

Hillside Coal and Iron Company.

This company has sunk a new shaft 12×26 feet on their land southeast of Avoca. The sinking was started in March, 1892, but not being pressed for coal, it was abandoned until May, when the sinking was commenced in earnest and the shaft sunk to the Red Ash seam, a depth of 168 feet, by September 1st. The second opening has been completed connecting with the workings of the Elmwood shaft of the Florence Coal Company. The coal is taken to the Consolidated breaker by a small locomotive over two miles of road.

Avoca Coal Company.

A new fan 12 feet in diameter has been erected on the air shaft of this company, which exhausts 55,000 cubic feet of air with 4 inches water gauge running 120 revolutions per minute, driven by a 20-horse power engine.

Robertson and Laws Colliery.

At the **Katydid** colliery, two new slopes were sunk from the surface on the Stark seam, a distance of 314 feet, area 6×10 feet on a grade of 8 degrees. The coal is taken 24,000 feet to the breaker by a small locomotive.

Bennett Colliery.

A shaft 8×10 feet was sunk to the Baltimore seam, a distance of 60 feet, as a means of escape for the men who were taking out the pillars at the farthest part of the workings, in case of a sudden caving of the roof.

Annora Coal Company.

A rock tunnel was driven from the upper to the lower split of the Red-Ash seam; area 7×12 feet, a distance of 300 feet. A shaft was also sunk to air the same between the splits, a distance of 20 feet; area 10×12 feet.

Clear Spring Coal Company.

A new Guibal fan twenty feet in diameter was erected on the air shaft to ventilate the workings of the Red Ash seam, driven by a vertical engine cylinder 16×30 inches.

Morning Star Colliery.

A rock tunnel was driven from the Bennett seam to the Ross, a distance of 275 feet; area, 84 feet. A new fan twelve feet in diameter was erected to ventilate the workings, exhausting 45,000 cubic feet of air per minute, driven by a horizontal engine, cylinder 10×20 inches.

Old Forge Coal Company, Limited.

In the Columbia shaft a rock tunnel was driven from the third to the fourth vein, a distance of 90 feet. Sectional area, 98 feet. To be used for transportation of coal.

gree pitch. A new fan of the Guibal pattern, 20 feet in diameter, has been erected on one compartment of the hoisting shaft to furnish ventilation for both seams. It is run by a horizontal engine, cylinder 16x20 inches, directly connected.

Annora Coal Company.

This company has erected a new Guibal fan 16 feet in diameter on the second opening to the slope, which furnishes the workings with a large quantity of fresh air. It is run by a 28-horse power engine, directly connected to fan shaft. A new shaft, 25x11 feet, was sunk 45 feet to the Marcy vein. It is located on the bottom of the Pittston vein on the strippings of the vein.

W. S. Payne & Co.

At the East Boston Colliery a new Guibal fan, 25 feet in diameter, has been erected as a duplicate in case of an emergency. It is run by a horizontal engine, cylinder 20x36 inches, and exhausts 141,800 cubic feet of air with a water gauge of 2-10 inches running 60 revolutions per minute.

Robertson, Law & Co.

At the **Katydid** Colliery a new Guibal fan, 12 feet in diameter, has been erected on the second opening to the slope. It is run by a horizontal engine, cylinder 12x12 inches, and exhausts 34,000 cubic feet of air per minute, with a water gauge of 5-10 inch.

Mount Lookout Coal Company.

This company has erected a new Guibal fan, 20 feet in diameter, on their air shaft, as a duplicate to the other, and have them so arranged that by closing one door and opening another, which will only take a few minutes to do, either fan could be run. It is run by a horizontal engine, cylinder 16x30 inches, and directly connected to fan shaft.

John C. Haddock.

At the Black Diamond Colliery a new air shaft, 14x12 feet, was sunk from the surface to the Cooper seam. The reason for this shaft having been sunk was that the old air shaft had been retimbered so often inside that the area had become too small to retimber it again in the same way, and to take the old timber out and replace it with new would necessitate the colliery to be shut down for some months, which the officials did not want to do. Therefore, the new one was started, which was quite an undertaking on account of the depth of quicksand to be overcome in that neighborhood. However, they were quite successful with it. The shaft was sunk through the sand 128 feet and 12 feet through shelly slate and coal, 140 feet in all, when, on

Improvements by the Florence Coal Company.

This company sunk a shaft from the surface to the Marcy seam, a distance of 227 feet. It has a sectional area of 220 feet. The coal is taken to the Elmwood breaker by a small locomotive a distance of 1,933 yards. The second opening has not been completed at this writing.

A 15 foot Guibal fan was erected on one of the compartments of the shaft, which is run by a horizontal engine 12x18 inches.

Improvements by Robertson and Law.

A new slope was sunk at the **Katydid** colliery from the surface to the Checker seam, a distance of 200 feet, area 7x9, grade 18 degrees. The coal from this slope is taken 2,000 feet to the breaker by a locomotive. The workings are ventilated by the Consolidated slope fan.

Improvements by the Babylon Coal Company.

A tunnel was driven from the top to the bottom split of the red ash seam, a distance of 162 feet, area 7x12, to be used for transportation of coal.

Improvements by the Forty Fort Coal Company.

The "Harry E." shaft of this company was sunk from the eleven foot to the red ash seam a distance of 229 feet, area 22x12 feet. The second opening shaft was sunk to the red ash seam at the same time, and a new 20 foot Guibal fan erected therein, run by a vertical engine directly connected to fan shaft.

Improvements by the Delaware and Hudson Coal Company.

Two tunnels were driven in the Delaware shaft, one between the Baltimore splits, a distance of 150 feet, the other to the Ross seam, 300 feet in length, to be used for transporting coal. Two air shafts were sunk to a depth of 30 and 50 feet respectively, to air the workings of these tunnels. Two inside slopes are being sunk on a 15 degree pitch and are 160 and 180 feet down at present.

Improvement by the Mt. Lookout Coal Company.

Electric Power Plant, Mt. Lookout Coal Company, Wyoming, Penna.

The power house containing the generators and engine is a separate brick building forty by thirty feet, situated about two hundred feet from the mouth of the main hoisting shaft and about one hundred feet from the air shaft. The generating plant consists of one M. P. 4. 100 Kilowatt, (135 H. P.) generator, driven at a speed of 650 revolutions per minute and developing 575

Improvements by the Forty Fort Coal Company.

Two new exhaust fans, 15 and 20 feet in diameter respectively were installed at the "Harry E" Colliery, replacing the old ones, which were inadequate to supply the ventilation required. The new fans exhaust 219,040 cubic feet of air per minute.

Improvements by the Hillside Coal and Iron Company.

A new air shaft has been sunk to a depth of 70 feet sectional area 10x10 feet, in the Consolidated Colliery, to be used for ventilation.

Improvement by the Westminster Coal Company.

A new fan 12 feet in diameter has been erected at this colliery to ventilate the underground slope workings. Engine 14x13-inch with a working speed of 60 revolutions.

Improvements by the Raub Coal Company, Limited.

A tunnel has been driven in the out crop of the Red Ash vein, a distance of 300 feet at the Louise colliery of this company, the coal from which is run down a gravity plane to the breaker. A new fan 12 feet in diameter has been installed on this tunnel which exhausts 60,000 cubic feet of air per minute to ventilate the workings.

Improvements by Robertson and Law.

A new slope has been sunk at the Katy Did Colliery a distance of 450 feet from the surface; area, 7x8 feet, with a gradient of 18 degrees.

A tunnel has been driven from the surface to the "Brown" seam, a distance of 100 feet; area, 10x10 feet, which is used for transporting coal.

Improvements by the Algonquin Coal Company.

On the Pine Ridge shaft of this company a new underground slope has been driven from the "Kidney" to the "Hillman vein," a distance of 632 feet, area, 7x20 feet. Three new gravity planes were made, varying in length from 380 to 460 feet. A tunnel has been driven from the Hillman to the Rock vein, a distance of 631-2 feet; area, 7x12 feet.

A rope haul from the Checker haul to the mouth of No. 1 Checker drift has been installed.

New Jeanesville pump 18x12x18 inch has been installed at foot of shaft which pumps to the surface.

ROBERTSON AND LAW COAL COMPANY

Katydid Colliery—Inside.—A new slope driven. They drove a rock slope 600 feet from the Spring Brook vein to bottom vein for the purpose of making a shorter haulage way; also made another opening for better ventilation and another way out for the men employed in that section of the mine.

CONNELL ANTHRACITE MINING COMPANY

Bernice Colliery.—No improvements at the Griffith colliery.

At the Bernice Colliery all improvements have been completed and are to be included in report for 1905.

In connecting the bottom vein with the upper vein by slope, contracts were made for under-cutting machines and a third rail locomotive.

The electrical power has been increased by the installment of a high speed engine and dynamo.

Details will be given in report for 1905.

PENNSYLVANIA COAL COMPANY

Barnum Colliery—Outside.—Breaker remodeled to enable company to clean the mud screen coal separate from the coarse coal.

Shakers introduced on head to separate coal instead of bars.

Mechanical pickers throughout to clean the coal.

Steam tip at head of breaker to dump the cars.

Inside.—No. 1 shaft abandoned; coal taken to No. 2 shaft inside.

No. 2 shaft, new shaft tower and first motion engines 24x48 inch.

Culm slushed in the mines and new pumping plant to take care of water.

The mine car changed from 28 inch to 36 inch gauge.

No. 3 shaft, rock tunnel from Pittston vein to Checker vein.

New barns in Marcy vein No. 2 shaft and bottom vein No. 3 shaft and mules stabled inside, outside barns abolished.

Central Colliery—Outside.—Addition built to breaker to wash all fine sizes and convey culm dump to breaker.

New boiler house with 8-150 H. P. Keeler locomotive boilers, equipped with all modern improvements.

New tower is being erected for Law shaft.

New slope from surface to Clark vein and Marcy. This coal to be pulled up slope and gravitated to breaker.

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

Langcliff 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.