The Alden Coal Company.

The Alden colliery is situated near the east end of Newport township, and is a new establishment. The shaft is 11×24 feet area and 225 feet deep to the Bennett vein, which is five feet thick of good coal. They have a tunnel driven from the surface into the Bennett and Baltimore veins; this is 800 feet long, having an area of 7×9 feet. The breaker was nearly completed and ready for occupation at the end of the year.

The Clear Spring Coal Company.

This again is a new coal firm and have opened a colliery in West Pittston which will be ready for operation the beginning of 1883. The shaft is 12½×28 feet and 160 deep, cutting the Seven-foot and Pittston veins. An air-shaft has been sunk also, to which connections are made in both veins. The breaker is ready to commence shipping coal in the beginning of the following year.

The Fuller Coal Company.

This company is sinking two shafts, one for hoisting and the other to comply with the law requiring second opening. The main shaft is 10×34 feet, and will have a probable depth of 250 feet, the air-shaft is located 185 feet from the main one, and has an area of 10×14 feet, is expected to be the same depth as the main one. The breaker, which is now in course of erection, will have a capacity of 1000 tons per day. The hoisting engines will have direct motion, cylinders 34×40 inches, and a conical drum. A fan 14 feet diameter, open periphery, will be erected at once upon the completion of the shafts, and the colliery is expected to be in operation by next June.

The Delaware, Lackawanna and Western Company.

The Woodward shaft, reported in last year's report was down at the close of this year a depth of 300 feet, and has employed about 60 persons. Its size is 10×53 feet, and will have probably a depth of 800 feet when completed. Another shaft has been commenced to constitute a second opening for the Woodward. This is 12×35 feet, and was just begun at the close of this year. I am informed that this shaft will also be utilized to work some of the upper veins. This company has also began preparations to sink a shaft on the Pettibone property, in the center of the valley, a little north of Wilkes-Barre, which is to be 10×35 feet area.

The Hanover Coal Company.

This new colliery is located in Hanover township, south of Sugar Notch, and is leased by this company from Mr. W. Maffitt, of Wilkes-Barre. A breaker is already nearly completed, and a tunnel driven into the Red Ash vein, where the coal is found seven feet thick. They will also work the Ross Seam from a temporary slope, made out of an old chamber driven up from old workings which had crossed the boundary line into this property.

The General Condition of the Mines.

During the year 1883, several new collieries began to operate in this district, swelling the list to an appreciable degree, and increasing the inspection work in the same proportion. The Clear Spring colliery began to send coal through the breaker January 3; the Alden colliery began January 18; the Hanover March 10; the Fuller colliery the last week in August; the Schooley breaker started September 3, and the Hillman vein breaker September 28. Beside these, the new breaker at the Lance colliery started to ship coal June 30, and the new breaker at the Stanton mine September 1. Thus eight new breakers are added to the list of this district for 1883. These new collieries are all equipped with the latest improved colliery-plant, and each is starting the operation of mining in good condition.

The ventilation of the Lance, Stanton, and Fuller collieries is largely in excess of the need of the present workings, and evidently it will continue so for some time. The ventilating systems of the other new collieries have not been completely established yet, but I expect it will be efficient when the contemplated work is accomplished.

In the old collieries, the good condition reported last year is generally maintained. A few instances exist where there is sufficient ground to complain, but even in these a slow progress is being made, and I am promised that a more satisfactory condition will soon be effected.

With the large amount of coal mined at present, the workings underground spread out rapidly, requiring extraordinary care in the manipulation of the air-currents to supply an efficient quantity of ventilation at the face of the workings. This is done remarkably well, considering the difficulties of the work.

Some difficulty is experienced in maintaining an effective discipline, from which laxity accidents frequently arise, causing injuries to the workingmen which might easily be avoided provided the discipline was more effective.

Events Causing Fire-Damp to Accumulate in Collieries.

Great danger exists when a large body of fire-damp accumulates in a coal-mine, and this danger had to be contended with at three of the collieries of this district for several months in 1883. During the first part of January the pillars of a large extent of workings in the Baltimore slope were crushing and showing the usual signs of an approaching cave, and about five o'clock, A. M., January 25, the expected cave transpired, breaking the strata clear through to the surface, and damaging a number of houses. While the pillars were being crushed, all the hitherto occluded gases were suddenly relieved and evolved into the cavities of the mine, causing the atmosphere of a large area of workings to become explosive. At the same time, from the same cause, the second opening of the Conyngham shaft was deranged and made for a while unavailable as an escapage for the latter colliery's workmen in case of emergency. The ventilation of this mine was also affected, so that a large section of the workings became

the language of a statute is clear and unequivocal, without ambiguity or uncertainty, we are to presume that it expresses the intent of the Legislature, and no construction is necessary. It may be that the working of the first and third seams at the same time that the communication was being made in the fifth increases the hazard and risk to those engaged in the work, but this is a matter for legislative action. We cannot make the law.

The decree in this case is, therefore, reversed, and the bill is dismissed at the cost of the appellees.

Messrs. E. P. & J. V. Darling and G. R. Bedford, for appellants.

Messrs. Dickson & Atherton, for appellees.

NEW COLLIERIES AND COLLIERY IMPROVEMENTS MADE DURING 1883.

Clear Spring Coal Company.

This new company entered the field of operation January 3, 1883, when coal was first sent through their newly completed breaker. Their colliery is situated in West Pittston, at the extreme eastern end of this inspection district. The hoisting shaft is 28′×12′ area, and one hundred and sixty feet deep to the Pittston vein. The air-shaft is 12′×12′ area, and sunk to the same depth. The Seven-Foot and Pittston seams are both being mined, and during this year one hundred and one thousand tons of coal were supplied to the market. A slope was driven to work the coal below shaft level to a length of four hundred feet, which has also been in operation for several months. The mine is ventilated by a Dawson fan, with open periphery, producing a ventilation of sixty thousand cubic feet per minute. The roof or top over the Seven-Foot seam is a very brittle, unreliable shale, dangerous and requiring careful mining, in addition to an unusual number of props to secure safety. The colliery is equipped with good machinery and an efficient breaker, having all the requirements of the law fully complied with.

Alden Coal Company.

This is another new establishment, which began to mine and ship coal to market January 18, 1883. Their colliery is located in Newport township, and they are mining the Forge and Twin seams. The shaft is 26′×12′ in size, and is sunk to a depth of two hundred and seventy-one feet to the Twin vein. A tunnel 7′×9′ is driven on a level with the breaker-dump from the surface through the Forge, Twin, and into the Ross seams, and the second opening of shaft is in this tunnel. The mine is ventilated by a fifteen-foot Guibal fan; but this is hardly adequate to produce an effective ventilation of both shaft and tunnel workings.

The capacity of the breaker is about eight hundred tons per day, but the mine is not yet opened so as to ship that quantity. They mined ninety-one thousand four hundred and seventeen tons in 1883, and are increasing their productive capacity rapidly.

Hanover Coal Company.

The Maffit colliery of this company started to mine coal March 10, 1883,

split of the Baltimore vein to top split, length 90 feet, to be used for transporting coal.

Butler Coal Company.

At the Mosier colliery, a new shaft was sunk to the Red Ash seam, a distance of 375 feet, sectional area, 120 feet, to be used as a second opening to the Mosier shaft.

Waddell & Walters.

At the Bennett colliery they have extended the old slope in the top split of the Baltimore vein 520 feet.

At the Raubville colliery, the second opening has been completed a distance of 2,000 feet, sectional area, 60 feet, to a drift on the mountain. They have placed a new fan, 16 feet in diameter, in position in the opening, with direct gearing working speed of 45 revolutions per minute. Amount of air exhaused, 50,000 cubic feet per minute. A new Pale pump was put in with 8-foot stroke, 14-inch working barrel, also three new steel boilers, 40×45 feet, and a pair of first-motion engines with conical drum on their hoisting shaft.

Clear Spring Coal Company.

At the Clear Spring colliery, a new inside slope was sunk in the Pittston vein, a distance of 500 feet, sectional area, 126 feet, with a grade of 10 degrees.

Elliott, McClure & Co.

The Sibly breaker of Elliott & McClure was burned down on the morning of February 6, 1886. They immediately rebuilt, and started their new breaker on July 20, 1886.

State Line and Sullivan Railroad Company.

At the Bernice colliery, Sullivan county, a new shaft was sunk to the vein now working, a distance of 69 feet, sectional area, 120 feet. They are going to place a fan on this shaft for ventilation to take the place of a furnace which does not give satisfaction. A tunnel was driven 604 feet from the bottom seam to top seam for transporting coal.

W. G. Payne & Co.

At the East Boston colliery, a tunnel was driven from the Red Ash to the Ross seam, a distance of 457 feet, sectional area, 84 feet. This tunnel opens a large territory of good coal for this company.

Wyoming Valley Coal Company.

The Forty Fort breaker of this company was burned down in 1885. The coal was taken to their Harry E breaker, about one mile distant, until the breaker could be rebuilt, which work was started immediately and finished July 25, 1886.

Miscellaneous Coal Companies.

At the Steven's colliery a new Guibal fan 20 feet in diameter was erected on the air shaft connected directly to the crank of the fan· all the connections to the fan are not completed at this writing.

At the Avoca colliery a new fan 12 feet in diameter was erected on the air shaft which ventilates both seams in the shaft and does away with the furnace which ventilated the bottom vein.

At the clear Spring colliery a new Guibal fan 20 feet in diameter has been erected on the air shaft taking the place of the old Dawson fan which has been abandoned. This fan increases the quantity of air considerably.

At the "William A" colliery two new shafts have been sunk from the surface to the Red Ash seam, a depth of 164 feet by William A. Connell Sons and on the west side of the Lackawanna river in Old Forge township, Lackawanna county.

The hoisting shaft is 16½x11. The other shaft which is used for hoisting and lowering men and for ventilation is 27x11 feet area. A new Guibal fan 17 feet in diameter has been erected on the air shaft.

A new breaker has been built and supplied with first-class machinery for cleaning and preparing a large output of coal; the capacity of breaker is about 1,000 tons per day. It was started to prepare and ship coal in the month of May, 1890. The machinery in and around the breaker is properly fenced or boxed off for the safety of the employes.

The Babylon Coal Company, operated by Simpson, Watkins & Co., has opened up a new colliery on the west side of the Lackawanna river, opposite the town of Duryea. The openings consist of two shafts sunk to Red Ash seam, a depth of 289 feet. The hoisting shaft is 12x16, the other shaft is used for an air shaft and for hoisting and lowering the men; it is 12x18. A new fan has been erected on this shaft 20 feet in diameter which supplies the workings with a large quantity of air. A new breaker has been erected which is a large and commodious structure with a capacity of 1,200 tons per day. It is heated throughout with steam. It was started to prepare coal for market in the month of July, 1890. An inside rock tunnel was driven from the 5-foot to the 6-foot seam, a distance of 100 feet; sectional area 12x7.

Jermyn & Co. have opened a new colliery close to the town of Old Forge in Lackawanna county. The openings consist of two shafts sunk from the surface to the Red Ash seam, a depth of 236 feet. A new fan 18 feet in diameter has been erected on the air shaft, which supplies the workingmen with a large quantity of fresh air.

A new breaker has been built and supplied with the latest improved machinery for cleaning and preparing coal for market. Its capacity is about 800 tons per day. It started to prepare and ship coal in the month of July, 1890.

Hillside Coal and Iron Company.

This company has sunk a new shaft 12×26 feet on their land southeast of Avoca. The sinking was started in March, 1892, but not being pressed for coal, it was abandoned until May, when the sinking was commenced in earnest and the shaft sunk to the Red Ash seam, a depth of 168 feet, by September 1st. The second opening has been completed connecting with the workings of the Elmwood shaft of the Florence Coal Company. The coal is taken to the Consolidated breaker by a small locomotive over two miles of road.

Avoca Coal Company.

A new fan 12 feet in diameter has been erected on the air shaft of this company, which exhausts 55,000 cubic feet of air with 4 inches water gauge running 120 revolutions per minute, driven by a 20-horse power engine.

Robertson and Laws Colliery.

At the Katydid colliery, two new slopes were sunk from the surface on the Stark seam, a distance of 314 feet, area 6×10 feet on a grade of 8 degrees. The coal is taken 24,000 feet to the breaker by a small locomotive.

Bennett Colliery.

A shaft 8×10 feet was sunk to the Baltimore seam, a distance of 60 feet, as a means of escape for the men who were taking out the pillars at the farthest part of the workings, in case of a sudden caving of the roof.

Annora Coal Company.

A rock tunnel was driven from the upper to the lower split of the Red-Ash seam; area 7×12 feet, a distance of 300 feet. A shaft was also sunk to air the same between the splits, a distance of 20 feet; area 10×12 feet.

Clear Spring Coal Company.

A new Guibal fan twenty feet in diameter was erected on the air shaft to ventilate the workings of the Red Ash seam, driven by a vertical engine cylinder 16×30 inches.

Morning Star Colliery.

A rock tunnel was driven from the Bennett seam to the Ross, a distance of 275 feet; area, 84 feet. A new fan twelve feet in diameter was erected to ventilate the workings, exhasting 45,000 cubic feet of air per minute, driven by a horizontal engine, cylinder 10×20 inches.

Old Forge Coal Company, Limited.

In the Columbia shaft a rock tunnel was driven from the third to the fourth vein, a distance of 90 feet. Sectional area, 98 feet. To be used for transportation of coal.

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.

Installed fire-pump in our new shaft buildings.

Completed bridge for our railroad track over Carpenter's Creek.

Built sand drying house 10 feet x 16 feet.

Built engine house 15 feet x 24 feet x 10 feet high for locomotives.

Put in concrete retaining walls 2½x8 feet x 99 feet long, at mouth of main slope, in place of the wooden cribbing that has heretofore been in use.

Drove 1,100 feet of new road, to connect new shaft to west gangway road.

Drove 240 feet of rock tunnel 8 feet x 12 feet for new road in Red Ash to face of 5th vein workings.

A slope 360 feet long at the inside end of new road was driven to the coal left in dip south of new road, and a 60 H. P. engine installed to operate this slope.

Installed electric haulage 300 feet long, with 8½ ton motor. This road is lighted with electric lamps.

Made second opening to Ross vein, same being the rock tunnel, crossing measures to the Marcey vein, size 8x12 feet.

CLEAR SPRING COAL COMPANY

Clear Spring Colliery.—They installed a 115 K. W. electric machine and engine, and are at present using the current for drilling inside. They intend installing two electric locomotives at an early date to be used in their small vein, viz: Marcey vein.

W. G. PAYNE COAL COMPANY

A new 16x24x15¼x18 inch Ingersoll-Sergeant air compressor, complete, has been installed alongside of the one already in use in a new engine house 16x44 built on concrete walls and foundation.

A new outside hospital for the mine stock, furnished with water and heat, was built during the year.

Air compressor pipe line running from the compressor down the shaft was increased in size from 8 to 10 inches.

There was a tunnel driven in the Eleven Foot vein through a roll 60 feet over all so as to get at the vein beyond.

Owing to the high percentage of acid in the mine water they changed all the Bennett pumps during the past year from cast iron to bronze. They also installed a new No. 10 Knowles pump in the Red Ash s'ope; also a new No. 9 Knowles pump installed at the same station.

There has been a new plane built 260 feet long used for conveying culm from the culm bank into the washery, in connection with a 90 foot swinging conveyor.

RAUB COAL COMPANY

Louise Colliery.—A tunnel, 106 feet long was driven from top Ross to bottom split of same vein in the Mt. Thomas drift, cutting the vein in good shape on the other side of fault.

A new air shaft, 6x6 feet, was sunk from surface on mountain

CLEAR SPRING COAL COMPANY

Clear Spring Colliery.—New plane connecting the two splits in the Marcy vein and the installation of one new 325 horse power Sterling boiler.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone Colliery.—Work of retimbering both shafts has been completed from surface to Red Ash vein. The erection of a brick partition separating hoistway and airway in No. 1 shaft, is now completed. Ventilation has been very materially improved by the installation of this partition.

Two rock tunnels have been driven from Hillman to Kidney vein, south of No. 1 shaft, one for haulage and development purposes, and the other for ventilation and second opening.

This colliery is now in operation after being idle on account of repairs to these shafts since August 16, 1909.

PLYMOUTH COAL COMPANY

Black Diamond Colliery.—One new rock plane 19 degrees pitch, from Cooper vein to Lance vein, on the south, east end, and one new rock tunnel from Cooper vein to Lance vein, on the south, west side of the property. Sinking a slope in Lance vein inside of this tunnel with one pair of 10 by 12 Bangor engines.

MINE FOREMEN'S EXAMINATIONS

The examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in Kingston, April 19 and 20th. The Board of Examiners was composed of the following: P. M. Boyle, Inspector, Kingston; James J. McCarthy, Luzerne; Harry Jones, Wyoming, and Edward Carlin, Luzerne.

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

Mine Foremen

John R. Owens, Westmoor; William H. Davies, Wyoming; George Davies, West Pittston; William D. Thomas, Edwardsville; Alfred H. Gibbs, Forty Fort; William Rowley, Luzerne; M. J. Cunningham, Wilkes-Barre; John Mellow, Wyoming; David Walsh, Swoyersville; M. J. Brady, Luzerne; George D. Lewis, Forty Fort; John T. Jones, Edwardsville; Jacob F. Miller, Maltby; Anthony Gallagher, Pittston, and Albert Edwin Thomas, Edwardsville.

Assistant Mine Foremen

William F. Taylor, Wyoming; M. H. Corrigan, Luzerne; Isidore Hochriter, Luzerne; Jacob Rosnick, Jr., Luzerne; John R. Thomas, Luzerne, Michael Kelly, Wyoming; John L. Williams, West Pittston; David Richards, West Pittston; Martin Tigue, Exeter; John Hosey, Forty Fort; James Donaldson, Avoca; William J. Costello, Kingston; John E. Dworske, Wyoming, and Samuel Booth, Wyoming.