

Number 6 Colliery.—In Number 6 Shaft a new brick car and blacksmith shop was built 30x90 feet; also a new brick wash house 17x17 feet.

A tunnel from Clark vein, Number 6 Shaft, to the Babylon vein, in Number 5 shaft, was completed. This will bring all coal to the same foot. Condition of colliery and ventilation fair; drainage bad.

Number 11 Shaft.—A steam plane was driven from the Babylon to the 14 foot vein to the Laffin basin. This will shorten the distance of transportation of coal over one mile.

A ventilating shaft was sunk from the Babylon to Red Ash vein on south pitch. Condition of colliery, fair.

Number 5 Shaft.—No improvements. Condition of colliery, fair.

**Ewen** Colliery.—A large washery was erected with a daily capacity of 1,600 tons. It is completed with modern machinery for cleaning the culm from the bank.

Number 4 Shaft.—A new steel tower was erected over the hoisting shaft. A new engine and pump house 41x20 feet was built, also a blacksmith, oil and wash house, 48x17 feet, of brick. A rock tunnel was driven from the Marcy to the 14 foot vein to recover the pillars in the old Number 2 Shaft. Condition of colliery, good.

Hoyte Shaft.—A new steel hoisting tower was erected over this shaft 80 feet in height; a new engine and compressor house was built of brick. A rock slope was also driven from the 14 foot to Marcy vein. This slope will reach the coal in Marcy vein, that otherwise could not be reached. Condition of colliery, good.

Number 10 Colliery.—A new breaker and washery was built situated between Number 10 and Number 8 colliery, which will take and prepare the coal from Numbers 1, 8, 9, 10 and 10, Jr., Shafts. It is equipped with all the most modern improvements and has a capacity of 5,000 tons per day.

The coal is carried to the top of breaker by inclined overlapping open top bucket steel conveyor, which is operated by 185 horse power 250 volt compound wound motor, reciprocating feed on conveyor driven by 10 H. P. 250 volt compound wound motor. The breaker and washery is equipped with mechanical pickers and nine L. V. jigs.

Both buildings are heated by exhaust steam. The engines are the Pennsylvania Coal Company pattern, 18x36 inches, in pairs. A brick building 50x160 feet was built for car and machine shops and is equipped with three lathes, planer, drill press, shaping machines operated by steam.

New mine scales and building erected at foot of conveyor for weighing mine cars. A new track scales for both light and loaded cars have been installed by Barker and Son, Scranton, Pa.

The power house is built of brick 34x74 feet with four engine type direct current compound generators 215 K. W. capacity, four 18x20 inch automatic McEwen engines. This electric power will be carried to Barnum Colliery, Number 1 and Number 10 shafts, and will operate a part of the breaker.

The boiler house is built of brick 76x113 feet, with an addition of 40x33 feet. The boilers are of the Sterling maxim type, consisting of 2,400 H. P. Equipment for boiler plant will be one 4,500 H. P. feed water heater, two 16x10x18 inch Scranton duplex plunger end packed pumps.

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 Laffin 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 anticlinal 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

- No. 14.—Safety conditions, ventilation and drainage good.  
**Ewen.**—Safety conditions, ventilation and drainage good.  
 No. 6.—Safety conditions, ventilation and drainage good.  
 No. 9.—Safety conditions, ventilation and drainage good.  
 Barnum.—Safety conditions, ventilation and drainage good.

### HUDSON COAL COMPANY

- Pine Ridge.—Safety conditions and ventilation good; drainage fair.  
 Laffin.—Safety conditions, ventilation and drainage good.

### HILLSIDE COAL AND IRON COMPANY

- Butler.—Safety conditions, ventilation and drainage good.

### LEHIGH VALLEY COAL COMPANY

- Heidelberg No. 1.—Safety conditions, ventilation and drainage fair.  
 Mineral Spring.—Safety conditions, ventilation and drainage fair.

### DELAWARE AND HUDSON COMPANY

- Delaware.—Safety conditions, ventilation and drainage good.

### TRADERS COAL COMPANY

- Ridgewood.—Safety conditions, ventilation and drainage fair.

### YOST MINING COMPANY

- Yost.—Safety conditions, ventilation and drainage fair.

## IMPROVEMENTS

### PENNSYLVANIA COAL COMPANY

**Ewen** Colliery.—A new brick fireproof storehouse has been built at No. 7 Junction, 33 by 250 feet, two stories high, to handle the supplies for the Pennsylvania and Hillside Companies.

At No. 4 shaft the boiler plant has been increased by adding one and a half sets of Babcock and Wilson boilers, 450 horse power. The ventilating fan has been rebuilt. The wooden connection from the shaft to fan has been replaced with brick and concrete, and the rest of the building made fireproof. A large Jeanesville pump has been installed in the 14 foot vein, which delivers the water to the surface.

No. 6 Colliery.—A power saw was erected to saw the props for the mines. A new washery has been erected in connection with the breaker to handle the tonage and the culm from the bank. One battery of Maxim Sterling boilers, 330 horse power, was added to the boiler plant, and the boiler house remodeled, and also the boilers to the Dutch oven type.

Explosion of Gas in Hoyt Shaft, Ewen Colliery, of Pennsylvania Coal Company

January 10.—Mathew Daily, company man, Frank Leish, laborer, and Patrick Bulger, company man, were fatally injured by an explosion of gas in Pittston vein. At 1.30 p. m., Bulger was sent to build a wall to direct the air current up to a counter gangway above, where Frank Leish was working. Mathew Daily was cleaning the road on the counter gangway. The fire boss on the above morning failed to discover any gas in the working places. The supposition is that Bulger had about completed the wall that directed the air current up into the abandoned breast where gas had accumulated when the gas was carried into the face of counter gangway and ignited by the open light of Frank Leish, who was the only person burned. Daily was suffocated by the after-damp, Leish died January 12 and Bulger died January 25, from injuries received due to the concussion.

Explosion of Powder in Number 10 Shaft, Number 9 Colliery, of Pennsylvania Coal Company

January 25.—Michael Roach, miner, George Zigmound, laborer, and Andrew Sepcock, laborer, were fatally burned by the explosion of a keg of powder.

These men got into a trip of empty cars with a keg of powder to ride in the gangway to work. The trip of cars was hauled in the gangway, Marcy vein, by an electric motor and the powder was ignited either by the electric current or by the men in the car. Roach died the same evening, Zigmound February 1, and Sepcock February 2.

Four other persons were slightly burned by this explosion while riding in the car next to the one containing the powder.

Explosion of Gas in Number 11 Shaft, Number 6 Colliery, of Pennsylvania Coal Company

June 5.—Walter Fitzsimons, car runner, was instantly killed and Martin Quinn, road cleaner, was fatally burned by an explosion of gas. As June 4 was Sunday, the ventilating fan on Number 5 shaft was slowed down to allow repairs to be made in the shaft, and the fan was not started at its regular speed until sometime in the night. In the meantime gas had accumulated in the workings of Number 6 shaft, Red Ash vein, which is connected through Number 5 workings up to Number 11 shaft.

The mule barn is situated in the workings between Number 11 and Number 5 shafts, and the drivers go down Number 5 shaft to the barn.

The fire boss of Number 11 shaft entered the mine at his usual time in the morning of the 5th and made his examination. On arriving at the foot of the shaft he met Martin Quinn, the road cleaner, at 6.00 a. m., and placed him at a door close to the manway to the barn and told him to allow no person to go in until he returned from examining the workings inside. At 6.45 a. m., Fitzsimons came down and started down the manway to the barn and lighted a body of gas with his open light.

## WILKES-BARRE COLLIERY COMPANY

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

## McCAULEY COAL COMPANY

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

The roads inside of the mines of the Pennsylvania Coal Company and Hillside Coal and Iron Company are kept in first class condition. The gangways are kept free from refuse and standing water, and are of ample width. The passing branches at the foot of most of the shafts are concreted on both sides from bottom to roof, the roof is supported by steel girders and the foot or landings are lighted by electric lights.

## IMPROVEMENTS

## PENNSYLVANIA COAL COMPANY

Barnum Colliery.—A slush pump 24 by 10 by 36 inches has been installed for pumping slush to the top of the hill, southeast of No. 2 shaft. No. 3 shaft has been abandoned as a hoisting shaft, all coal being taken by motor to No. 2 shaft, Pittston vein landing.

Number 9 Colliery.—No. 3 shaft, on Broad street, Pittston, has been sunk to the Red Ash vein, to be used as a second opening and for ventilation; size of shaft 10 by 20 feet.

Curttis slope has been sunk from the surface to the Checker vein, 7 by 12 by 350 feet long. An electric hoist has been installed outside to hoist the coal from this opening. This is enclosed with a fireproof building, 14 by 18 by 12 feet.

At Leadville shaft the Clark vein has been opened through old No. 9 shaft, the coal being dropped to the Red Ash vein and hoisted up the Leadville shaft.

Number 6 Colliery.—A pair of 10 by 24 inch engines was installed outside in a fireproof building 17 by 32 feet, for hoisting the coal from the New Diamond slope. An air shaft 12 by 12 feet was sunk from the surface to the Marcy vein, a distance of 360 feet, for the purpose of ventilating the Diamond, Babylon and Red Ash veins.

In No. 6 shaft a tunnel was driven 7 by 12 by 200 feet long, for the purpose of recovering the Hillman vein pillars.

In No. 5 shaft two shafts, 10 by 10 by 30 feet deep, were sunk from the top to the bottom split of the Checker vein.

In No. 11 shaft a pair of 16 by 24 inch engines were installed to operate the tail rope haulage in the Babylon vein.

**Ewen** Colliery.—At No. 4 shaft a pair of 15 by 36 inch engines was installed in a brick building 27 by 40 feet, for the purpose of operating the rope haulage in the Red Ash vein.

In Hoyt shaft a fireproof mule barn was erected in the Red Ash vein, to accommodate 24 mules. An air shaft, 10 by 10 by 70 feet, was sunk from the Pittston to the Marcy vein, for ventilation.

In No. 4 shaft a rock tunnel 7 by 12 by 300 feet, was driven in the Red Ash vein, for transportation. A new rope haulage was installed

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.

Laffin 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

## CENTRAL COAL COMPANY

Wyoming Colliery.—This colliery is located in Plains township, Luzerne county, east of the Delaware colliery, on the Delaware and Hudson Railroad, between the boroughs of Laffin and Hudson. A small breaker was erected, with a capacity of 300 tons per day, and started to prepare coal for the market on May 1, 1914, the coal being shipped to market on the Delaware and Hudson Railroad. The mine openings consist of a drift driven from the surface to the Ross vein, and a slope sunk from the surface to the Bennett vein, one mile southeast of the breaker. The coal is taken to the breaker by a small locomotive.

## JOHN CONLON COAL COMPANY

Conlon Colliery.—This colliery is located in the village of Hudson, Luzerne county. A small breaker was erected, having a capacity of 250 tons per day, and is operated by electricity furnished by the Wilkes-Barre Light and Power Company. The breaker started to prepare the coal for market November 3, 1914, shipping on the Delaware and Hudson Railroad. The mine opening consists of a slope sunk from the surface to the Cooper vein 300 feet. The workings are ventilated by the Pine Ridge fan.

## PENNSYLVANIA COAL COMPANY

Ewen Colliery.—Ewen breaker, situated in Jenkins township, was totally destroyed by fire of unknown origin on the morning of December 11. The destruction of the breaker necessitated the closing down of Numbers 4 and 7 shafts, until a new breaker can be built, and also a few days of idleness of the Hoyt shaft while a track could be laid to Number 14 breaker where the coal is being taken for preparation. The employes from Numbers 4 and 7 shafts were given employment in the other collieries of the Company.



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

Lafin 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 7½-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.