

which has improved the ventilation of that colliery greatly. For full description of the fan, see Table No. 1.

At the Baltimore tunnel, a new tunnel is now in progress, from the Baltimore to the Red-Ash seam. It is at present about twelve hundred feet in length, and is expected to go about three hundred feet further before striking the coal. It is intended for a mine locomotive to haul the coal out from this tunnel when completed, and is driven large enough for that purpose.

At the Conyngham shaft, the second opening is through, and a breaker is now in course of construction at the top of the shaft. By the time they will be ready to ship coal through the breaker, the gangways will be driven a goodly distance, and will have room to open a number of chambers, and give a good quantity of coal when they start.

Susquehanna Coal Company.

The No. 5 breaker, a large structure capable of shipping over one thousand five hundred tons per day, erected by this company at Nanticoke, was completed ready to ship coal on the first day of April, 1880.

A new fan was erected at No. 1 slope, a description of which is given in table No. 1. The ventilation of this mine was much improved by the erection of this fan, and is now in pretty good order.

At the grand tunnel, West Nanticoke, a new underground slope was driven down to a basin, which was a considerable distance below their workings. The slope is one thousand four hundred feet in length, and has an average grade of seven and a half degrees. It opened a convenient territory of excellent coal.

Delaware, Lackawanna and Western Company.

At the Avondale colliery a new underground slope was opened a distance of one thousand eight hundred and forty-five feet, on an average grade of twelve degrees. A large territory of excellent coal can be worked from this slope, and is convenient to the shaft.

They also drove a new plane, extending above their present workings a distance of one thousand four hundred feet, from which a large amount of coal is expected to be mined. This makes the fourth plane, one extending above the other, on the same pitch.

The Kingston Coal Company.

This company is sinking a new shaft near their present No. 2 shaft. The sectional area of it is twelve by thirty-three feet, and it is down at the time of this writing four hundred and seventy-five feet. They contemplate sinking it through the Ross and into the Red Ash veins, both of which are to be worked from it.

In the No. 2 shaft an underground slope was driven down to a length of one thousand three hundred and fifty feet, on a grade of one in twelve. They also drove a tunnel from the Cooper to work the Bennett vein.

Improvements by the Susquehanna Coal Company.

At the No. 1 shaft a tunnel was driven from the "Forge" to the Hillman seam. It is 650 feet in length and 7×14 feet area. It is intended to work the coal of No. 2 slope through this tunnel and abandon the slope.

The workings of the Forge Vein No. 1 shaft were connected by a tunnel from the No. 2 shaft and it is intended to convey the coal from a part of the Forge Vein workings by that way, to the No. 2 shaft when necessary.

In the No. 4 slope a tunnel was driven from the Mills to the George seam on a grade of twenty degrees, to make a gravity plane. It is 300 feet in length and 7½×12 feet area. A second opening was driven to connect with the workings of the George seam in the No. 1 shaft, and from there an airway was driven out to the surface. Upon this airway to ventilate the George seam workings, a new fan was erected, 18 feet in diameter, which is exhausting about 50,000 cubic feet of air per minute. At the No. 6 shaft a rock gravity plane has been completed, extending up to the No. 6 tunnel. It is 700 feet in length on an average grade of 14 degrees.

A great deal of work has been done in enlarging the return airways in several of the mines of this company, which has effected a marked improvement in the ventilation in each case.

Improvements by the Kingston Coal Company.

At the No. 1 shaft a tunnel was driven 1,200 feet from the Bennett seam to what is supposed to be again the Bennett. Its size is 7½×11 feet. In the No. 2 shaft an outlet has been driven to the outcrop to be used as an intake and travelling way.

At the No. 4 shaft two underground slopes were completed in the Red Ash seam.

Improvements by the Delaware, Lackawanna and Western Railroad Company.

At the Avondale mine each of the two underground slopes were extended, and they have commenced to drive a tunnel from the Red Ash to the Ross. Its size is 7×12 feet. At the Woodward colliery, a rock tunnel was driven from the Red Ash seam to the Ross, and continued to be driven to the Baltimore seam. Its length now is 1,200 feet, having an area of 7×14 feet. The two slopes, one in the Red Ash seam, and the other in the Baltimore, were extended to a length of 1,713 and 3,700 feet respectively, the Baltimore slope being the longest. This is now an extensive mine, well ventilated and kept in good order.

9-12-92

November 26, Burt Cruickshank, American, reelman on motor, was instantly killed at Mount Lookout Colliery, Temple Iron Company. He was employed to attend to the reel wire on the electric motor in No. 6 slope, Marcy vein. He apparently made a mistake in hooking on the lead wire and fell under the motor.

Miscellaneous

July 6, John Onderko, Slavonian, laborer, was fatally injured at Maltby Colliery, Lehigh Valley Coal Company. He was employed as a laborer around the breaker. He was walking over a trestling or bridge, leading from the breaker to the foot of the plane and fell off, a distance of about 8 feet. Outside.

October 27, Joseph Mackin, American, breaker oiler, was fatally injured at Exeter Colliery, Lehigh Valley Coal Company. He was leaving the oiler's room, about 5.45 P. M., after oiling the machinery and looking it over, when a cyclone struck the breaker, causing the tower hoistway, the mud screen and the belt rooms to collapse. Mackin was pinned fast among the debris. Rescuing parties worked heroically to liberate him. It was eleven hours before he was found. He died about 3 P. M. on the 28th. Everything that was possible was done for him.

November 11, Joseph Bessermey, Slavonian, platform man, was fatally injured at Maltby Colliery, Lehigh Valley Coal Company. He was helping to tear out some chutes in the breaker, and was running the plank out through the window. He stepped back where there was an opening left over the belt room, and fell through it. This opening was guarded by railing, but he went over the railing.

CONDITION OF COLLIERIES AND IMPROVEMENTS

KINGSTON COAL COMPANY

Completed the second half of 2,400 H. P. boiler plant.

Installed Norwalk compressor, capacity 2,400 cubic feet per minute; fire pump and fire lines around plant and breaker, compound duplex Goyne pump 28x18x10x36 inches; bore hole to surface through which to pump water. Erected warehouse and office.

Kingston No. 2 Colliery.—Culm hole at breaker for flushing culm into workings. Condition of collieries is good.

TEMPLE IRON COMPANY

Harry E. Colliery.—The new breaker which was practically completed in 1905, was placed in operation on July 23, and is working very satisfactorily. The breaker tracts were graded and relaid. New scales, both empty and loaded, were installed. A new shaft head frame was erected and self-dumping cages installed. Portions of the shaft cribbing and buntons were renewed, and 4½x11 inch guides placed in the shaft to replace the old 6x8 inch guides. A concrete retaining wall was built around the head of the shaft in place of the old wooden cribbing.

A new carpenter, blacksmith and machine shop was built. This is a concrete building, 56 feet 6 inches x 28 feet. The foundation is made of concrete, 21 inches thick. The building walls are 8 inches

IMPROVEMENTS

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—Great attention has been given to the development of the water level coal in the mountain district.

Four tunnels have been driven from the surface cutting through the Ross and Red Ash veins.

A new coal road 3,000 feet long, also a self-acting plane connecting these tunnels to the main haulage road to No. 2 breaker.

A new concrete crib has been substituted for the wooden timbers at the permanent opening of No. 2 Slope.

450 H. P. return tubular B. and W. boilers have been installed at the old slope, and are enclosed in a corrugated iron-brick house.

Three tunnels have been completed in the Old Slope district between the Ross and Red Ash veins.

A new addition has been built to the east side of No. 2 breaker, new shakers taking the place of revolving screens.

A new 8 inch wooden pipe line 2,000 feet long connecting No. 3 shaft with No. 2 breaker.

A new system of fire protection and electric light.

A new washery has been erected independent of the breaker.

Kingston No. 4 Colliery.—Two new tunnels between the Bennett and Checker veins.

An additional pump and bore hole completed to Central pumping plant in Bennett vein.

A new 8x25 foot fan and expanded metal-concrete casing and house for same are in course of construction and will soon be completed.

300 H. P. return tubular B. and W. boilers added to main boiler plant.

The electric power plant has been increased by the addition of two 240 K. W. direct driven generators, new brick house enclosing same.

A number of changes and additions made to the breaker.

New addition to warehouse.

Through the generosity of the company a free library has been opened for the use of the employes, where they can spend their evenings in reading and studying. No books or magazines of a sectarian nature will be allowed in the library. Everything is free. Lectures are given on the "first aid to the injured" by Doctor Lake once a month. Also lectures are given on mining questions once or twice a month.

TEMPLE IRON COMPANY

Mount Lookout Colliery.—The wooden cribbing in the Mount Lookout shaft, which is 14x22 feet, and 110 feet from the surface to top of rock, became partially decayed to a depth of 50 feet, which is the low water mark. The cribbing below this level is constantly wet and consequently well preserved. The problem of renewing this cribbing without a lengthy suspension of work was a serious one,

IMPROVEMENTS

LEHIGH AND WILKES-BARRE COAL COMPANY

Lance No. 11 Colliery, Inside.—No. 25 Tunnel, Cooper to Baltimore.
Nottingham No. 15 Colliery, Outside.—New wash house.
Inman No. 21.—Sinking shaft. Continued sinking Baltimore and Red Ash shafts.

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—A new washery, capacity 1,000 tons per day, has been completed midway between No. 2 breaker and No. 4 breaker, said washery complete with duplicate shakers, rolls, elevators and conveyors and Jeffrey crushers.

Three bore holes driven so that all waste from the breaker is flushed into the mines.

Shipment began from the washery in the month of May.

A new brick boiler house equipped with 600 H. P. water tube boilers, feed pumps and water heaters.

A wet addition was completed to the breaker equipped with duplicate shakers, elevators, rolls and Jeffrey crushers.

The dry part of the breaker is being entirely remodeled, work on which will be completed in the fore part of 1909.

All circular screens are being substituted with shakers.

The old plane has been abandoned and a new location made away from the breaker and at a much easier grade, which removes the unsafe condition.

A new brick office and retail scales complete.

The tracks on the loaded and empty sides of the breaker have been changed and new railroad scales set in place.

A new steel concrete bridge has been completed over Jackson avenue dispensing with the old wooden structure.

Special attention has been given the remodeling of the emergency hospital in the Nos. 2 and 3 Shaft districts; also a brick combination hospital and foreman's office built at the old slope.

The equipment has been increased with two new locomotives and cars for the Mountain tunnel development.

Gaylord Colliery.—A new washery, with a capacity of 1,000 tons per day, was completed and operation begun in March; the washery is completed with duplicate shakers, rolls, elevators and conveyors and Williams crushers, and also acts as a wet side or mud screen adjunct to the breaker.

Two new Goyne pumps 28 x 10 x 36 pump silt through 8 and 10 inch culm lines 3,000 feet to bore holes, so that all the refuse from the washery and breaker is flushed into the mines.

Series of six holes have been completed for flushing purposes.

Two bore holes for steam exhaust and culm pipe and a new pump outfit completed in Bennett vein.

During the months of July and August the breaker was remodeled and all circular screens dispensed with, shakers being substituted, also modern rolls, crushers, etc.

LEHIGH AND WILKES-BARRE COAL COMPANY

Nottingham.—Ventilation, drainage and general condition as to safety, good.

Lance No. 11.—Ventilation, drainage and general condition as to safety, good.

DELAWARE AND HUDSON COMPANY

Plymouth No. 5.—Ventilation, drainage and general condition as to safety, good.

Plymouth No. 2.—Ventilation, drainage and general condition as to safety, good.

Plymouth No. 3.—Ventilation, drainage and general condition as to safety, good.

PARRISH COAL COMPANY

Buttonwood.—Ventilation, drainage and general condition as to safety, good.

Parrish.—Ventilation, drainage and general condition as to safety, good.

PLYMOUTH COAL COMPANY

Dodson.—Ventilation, drainage and general condition as to safety, good.

GEORGE F. LEE COAL COMPANY

Chauncey.—Ventilation, drainage and general condition as to safety, good.

BRIGHT COAL COMPANY

Hillside.—Ventilation, drainage and general condition as to safety, good.

DUNN COAL COMPANY

Dunn.—Ventilation, drainage and general condition as to safety, good.

 IMPROVEMENTS

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—No. 2 breaker was entirely overhauled and rebuilt without interfering with the output. It is equipped with shaking screens and mechanical pickers and no boys under the age of sixteen years are employed. This breaker commands a large local retail trade; therefore the streets and foot of the breaker have been paved with brick-concrete.

A new concrete foundation-stalls frame building has been completed for seventy mules.

A brick mule hospital and harness shop erected.

A concrete powder house built for the Old Slope district.

The wooden building over the slope hoisting engines at Mountain tunnels substituted with brick-concrete.

The wooden housing and upcast at No. 3 shaft fan has been substituted with concrete.

A rope hole has been completed from the surface to the Ross vein and a set of hoisting engines installed on the surface, thus removing the inside slope rope from No. 3 shaft and the inside gangways.

A tunnel has been completed on the first lift from Bennett to Red Ash vein, and another tunnel has been started on the lower lift from Ross to Bennett vein.

A series of tunnels and rock holes has been completed from the Ross vein to the overlying split, and mining has now been started in the small vein 2 feet 6 inches thick.

Gaylord Colliery.—The wooden housing and building of the 25-foot ventilating fan has been replaced with reinforced concrete and brick. The fan is reversible and fire-proof.

A new brick-concrete wash-house has been erected for the use of the employes, and equipped with 100 steel lockers, ten bath tubs, shower baths, hot and cold water and steam. The conveniences and sanitary arrangements are worthy of mention.

A brick-concrete mule hospital has been constructed.

Powder house has been changed to a more isolated place.

A new 8-inch bore hole driven for pump discharge from Bennett vein to the surface for a new pump in the Bennett vein.

Progress has been made in the reopening of the old caved district in the Red Ash vein. To this end a slope 1,500 feet long has been sunk through the old workings in the Red Ash vein and a tunnel 650 feet long driven from the Bennett vein to the Ross vein.

Additional bore holes have been completed for culm flushing, which has been extensively carried on during the last year, into the old workings.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Woodward Colliery, Outside.—The work of replacing old trestling work connecting No. 1 shaft landing with surface with re-inforced concrete, is now under way and will soon be completed.

The breaker building has been re-piped and is now heated with exhaust steam in a very satisfactory manner.

Considerable repairs and improvements, including the installation of mechanical pickers, etc., have been made at the breaker with very good results.

Inside.—The work of sinking No. 3 shaft, located on the Kingston Flats, from the surface to the Cooper vein to a depth of 783 feet, was completed by Messrs. John Pugh and Sons on September 12. This work was started September 13, 1907, thus making the time occupied in doing the work about two years. The erection of a steel tower over this shaft is now under way and will soon be completed.

The underground workings have been connected to the main shafts at Woodward, and the work of grading roads for the mining of coal in this neighborhood is now being done.

The No. 17 slope, or surface slope, was sunk from the Snake Island to the Abbott vein. A 16-foot ventilating fan was installed upon this slope, and is now in operation.

The following rock tunnels were driven:

(a) Rock slope through fault, Hillman to Kidney vein, on 8 per cent. dip, was completed.

(b) Second opening for this slope in 2 per cent. grade was completed.

BRIGHT COAL COMPANY

Hillside.—Safety, ventilation and drainage good.

DUNN COAL COMPANY

Dunn.—Safety, ventilation and drainage good.

IMPROVEMENTS

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—A new manway has been completed in the Mountain Tunnel district from the foot of Rock slope to the surface.

A tunnel has been driven from the Ross vein through the Lift vein to the Bennett vein, making a second opening for No. 2 shaft.

The inside hoisting engine in Red Ash vein has been removed to the surface, rope being conveyed through bore hole to inside slope instead of through shaft-way.

Two new manways have been completed along the plane in the Cooper vein for the safe travel of men. Also reopened main gangways for width in Lance and Bennett veins.

New barn completed at foot of No. 2 shaft, with sheet iron, cement and concrete stalls, equipped with electric light. A similar outfit has been provided at foot No. 3 shaft.

A new brick-concrete locomotive house completed.

A new brick carpenter-blacksmith shop under construction to take the place of the old buildings around the head of Nos. 2 and 3 shafts.

Gaylord Colliery.—Completed brick and expanded metal concrete housing over 25 foot ventilating fan.

Complete brick pump house for silting pumps.

Installed two 12 by 8 by 12 boiler duplex feed pumps.

Installed new jigs in washery.

Tunnel 650 feet long completed from Checker vein to the Ross vein.

Old air shaft opened from Ross vein to Red Ash vein in squeezed territory, and steps placed in air shaft for a traveling way.

Red Ash slope has been extended through the squeezed territory to a total distance of 1,800 feet.

Two silt holes and one new rope hole were drilled. Silting operations have been carried on extensively during the year.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Woodward Colliery.—In the Cooper vein several air bridges have been rebuilt with concrete and steel.

The main haulage road has been timbered with creosote timber and the old timber taken out.

In No. 1 shaft concrete fire bosses' stations have been erected on the inside. The fire bosses are now located at the foot of these openings where they can better protect the entrance to the mine.

A tail rope has been installed on "G" gangway, Red Ash vein.

Twenty concrete arches have been erected in No. 1 tunnel. Several sets of treated timber upon which a comparison is to be made for future reference.

An old passenger coach has been equipped with the "Draeger Rescue Apparatus," consisting of four helmets, oxygen storage tanks,

CONDITION OF COLLIERIES

KINGSTON COAL COMPANY

Kingston No. 2 and Gaylord.—Safety conditions, ventilation and drainage, good.

DELAWARE AND HUDSON COMPANY

Plymouth Nos. 2, 3 and 5.—Safety conditions, ventilation and drainage, good.

LEHIGH AND WILKES-BARRE COAL COMPANY

Nottingham and Lance No. 11.—Safety conditions, ventilation and drainage, good.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Woodward and Avondale.—Safety conditions, ventilation and drainage, good.

PARRISH COAL COMPANY

Buttonwood and Parrish.—Safety conditions, ventilation and drainage, good.

PLYMOUTH COAL COMPANY

Dodson.—Safety conditions, ventilation and drainage, good.

GEORGE F. LEE COAL COMPANY

Chauncey.—Safety conditions, ventilation and drainage, good.

BRIGHT COAL COMPANY

Hillside.—Safety conditions, ventilation and drainage, good.

DUNN COAL COMPANY

Dunn.—Safety conditions, ventilation and drainage, good.

IMPROVEMENTS

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—Outside: The breaker has been equipped with a new Carpenter patent dust eradicator, size of fan 15 feet by 6 feet, belt driven, for removing dust from the breaker and eliminating such dust in a new water tower built on the outside of the breaker.

Two new jigs were installed in breaker.

The breaker has been wired and lighted by electricity.

A brick-concrete wash-house completed for the use of the miners, equipped with shower baths, individual tubs and two hundred steel lockers.

Concrete engine houses were constructed, supplanting frame at Lance bore hole, Orchard bore hole and Nos. 2 and 3 shafts.

Warehouse and office of brick, supplanting frame.

Nos. 2 and 3 shaft hoisting engines were equipped with Welch Improved Overwinding Prevention Device, steam reverse and brake.

Brick-concrete-steel mule bath, shoeing and wagon shed completed.

Twenty-five thousand gallon circular wooden water tank set in place.

Nos. 2 and 3 shaft towers have been stripped of wooden sheathing and head frame removed and strengthened.

No. 2 Shaft.—Inside: In accordance with the Act of June 15, 1911, all buildings inside of the mines have been constructed of incombustible material.

A concrete emergency hospital was built at the bottom of No. 2 shaft.

A concrete fire boss station was built in the Lance vein at the foot of shaft.

Two openings were driven from the Cooper to the Lance vein for second outlet.

A rock tunnel was driven from the Cooper to the Lance vein, a distance of 180 feet for traveling way and mule way.

The Bennett vein barn was extended, with steel and concrete stalls.

No. 3 Shaft.—Inside: Concrete-steel barn was built in Red Ash vein.

Concrete motor pit was built.

Concrete emergency hospital was built at the foot of the shaft.

A concrete fire boss station was built.

A balance plane was made in Red Ash vein.

Kingston Nos. 2 and 4 Washeries.—No. 2 culm bank was exhausted on October 23, and they are now preparing No. 4 bank through No. 2 washery structure.

Three new conveyor lines were built, running by subway under the railroad tracks, Main Street and No. 4 yard, to transport No. 4 bank to the washery.

Four new jigs were installed.

A 25,000 gallon fresh water circular wooden tank is in course of construction at boiler house.

Roadway for retail wagon trade under washery.

Silting from the washery was carried into No. 3 Ross and Red Ash workings.

Gaylord.—Outside: A brick ambulance wagon shed was erected.

The culm plane bridge over wagon road was rebuilt.

A 50,000 gallon cedar water storage tank was placed on steel and concrete foundations.

A playground was established along Cherry Street, complete with swings, wading basin, horizontal bars, turnstiles, etc., and opened to the children of employes on July 4.

Foundations have been completed for a new Ingersoll-Rand air compressor.

Inside: A concrete engine house was built for the Red Ash slope engines.

A bore hole 450 feet was sunk from the head of culm plane to the Red Ash vein for silting purposes.

Red Ash slope was extended and steel timbers are being tried.

Silting operations have been carried on extensively during the year.

PARRISH COAL COMPANY

Buttonwood and Parrish Collieries.—Safety conditions, ventilation and drainage, good.

PLYMOUTH COAL COMPANY

Dodson Colliery.—Safety conditions, ventilation and drainage, good.

GEORGE F. LEE COAL COMPANY

Chauncey Colliery.—Safety conditions and drainage good. Ventilation fair.

WEST NANTICOKE COAL COMPANY

West Nanticoke Colliery.—New opening, just opening up from surface.

BRIGHT COAL COMPANY

Hillside Colliery.—Safety conditions and ventilation good. Drainage fair.

IMPROVEMENTS

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—Inside: A tunnel was driven from Cooper vein to Lance vein for haulage and second opening. Two 2-inch drainage holes were bored from Cooper vein to Bennett vein. Two electric hoists were installed in Bennett vein. A new 6-inch hole was completed from the surface to Red Ash vein, a distance of 550 feet, through which electric wires are conducted, the old ones having been removed from the shaft.

At No. 3 shaft a 15-degree rock plane was completed from Ross vein through the Eleven Foot vein to Bennett vein, making a second opening between Nos. 1 and 3 shafts.

In the slope and tunnel a new manway and muleway completed from Eleven Foot vein to the surface, and a new second opening completed from Eleven Foot vein to Bennett vein on the west side.

Outside: Rebuilt empty car trestle at head of No. 3 shaft extended No. 2 shaft boiler room to install 600 horse power additional B. and W. boilers. New blast fan has been purchased. New 10-inch steam line constructed from boiler house to No. 3 shaft and fan engines.

Gaylord Colliery.—An 18 by 30 by 27½ by 24 inch Ingersoll-Rand Corliss, valve two-stage air compressor was installed.

DELAWARE AND HUDSON COMPANY

Plymouth No. 5 Colliery.—At Boston Red Ash, No. 17 plane air return from No. 13 plane 7 by 12 by 132 feet, 18 degree pitch, and work on concrete stables completed.

Plymouth No. 2 Colliery.—Two 24-inch bore holes drilled from surface to Bennett vein, 640 feet deep. Concrete reinforcements to pumping rooms Nos. 1 and 2 in Bennett vein. Tunnel, 7 by 12 feet, 422 feet long, driven from No. 7 plane in "G" vein to top of Plymouth No. 5 Shaft. Established Mine Rescue Station for Plymouth Division, equipped with Draeger Apparatus and other appliances.

Avondale Colliery.—The work of reopening this colliery after the squeeze of 1910 is not yet completed. The major portion of the workings in which there is virgin coal is in fairly good condition. The Ross vein section, No. 5 slope, is still under water. A large centrifugal electrically operated pump will be installed to remove the water and the mining of coal will be continued.

Loomis Colliery.—The work of development at this colliery is under way; the coal is being shipped for preparation to the Bliss colliery. Installed shaft hoisting engine and steel shaft head frame. The foot of the shaft openings in the Hillman vein is being equipped with concrete side walls and I beams, and single passageways for persons to travel from waiting rooms to foot of shafts when about to be hoisted to the surface. All the work is of a very substantial and permanent character.

The buildings on the surface are of concrete and brick construction.

A 20-foot multi-blade fan is being installed.

The work of widening out the old Dundee shaft to the Mills vein will soon be started. It is also proposed to sink a four compartment shaft from the surface to the Hillman vein, a short distance south of Butzbach's landing, the coal from which will be prepared at the Loomis breaker now under construction. This breaker will have many unique features. It will be constructed of reinforced concrete from the surface to the pocket lines; the rest of the building will be of steel and wired glass. It is intended to make it as nearly fire-proof as possible. It is also to be a very large producer. 6,000 tons of coal per 9 hour day will be shipped to market. The company has a large undeveloped territory of coal surrounding these openings. The boiler plant and other equipment will all be of the latest design.

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—Completed a 12-inch concrete, reinforced steel partition from the Ross vein to the Orchard vein close to the surface and the old wooden brattice was removed from No. 3 shaft.

Installed an 8 by 25 foot double intake fan at the Old slope, driven by 18 by 30 inch direct connected Corliss engine, all encased in concrete, reinforced steel building and connected by concrete upcast to the fanway at the outcrop of the Eleven Foot vein.

Built an addition 22 by 68 feet to the miners' wash house at No. 2 shaft. The wash house is now equipped with six showers, a battery of twelve wash stands, twenty-eight tubs and two hundred and eighty-eight lockers.

Completed a pump discharge bore hole, 315 feet deep, from the surface to the Checker vein No. 3 shaft, dispensing with the cast iron culm line in the shaft.

Completed the addition to the boiler plant at No. 2 and installed 300 H. P. B. and W. boilers; also transferred from the washery and installed at No. 2 300 H. P. B. and W. boilers.

The boiler house is covered by steel truss galvanized iron roof and Pond steel continuous sash ventilator frames.

Gaylord Colliery.—The pump and boiler at the river for supplying wash water were replaced by an Aldrich vertical triplex pump 11 by 12 inches, with a 50 H. P. A. C. electric motor.

Lance No. 11 Colliery.—Inside: Completed No. 8 slope, Top Baltimore to Bottom Baltimore; No. 28 slope, Bottom to Top Red Ash; and No. 29 tunnel, Top Baltimore to Five Foot. Installed a 10 inch by 36 inch compound pump in Hillman vein.

Parrish No. 23 Colliery.—Inside: Completed No. 1 slope, Baltimore to Baltimore; and built a new barn. Installed electric haulage on 2nd West Baltimore and a centrifugal pump and gravity water pipe to No. 14 tunnel.

Buttonwood No. 22 Colliery.—Inside: Completed No. 10 tunnel, Kidney to Abbott; No. 11 tunnel, Stanton to Stanton; and No. 12 tunnel, Surface to No. 6 vein. Installed electric haulage on shaft level and 2nd East, No. 2 plane; also new pumping plant on shaft level.

Outside: Erected colliery shop, breaker engine-house hoisting house, timber yard and saw mill. Reconstructed the power plant and boiler plant. Installed electric haulage, Buttonwood to Inman No. 21, and breaker wash pump and reservoir.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Woodward Colliery.—Steam generators have been replaced by electric motor generators. Electric power is being generated at the Nanticoke power plant and transmitted by high tension lines, transformed and stepped down as necessity demands at the colliery.

Concrete walls and I beams have been placed around the shafts, thus reducing the fire risk considerably. Completed several rock tunnels for development and ventilation purposes.

Installed two 20-foot fans outside.

Loomis Colliery.—Completed a new shaft known as Loomis No. 3, near Butzbach's Landing, from surface to Hillman. Preparations are being made for the widening out of the Old Dundee shaft.

Avondale Colliery.—Completed reopening of the Red Ash vein; also second opening for No. 9 tunnel, Ross to Hillman, to be connected at the Five Foot vein. The Ross vein section, No. 5 slope, is still under water. Installed pumping equipment to remove the water from this colliery, the flooding of which was caused by the inflow of a large quantity of water from the Susquehanna River bed after the squeeze of November, 1910.

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—Inside: Completed two tunnels, one from Cooper to Bennett vein, and the other from Cooper to Lance vein, for haulage and second opening, also a tunnel in No. 3 shaft through roll in the Eleven Foot vein. Installed an electric hoist in No. 1 plane, Ross vein; and a new system of culm and surface clay and rock flushing. An emergency hospital was built near the main turnout of the Eleven Foot vein in the slope. The sides around the foot of No. 2 shaft were reinforced with concrete-steel.

Outside: Installed a new 6-inch bell mouth water line, 2,400 feet in length from fresh water tanks for fire emergency, and a new 8 inch by 6 inch by 10 inch Scranton Duplex pump. Fitted up brick

building for a wash house and installed bath equipments to meet the requirements of the number of men using it. Remodeled brick building for use as an outside hospital.

Completed a new playground in Edwardsville and opened it on May 30. As in former years, night school has been held during the winter in the Company's free library.

Gaylord Colliery.—Completed a 15 degree slope from Ross to Red Ash, for ventilation and second opening. Silting operations were carried on extensively during the year.

Outside: Completed hospital.

Plymouth No. 3 Colliery.—Rock plane was driven from Stanton vein to Hillman vein, a distance of 300 feet.

Plymouth No. 5 Colliery.—The breaker has been entirely re-modeled. In the Boston section, a tunnel 80 feet in length was driven from the Bennett vein to the Cooper vein.

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—Inside: In No. 2 shaft, completed two short tunnels from Cooper vein to Bennett vein for a second opening; also two short tunnels from Cooper vein to Lance vein for a second opening. In the old slope, a new traveling way for men and mules was completed from Red Ash lower level to top lift.

Outside: Installed a 10,000 gallon water tank. Completed two concrete powder houses.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in Plymouth, June 6 and 7. The Board of Examiners was composed of David T. Davis, Mine Inspector, Wilkes-Barre; H. G. Davis, Superintendent, Kingston; George W. Raub, Miner, and Lewis R. Thomas, Miner, Plymouth.

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

MINE FOREMEN

Nathan W. Bittenbender, Frank Coggins, Elijah B. Dobson, Ezra M. Griffith, William B. Jones, Price Lloyd, Arthur Williams, Plymouth; James J. Duffy, Kingston; William C. Thomas, Edwardsville.

ASSISTANT MINE FOREMEN

George Barney, William J. Davis, Walter Peter Dajnowski, Richard Edwards, Fred B. Hick, Evan Hopkins, Samuel C. Heller, Howell T. Jenkins, Ignaz Kosmela, Joseph Leedock, Frank Munday, James H. Morgan, Felix Pohola, John B. Rees, William Richards, Joseph Stukowski, Frank Sobashinski, Walter Symons, Cornelius Shovlin, Joseph R. Thomas, Joseph Turek, Isaac J. Thomas, Thomas Taylor, Frank Walters, Martin Zola, Plymouth; Thomas Brislin, West Nanticoke; Alfred M. Clark, Alfred Jones, Stephen M. Lodwick, Griffith Roberts, Bert Smith, Albert G. Wilczak, Edwardsville; Evan J. Evans, Forty Fort; Michael Farrell, William Meyers, Larksville; John Powell, David T. Morgan, Kingston.

nel was driven from Cooper to Lance vein; distance 100 feet. Built 250 feet of concrete walls and steel I beams for roof and side supports on Cooper vein haulage road, and 300 feet on Baltimore haulage road, No. 3 shaft.

Installed two electric locomotives, one in Hillman vein, No. 2 shaft, and one in Baltimore vein, No. 3 shaft.

Outside: Installed one generator set, switchboard, etc., complete. Erected new steam lines from steam plant to the several hoisting engines.

LEHIGH AND WILKES-BARRE COAL COMPANY

Lance No. 11 Colliery.—Extended No. 8 slope, Cooper to Baltimore; No. 31 slope, Baltimore to Cooper; rock plane airway, Bottom to Top Red Ash; No. 22 plane, Stanton to Hillman; and rock plane airway, Hillman to Kidney vein.

Nottingham No. 15 Colliery.—Completed No. 7 tunnel, Ross to Ross vein.

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—Drove a new traveling way and airway in Cooper vein through culm-filled district and connected with Lance vein tunnel. Two short tunnels were driven from Cooper to Bennett vein.

In No. 3 shaft, a second opening was made from East Red Ash to the Ross tunnel on the west side. Forty-six shafts were driven from Ross to Ross Split vein. Completed a short tunnel through roll from Eleven Foot vein to Eleven Foot vein.

In the slope, a 2-inch bore hole was drilled from Eleven Foot to Ross vein, for drainage.

Installed a 5-ton Jeffrey storage battery locomotive in lower lifts of Ross and Red Ash veins.

Outside: A concrete and steel foot-bridge has been erected over main tracks, with concrete and steel passageways, foot-paths, fences, etc., for the safety of employes.

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 Building, Plymouth, June 6 and 7. The Board of Examiners was composed of D. T. Davis, Mine Inspector; Harry G. Davis, Superintendent, Kingston; William H. Chappell, Miner, Plymouth, and Lewis R. Thomas, Miner, Edwardsville.

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

MINE FOREMEN

Philip Callender, Daniel R. Edmunds, David T. Morgan, Frank B. Davenport, Clarence E. Rosser, Kingston; Fred B. Hicks, Henry Hosey, Isaac J. Thomas, Robert J. Tischler, William J. Hobbs, Milton Jones, Thomas H. Lewis, Joseph R. Thomas, Plymouth; Gwilym Jones, Dorranceton; Herbert Morris, William R. Roberts, William Price, Alfred Hazell, John Morris, Albert G. Wilczock, Michael A. Putera, Edwardsville.

PA Mine Inspection 1916

The entire mine has been equipped with the Koehler type safety lamp replacing the Davey and Clanny safety lamps.

Installed an overwinding device on No. 3 shaft hoisting engine.

Completed a 7 foot by 12 foot rock tunnel, 700 feet long, from the Lance to the Five Foot vein, No. 1 shaft.

LEHIGH AND WILKES-BARRE COAL COMPANY

Lance No. 11 Colliery.—Completed No. 32 tunnel, Cooper to Five Foot vein and No. 33 tunnel and plane, Stanton to Hillman vein.

Nottingham No. 15 Colliery.—Completed extension of 14 inch compressed air line to 11th east and installed a 75 H. P. electric hoist on Nos. 1 and 6 slopes.

Outside: Installed a 100 H. P. electric hoist on No. 4 slope.

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—The cribbing between the surface and the solid rock in No. 2 shaft has been removed and replaced with reinforced concrete. Installed two storage battery locomotives in the Lance and Cooper veins and an electric hoist on the new plane in the Bennett vein.

At No. 3 shaft, the cribbing between the surface and the solid rock in the shaft has been removed and replaced with reinforced concrete. Fifty short shafts or rock holes were driven to the Ross split vein from the Ross vein. Installed two storage battery locomotives complete with charging station for each locomotive.

Installed three storage battery locomotives complete with charging panels, and two electric hoists, one in the Ross vein and one in the Red Ash vein.

Outside: One corrugated iron waiting station for miners was constructed at the head of No. 2 shaft and one near the head of No. 3 shaft.

Four Dutch ovens were added to the grate space of four boilers at No. 2 boiler plant.

Installed a cross compound Corliss engine 16 inches and 30 inches by 42 inch stroke, direct connected to a 300 K. W. Westinghouse generator as an auxiliary for generating power required for the new additional storage battery locomotives at No. 2 colliery.

Gaylord Colliery.—Completed boiler plant pump house and 17 K. W. lighting set. This machine furnishes power to all of the arc lights on the property and for the lighting of buildings; the hospital, ambulance room and electric shop; a brick and concrete mule bath, and a brick colliery office building, 27 feet by 50 feet.

Installed several chemical engines and fire extinguishers and a 44 foot, 150 ton track scale and also a 22 foot Barker 25 ton truck scale for retail coal. A new motor driven ambulance was purchased, as required by law.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in Plymouth, May 7 and 8. The Board of Examiners was composed of David T. Davis, Inspector, Wilkes-Barre; Henry G. Davis, Superintendent,