

**Church Mine.**

A new slope has been sunk from the surface to the coal.

**Grassey Island Mines.**

They have driven a new drift to open up the slope vein of coal.

**Dolph Colliery.**

There have been new lump coal schutes built on breaker.

**Edgerton Mine.**

Two air shafts have been sunk, one 35 feet deep, the other 41 feet deep; sectional area of each, 100 square feet.

**Peckville Colliery.**

This is a new colliery, located in Winton borough, on the south-east side of the Lackawanna river. Coal can be shipped by the Delaware, Lackawanna and Western railroad or the Delaware and Hudson Canal Company's railroad. It is owned and operated by the Peckville Coal Company. They have one drift driven 200 feet into the coal, and opening right and left of the main heading. There is another drift 600 feet south of breaker. A new breaker is being built which will have a capacity of 600 tons per day. They will be ready to ship coal in about three months. An air shaft is also being sunk.

**Pierce Mines.**

The slope from the surface has been sunk 700 feet in 1886. Sectional area, 100 square feet.

**Erie Colliery.**

On November 16, 1886, Erie breaker was destroyed by fire. It is now being rebuilt, and will be ready for the preparation of coal about March 1, 1887. Sunk one pumping shaft 225 feet deep; sectional area, 48 square feet. Two new shafts are being sunk, one to top vein and one to bottom vein. Size of shafts, 12×30 feet. A breaker is to be erected for the preparation of coal and is now ready for the superstructure.

**Keystone Mine.**

One self-acting plane, 450 feet long, sectional area, 96 square feet, has been built and in operation.

**Brennan's Mines.**

A new breaker has been erected; a drift has been opened and an air shaft has been sunk in 1886.

**Belmont Mines.**

A new drift has been driven for a distance of 300 feet, for the purpose of drainage. Sectional area, 42 square feet.

*Buffalo Mines.*—Built a three-foot gauge track railroad from mines to Jefferson branch of N. Y., L. E. & W. R. R., a distance of two and one-third miles. Coal is hauled by a small locomotive. A new hoisting engine, new main and pony rolls and screens were also put in, and the breaker and machinery given a thorough overhauling.

*Belmont Mines.*—A new water-level tunnel; was opened to coal headways, and airways were driven to cut off the distance in haulage.

*Edgerton No. 2* was opened by a water-level tunnel. It is located about two miles northeast of breaker. Coal is hauled by a small locomotive on a three-foot gauge track.

*Eaton Tunnel.*—Drove a heading to surface for manway and ventilation; size of opening, 6'x9'—54 feet.

*Eaton Shaft.*—Sunk a shaft from surface to the present working or "Archbald" vein 162 feet deep; size of opening, 10'x20'—120 feet area.

*Jermyn No. 3.*—Sinking slope; it is down 700 feet; opening 14'x7'—98 feet area; driven on a grade of one in three feet; in place, six new boilers, one pair of hoisting engines, 10'x10', one fan engine, 12'x12", and one pump, and are also building new breaker.

*Mount Pleasant Mines.*—Sinking a second opening from G, or Big vein, to Clark.

*Filer's Slope, now Mount Jessup.*—Have driven slope in coal about 1,000 feet in length.

*Lackawanna Shatt.*—Have placed an endless wire rope about 2,000 feet long in main gangway for haulage; it works satisfactorily; it is cheaper and better than horses or mules.

*Pancoast Shaft.*—Have put in a new set of boilers; have put in Zeigler's patent slate-pickers; have graded slope to a uniform grade for about 1,000 feet; they are using the electric arc light at this colliery and it gives general satisfaction.

*Rushbrook Shatt.*—Have erected a new blacksmith shop, 20'x20', a new powder house, 10'x10', a new barn, 14'x20'; have placed in mine a No. 10 Knowles pump, sunk a second opening to top vein, and have driven headings in top vein going east 350 feet, and in the same vein going west 300 feet; the east heading in bottom vein has been driven 400 feet, and in the same vein going west 125 feet.

*Spencer Shaft.*—Are driving slope in coal northwest of shaft; in middle vein they are down about 800 feet.

Hon. Thomas Waddell is at present opening up a new mine in Winton borough.

*Note.*—The Peakville Coal Company's colliery was idle during the year and did not ship any coal.

The Rushbrook colliery did not ship any coal during 1888.

Bridge colliery was sold and abandoned August 16, 1888.

Shaft No. 2, Penn. Coal Company, located in Dunmore, was abandoned September 1, 1888.

face at shaft and roadbed of tunnel, at which point it is dumped and the coarse coal separated from the fine, the coarse coal to be shipped direct to market and the fine to Bunker Hill breaker. A 90 horse-power engine will be used for hoisting the coal. Three boilers are in place, each 36' long and 30" diameter for the present furnish sufficient steam for hoisting and for one No. 4 Knowls pump at bottom of shaft.

Yours, very respectfully,

JAMES YOUNG,  
*Mine Superintendent.*

*Capouse shaft, Lackawanna Iron and Coal Company.*—Have constructed a new plane between G and Rock veins 369' long; sectional area equal 96 square feet and on an angle of 15°.

*Pine Brook shaft.*—Finished plane 1,500' long; sectional area, 6'x14', equal 84 square feet on a pitch of 15°.

*Clifford shaft.*—Finished one new plane 887' long; sectional area equal 72 square feet on an angle of 6°.

*Forest City mines.*—Finished a new slope 400' long; sectional area, 84 square feet on an angle of 9°.

*Glenwood mines.*—Constructed a slope 400' long; sectional area, 48 square feet on an angle of 14°.

*Keystone tunnel.*—Finished a new plane 1,100' long; sectional area equal 98 square feet on a pitch of 7°.

*Elk Creek drifts.*—Constructed a plane 80' long; sectional area, 5'x16', equal 80 square feet on an angle of 38°.

*Eaton tunnel.*—Extended slope 500 feet; sectional area, 6'x14', equal 84 square feet on a dip of 1 in 9.

*Edgerton Coal Company* is opening a new drift into bottom coal  $1\frac{1}{2}$  miles north of Edgerton No. 2, close to where the old Hendricks breaker stood and on the same tract of land.

*Dolph tunnel.*—Finished plane No. 5, 525' long and on a pitch of 3°; also plane No. 6, 300' long on an angle of 3½°.

*Grassy Island colliery.*—Sunk second opening shaft from Grassy island to Clark vein, a depth of 157' feet; sectional area, 308 square feet; also new air shaft for drift workings and built a new furnace.

*Jermyn No. 3 slope.*—This colliery is located in Dickson City borough about 2,000' northwest of Jermyn shaft No. 4; it consists of a slope and breaker; the slope is sunk. From surface to first vein of coal is 600' and to second vein of coal 800'. It is connected with mine workings of Jermyn No. 4 and is ventilated at present by the fan at Jermyn No. 4. They are sinking a fan shaft northeast from mouth of slope; it is now down about 175'; they are also erecting a fan. The breaker is new and located 200' southeast of slope mouth; it has a capacity of 1,000 ton of coal per day and is furnished with all the modern improvements.

*Lackawanna shaft.*—Finished a plane 300' long; sectional area, 8'x18'

of new hoisting engines, 22x30, have been erected, and 1½-inch ropes, with heavy shieves, placed in shaft. Two new carriages with pneumatic fans have also been placed in the shaft. A road has been graded and built from No. 1 shaft, in Grassy Island vein, a distance of 5,500 feet, to reach certain numbers of pillars from this vein.

At Edgerton, a road 5,250 feet long has been graded and built from what is known as the Edgerton drift to the coal upon the Pierce Coal Co. property. A tunnel is now being driven to reach coal in what is known as the Russell tract, and two planes are now being built to reach this coal.

At Lackawanna colliery eight jigs of the Reading pattern have been placed in the breaker.

#### Hillside Coal and Iron Company's Improvements.

A washery at Clifford breaker has been erected to wash fresh-mined culm, all sizes above birdseye having been taken out. It was started about May 1. The capacity is 300 tons a day.

Forced draft plant with Sturtevant blower, 7x4 feet, to increase the capacity of the Clifford boilers. The blower is capable of furnishing blast for 900 horse-power.

Savory's plane, on the Ontario tract, Clifford mine, 1,500 feet long, 7x14 feet in area, has been finished.

No. 6 plane, on the Ontario tract, Clifford mine, 600 feet long, 7x14 feet, in area.

One hundred horse-power electric hoist, west plane, No. 2 shaft, Forest City. This plane is 1,800 feet long. The hoist has a capacity of 500 loaded cars per day. There are four headings and two lifts. The hoist pulls the loaded cars out of the headings and draws up the empty cars.

A tunnel in No. 2 shaft, Forest City, from the upper split of the shaft vein to the lower split, 750 feet long, 7x10 feet in area. This tunnel is two-thirds completed.

A curved self-acting plane at Glenwood breaker. The plane is 990 feet long, 780 feet of which is in the Archbald seam, and 120 feet on the curve carrying the plane into the rock in an easterly direction toward the small seam above the Archbald, which was reached at a distance of 90 feet after the curve was made. The plane was projected in this way because of the pitch of the two seams. The curve has a radius of 50 feet, and the cars pass around it without difficulty, and I see no reason why it cannot be operated as easily as the ordinary straight line self-acting plane. It is 7x16 feet.

#### Remarks on Accidents.

A few brief notes on fatal accidents, made from actual observations by visiting, for the purpose of investigation, the scene of each one,