keep all the workmen of Laurel Run colliery out of the mines, as I understand that explosive gas has accumulated to an alarming extent between the inside workings of your mine and the fire in the Delaware workings, until you hear from me.

I am truly yours,

H. McDONALD,
Inspector of Mines.

I would here state that I was at the Delaware colliery on the 29th of December, 1900, and ordered the men out by telephone at 9 A. M., which order was immediately complied with, and when I went to my office, I sent the above notice which I understand Mr. Williams showed to some of the officials, who advised him to keep out of the mine.

While **Laurel Run** mine was shut down and the men who were fighting the fire had been driven back on account of lack of pure air, a consultation was held and it was decided to close the intake of the Laurel Run mine and connect both ventilating fans on the Delaware workings, as by stopping the Delaware fan they found that the workmen could approach the fire and proceed again with the work of cutting around it.

A steam plant has been projected in the Thomas shaft Red Ash vein from the shaft level up the east rise and driven a considerable distance which will work all the coal to the crop a distance approximately 3,500 feet. A pair of 16x20 inch engines is placed in position to handle all the coal.

A new slope called Butler Marcy slope, has been sunk from the surface in Marcy vein and through the old abandoned workings of the Butler shaft until at the present writing it has reached a distance of 3,500 feet. A pair of first motion 26x36 inch Vulcan engines installed for hoisting the coal, a new engine and fan house were erected and a 20-foot diameter fan built to ventilate the workings.

At the Consolidated colliery, of the above company, the No. 1 slope has been extended 140 feet to the bottom split of Red Ash vein.

DELAWARE AND HUDSON COMPANY

At the Delaware shaft, a new air return has been driven in the Cooper vein, a distance of 3,000 feet, to ventilate the territory covered by the mine fire of 1900, and also to ventilate numbers 19 and 20 tunnel workings.

At the Baltimore slope, No. 5 plane in Baltimore seam has been graded and a pair of engines installed on the surface which operate the plane by rope through a bore hole.

HUDSON COAL COMPANY

At the Laffin colliery a bore hole was drilled near the breaker and crusher plant installed for crushing the refuse from the breaker which is being flushed into the mine.

An engine plane in the Red Ash vein was driven 1,250 feet, a bore hole was drilled from surface to head of plane and a pair of 14x2 inch engines was installed on the surface to operate the same.

At the Laurel Run colliery, a rock tunnel from the Checker to Red Ash vein was driven a distance of 1,050 feet.

A new haulage road has been driven 450 feet toward Pine Ridge workings, to transport the coal up the Pine Ridge shaft to be prepared in the breaker. This road when finished will do away with the **Laurel Run** breaker.

Mine Foremen's Examinations

The examination of applicants for certificates of qualification as mine foremen and assistant mine foremen, was held on the 15th and 16th of June, at Pittston.

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.

Lafin.—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.

Laurel Run.—Number 11 tunnel extended 450 feet to bottom split of Red Ash. Haulage road toward Pine Ridge driven 1,275 feet. Condition of colliery, good.

DELAWARE AND HUDSON COMPANY

Delaware Shaft.—New steel tower erected over main shaft to take place of frame structure. Condition of colliery, good.

TRADERS' COAL COMPANY

Ridgewood Slope.—Condition of colliery, good.

Mine Foremen's Examination

The examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen, was held on the 19th and 20th of June, at Pittston.

The Board of Examiners was H. McDonald, Inspector of Mines. James McCarty, Superintendent, John J. Morahan and David P. Williams, miners.

The following applicants were recommended for certificates:

Mine Foremen

William H. Muir, Edgar C. Weichel, William Jeffery, Walter J. Hutchings, John Richardson, Patrick Durkin, George Parry, Michael Houston, Albert A. Carey, Samuel Harrison, F. G. Wilcox, E. F. Lewis, James C. Johnston, Charles Johnston, Charles B. Smith, William Moore and Michael Connors, of Avoca; William Fowler, John Henighen, Benjamin J. George, F. W. Campbell, Patrick J. Hopkins and John E. Davis, of Pittston; Charles Pyne, Reese Bennett, Wyoming; Evan Fulton, Edwardsville and Morgan Mainwaring, Dupont.

Assistant Mine Foremen

George Steel, Michael Price, James Thompson, Daniel R. Jones, Pittston; George P. Kearney, John Killeen, Inkerman, William Llwellyn, William Branch, Wilkes-Barre; Henry R. Kettle, H. B. Bittenbender, Plymouth; Samuel Prichard, Edwin Jones, Edwardsville; John Vinton, John Harris, Plains; Thomas Hughes, Parsons and David Thomas, Avoca.