

When these mines were opened, the robbing of pillars was one of the important considerations, and with this in view a system of mining was adopted which has been strictly adhered to. An engineer was kept at the mines, to put up all chamber lines, and see to it that they were driven accordingly.

All chamber roads, gobs and props, conform strictly with the engineer's lines, the road being on one side, and the general success attending the mining at this colliery, is the best evidence of the successful methods there in vogue.

While the robbing of pillars is such an important part of the work at these mines, it can be said that not a single accident can be attributed to it.

Clifford Colliery.—The ventilation is, and has been, undergoing a thorough overhauling, and will soon be in a satisfactory condition.

Glenwood.—The ventilation is in fair condition; they are robbing pillars in a thick vein, and on this account it is very difficult to maintain systematic ventilation, but the employes do not suffer in any way for the want of air.

TEMPLE IRON COMPANY

Lackawanna.—The chambers of this mine are well ventilated, and have been very much improved lately. A new shaft is being sunk, which will improve their haulage and do away with using the main haulages as return, which, under present conditions, would be impossible.

Northwest.—The ventilation is fair; they are robbing pillars in a thick vein, but the men appear to have a full and adequate supply of air.

NORTH END COAL COMPANY

North End.—This mine has been under development, and is not sufficiently far advanced to be considered.

Improvements

SCRANTON COAL COMPANY

At the Johnson colliery a 30 foot Guibal fan has been installed as an alternate to the present fan now in use, which fully meets the requirements of this gaseous colliery.

The engine room and fan drift are built of substantial masonry, and the arrangement of operating the doors that turn the air currents to either fan, is very effective and complete.

At Raymond Shaft a 250 horse power locomotive boiler has been set up in addition to the present equipment. This will do away

The improved haulage and equipment at this colliery, is in a condition second to none in the region.

HILLSIDE COAL AND IRON COMPANY

At Forest City colliery a 7x12 inch Quintuplex Electric plunger pump, equipped with a C. C. 90 H. P. motor, the pump having a capacity of 600 gallons per minute against a head of 450 feet, has been installed in the Red Ash vein at No. 2 shaft.

An additional 7½ ton electric motor, with cable reel attachment, has been added to the Red Ash vein; also a 7½ ton with cable and reel attachments, added to the equipment of the Clark vein.

Also at Forest City (outside) a very modern supply house, 35x50x18, has been constructed, with a fire-proof addition 18x21x18, used for an oil house.

The interior arrangement—equipment for handling oil by the use of pumps, manner of storing supplies, and method of keeping a record of the same—is indeed of great value to the colliery, and reflects credit on its designers.

At Clifford colliery a steam plane, 900 feet in length, area 7x12, has been driven up the west rise.

At Glenwood colliery a new cold air blast for the boiler plant, with fan and engine, has been installed, and a new 6" steam line from Glenwood boiler room to the pump shaft, a distance of 3,000 feet, has been erected, which will allow the shutting down of the boiler plant at the pump shaft the greater part of the year, when the pumping is not excessively heavy.

TEMPLE IRON COMPANY

At Northwest colliery a plane 417 feet long has been driven from the Clark to the New County vein.

Remarks

A review of the operations in this district for the year 1904, shows an unsatisfactory condition regarding accidents.

The high percentage of accidents caused by falls of roof, is no exception to records of former years. The attention of those interested, has been repeatedly called to the irregularities that cause this class of accidents, but a reduction can never be looked for until the employes see that it is better to observe and obey the law concerning the examination and securing of the roof of their working places than it is to disregard it.

There were 36 fatal accidents, 17 of the victims were English speaking persons, and 19 foreign speaking. From this it will be seen that the increase in the number of accidents in the mines is not wholly due to the "foreigner," as is very often asserted.

Jermyn Colliery.—Plane in Grassy vein driven 800 feet. Plane in Archbald vein extended 600 feet. Rope haulage in Archbald vein extended 2,200 feet. A 17 foot Guibal fan has been built to ventilate the Grassy vein. A Dickson engine, 16 by 30 inch cylinder, operates the fan. An 8-inch bore hole driven 147 feet from the surface to the Archbald vein to convey steam to operate fan on the surface.

White Oak Colliery.—Tail rope haulage in Dunmore vein straightened and graded for a distance of 1,600 feet. No. 2 slope Dunmore vein extended 400 feet. Tunnel in Dunmore vein driven through fault 150 feet. No. 6 Tunnel re-opened, and 2,200 feet of tracks laid to operate it. No. 8 Tunnel to Dunmore vein re-opened and tracks laid preparatory to robbing.

HILLSIDE COAL AND IRON COMPANY

Eric Colliery.—A two-story building of reinforced concrete 29 x 74 feet was erected for storehouse purposes. Three tubular boilers were installed equal to 300 horse power, or 1,200 in the aggregate. One $7\frac{1}{2}$ ton electric motor. West side steam plane extended 400 feet. East side plane extended 1,400 feet. One 6-inch bore hole from surface to the Grassy vein for slushing purposes to recover pillars.

SCRANTON COAL COMPANY

Raymond Colliery.—The Raymond shaft has been sunk from the Clark to the Dunmore vein, a distance of 86 feet, cutting a four foot vein of excellent coal. The second opening has also been sunk from and to the same vein.

TEMPLE IRON COMPANY

Northwest Colliery.—An air shaft was sunk to Mills vein, a distance of 32 feet. A Guibal fan was erected on this shaft 20 feet in diameter for ventilation. It is driven by an electric motor. A 75 K. W. generator driven direct by a Taylor-Chandler engine was installed to generate current to supply the motor.

HUMBERT COAL COMPANY

Sunnyside Colliery.—A new vein of coal has been opened near top of mountain about 2,000 feet from the breaker. A new mule barn and a fireproof stone powder house were erected. Additional railroad tracks have been laid in order to meet the increased capacity of the colliery.

MORSS HILL COAL COMPANY

Morss Hill Colliery.—A slope was sunk from the surface to top vein, a distance of 125 feet, the average pitch twenty degrees and a steam hoist was installed. Water way was driven to Third vein. The breaker and trestle thoroughly repaired and new breaker engine, jigs, screen, etc., installed. A 65 K. W. generator, electric hoist, two motors for shop purposes and a complete system of electric lighting for breaker and offices were installed,