

and upon end supports. Having thus supported the tower and trestle no trouble was experienced in holding filling back, and taking out old cribbing. The concrete was put in with a thickness of three feet in the bottom and tapering to two feet on top.

#### STEVENS COAL COMPANY

Sunk new shaft, 12x24 to Red Ash vein.

Made opening in shaft into vein underlaying the Marcy vein.

Installing coal hoisting plant at new shaft.

Started up coal washery which is contained in one wing of the breaker.

Put in new 150 H. P. boiler at steam plant.

Made new opening from Red Ash slope workings through by roll to old workings on Slocum property, for ventilating purposes.

#### CONNELL ANTHRACITE COAL MINING COMPANY

##### Bernice Colliery

The following are the improvements made at the Bernice colliery. They have erected a modern anthracite breaker on their property, containing about a million feet of lumber, equipped with the latest modern machinery, shakers, etc. They have erected a plant of one thousand (1,000) horse power National water tube boilers, a machine shop, and have equipped the colliery in every respect to prepare the coal up to the regular anthracite standard. They have added a thirteen (13) ton electric locomotive to their inside haulage, regraded the gangways, and are now sinking a shaft upon the property 12x22 to be used as a second opening and an air shaft, and erecting a sixteen (16) foot fan thereon.

#### DELAWARE AND HUDSON COMPANY

##### Langcliffe Colliery

No. 1 slope in the No. 2 Checker drift has been extended 500 feet.

New road driven at the head of No. 1 plane in Red Ash vein for a distance of 650 through caved area of Avoca Coal Company.

New 10 foot fan erected to ventilate No. 2 Checker drift.

10x36 inch, in Bennett vein and pumping through bore hole direct to surface. One small electric pump, 4x5 inch.

Have been driving slopes in Orchard, Bennett and Ross veins.

Are driving rock plane upon 15 degrees from Bennett vein to upper veins, which will cut Cooper, Lance, Orchard and Hillman veins.

#### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone Colliery.—The new boiler plant referred to in my last report has been completed and is composed of 10 fore-box locomotive boilers.

Breaker improvements consist of mechanical pickers, elevators, conveyors and spring balance shakers for the preparation and cleaning of coal.

Inside improvements consist of two 7x12 rock tunnels, one driven from the Cooper to the Lance vein, the other was driven through what is known as the Pettebone anticlinal Hillman vein. The condition of haulage roads and return airways has been improved upon.

#### TEMPLE IRON COMPANY

Mount Lookout Colliery.—New boiler house (frame building) 140x40 feet inclosing 8 sets of Sterling boilers and one new rock crusher to crush all the mine rock which is returned and deposited in the mine.

#### CLEAR SPRING COAL COMPANY

Clear Spring Colliery.—Have erected a new washery at this colliery to prepare the marketable coal in their large culm dump. They run all the sedge and refuse from this washery into the mine. The cost of this washery was about \$25,000, and in addition to this the company expended nearly \$3,000 in yard improvements, which include the changing of their tracks, etc., making a total expenditure of about \$28,000.

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

Black Diamond Colliery—Inside.—Driving one tunnel from Red Ash to Ross veins.

Erected at breaker one set of Emery slate pickers for separating slate from stove coal.

Outside.—Scraper line and rolls for breaking and conveying slate to mines for flushing mines.

Completed 12x72 inch x 18 feet return tubular boilers. These boilers were begun in 1903.

#### DELAWARE AND HUDSON COMPANY

Langcliffe Colliery.—No. 1 slope Checker vein, driven 400 feet to crop. No. 2 slope Red Ash vein driven 500 feet to crop.

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.

a brick washhouse at boiler house for the firemen, equipped with steel lockers and other improvements which make it modern in every respect.

#### LEHIGH VALLEY COAL COMPANY

Seneca Colliery, Outside.—The fire that developed from a smouldering condition in the old culm bank, and threatened the destruction of the breaker, was isolated by a trench cut through the bank. The Coxey shaft fan house was protected from sparks of passing engines by a corrugated iron, and the shaft is completely recribbed. 5276 feet of diamond drill test holes were completed for protection against accidents, in testing cover limits over Pittston and Marcy veins. A Williams crusher was installed for Pittston vein flushing. Inside.—A 4 inch drainage hole drilled from Marcy to red ash vein was completed. Two rock tunnels, driven through the upthrow in the red ash vein, were finished during the year.

William A and Lawrence Collieries, Outside.—An 8 inch rope haulage hole was drilled from surface to red ash vein at Babylon mine. Beginning January 1, 1907, the Lawrence breaker will be operated as a washery only, the coal being prepared at William A breaker. Inside.—A new haulage road has been driven 2,500 feet through middle split pillars to Babylon mines to minimize transportation. The road was continued in the bottom split across the Babylon tract to the westward, where a 300 foot tunnel opens up the virgin coal. This haulage road will be eventually connected with No. 10 tunnel at Campbell's Ledge, when it will be a continuous road of 16,000 feet in length.

#### HILLSIDE COAL AND IRON COMPANY

Consolidated Slope.—They are steadily opening on the bottom Red Ash vein at Consolidated slope, and have also just opened on the split of the Checker underlying the main Checker vein, about six feet apart. This has been done direct from the Consolidated main slope.

#### HUDSON COAL COMPANY

**Langcliff** Colliery.—No. 2 slope in Red Ash vein extended 380 feet. One 54 inch locomotive type boiler installed.

#### JERMYN AND COMPANY

Jermyn No. 1 Colliery.—This mine went on strike February 13 and the strike continued until August 23. On October 27 a cyclone destroyed the breaker which is now being rebuilt. During the suspension new sills and pockets were placed under the breaker.

Jermyn No. 2 Colliery.—The men at this mine went on strike February 13 and remained out until November 1, when operations were again resumed. A new rope haulage system was installed in the outside slope to the Clark and Marcy veins.

#### ELLIOTT, McCLURE AND COMPANY

Sibley Colliery.—On June 23 a fire broke out in the breaker about 10:45 A. M. and destroyed it, also the engine house, boiler house and supply house. A new breaker, boiler plant and other buildings are

## DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Halstead Colliery.—Slope was driven from surface to Marcy vein for haulage purposes. Open Marcy vein to increase output. Made second opening to Marcy vein for ventilating purposes. Recribbed Feeder Dam shaft.

## JERMYN AND COMPANY

Jermyn Colliery.—Sunk No. 3 shaft from No. 2 Dunmore vein to No. 3 Dunmore vein. A drift was driven from surface to bottom split of the big vein. An electric pump was installed in the second Dunmore vein.

Outside: An air compressor was installed near No. 3 shaft.

## HUDSON COAL COMPANY

Langcliffe Colliery.—Outside: Breaker was remodeled to a considerable extent.

## HILLSIDE COAL AND IRON COMPANY

Consolidated Colliery.—An air shaft was sunk from the surface to the top split of the Stark vein at Consolidated drift. This shaft also provides a second opening.

## MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in the High School, Old Forge, May 18 and 19. The Board of Examiners was composed of Augustus McDade, Inspector, Rendham; David Lloyd, Superintendent, Scranton; Morgan E. Griffiths, Miner, Taylor; Michael Cosgrove, Miner, Old Forge.

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

## MINE FOREMEN

John N. Cooke, James McGinley, William C. Riddle, Bernard Boyle, David E. Davis, John J. Boyle, Thomas Phillips, John Rohland, John Digwood, William W. Powell, James Walsh, Louis Tedesco, William G. Gwyn, Old Forge; John Scriven, John Withey, William W. Jones, Gounod Evans, Thomas V. Reynolds, Grover Perry, Martin Carroll, Thomas H. Griffiths, Thomas W. Jones, Daniel Hayes, David J. Thomas, John J. Jarret, Enoch Williams, Charles J. Powell, Alex. G. Law, David Moses, William H. Powell, David E. Harris, Robert J. Jacobs, Thomas G. Townsend, George E. Williams, William G. Lewis, Peter E. Partington, Benjamin Sweetman, Thomas Daniels, George S. Goodwin, Taylor; James Kelley, John W. Clifford, Cornelius McLaughlin, Avoca; William Creeden, Frank Baxter, James Baxter, John M. Reid, Moosic; Michael Joseph, Cosgrove; Martin Durkin, John E. Jones, Barney O'Boyle, William Richards, Thomas Wylam, Rendham; Theodore P. Hartman, Charles Cooksey, John M.

### CONDITION OF COLLIERIES

#### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Taylor, Pyne and Holden Collieries.—Ventilation, drainage and condition as to safety, good. Pillars are being removed.

Halstead Colliery.—Ventilation, drainage and condition as to safety, fair. Pillars are being mined.

#### PENNSYLVANIA COAL COMPANY

Old Forge and Central Collieries.—Ventilation, drainage and condition as to safety, good. Pillars are being mined.

#### JERMYN AND COMPANY

Jermyn Colliery.—Ventilation, drainage and condition as to safety, good. Pillars are being mined extensively.

#### DELAWARE AND HUDSON COMPANY

Langcliff Colliery.—Ventilation, drainage and condition as to safety, good. Mining pillars exclusively.

#### HILLSIDE COAL AND IRON COMPANY

Consolidated Colliery.—Ventilation, drainage and condition as to safety, good. Pillars are being removed.

#### MOOSIC COAL COMPANY

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

### IMPROVEMENTS

#### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Taylor Colliery.—Inside: Installed one 7-ton electric locomotive.

Pyne Colliery.—Inside: Installed four new electric locomotives.

Outside: Installed recaging device at head of breaker, one Sullivan 10 by 10 portable electrically driven air compressor with Ingersol Rand jackhammers, also an electric motor drive to take the place of steam drive in breaker annex.

#### JERMYN AND COMPANY

Jermyn Colliery.—Inside: Installed one electric coal cutting machine in No. 3 Dunmore vein, No. 3 shaft.

#### DELAWARE AND HUDSON COMPANY

Langcliff Colliery.—Inside: Installed two 800 gallon electric pumps.