

No. 26.—Inspected November 7, 1870.

Description.—Hein & Glasmire's New Philadelphia colliery, situate east of that place, on the estate of the Valley Furnace company. It consists of a shaft sunk 100 yards deep on the north dip of the Gate vein. The section area of the shaft is $6 \times 16 = 96$ square feet, working only one cage. The pumps are located in the shaft and partitioned off; a 40-horse engine is used to both hoist and pump with. **This colliery was, unfortunately, the scene of a disastrous accident, on the 10th of last August, by which 9 men lost their lives**; but the coroner's jury in this case rendered a verdict exonerating the operators from blame. This unhappy affair caused the death of 9 men, 6 of whom left widows and 26 orphans. The three others that were injured recovered. The accident occurred by the breaking of a driving-wheel. The drum, having no brake, yielded to the weight of the rope, cage and 12 men, the force of descent being so great that the building was shattered and the machinery removed, the cage breaking through the sump cover, carrying with it in its descent the 12 men, which were instantly covered with water and in this condition held down by the coils of the shaft rope. The circumstances of the operators was such that they could not, from their sources of revenue, keep the place in that style of safety that is required by law, but are doing all they can do for better ventilation and safety of their hands.

Gangways.—The west gangway is open in 400 yards, of an area of 33 square feet section, working 1 breast and 12 men. The east gangway is open in 400 yards, of a like area, with 18 men in it. The character of work done is driving gangway and breastwork, and is considered safe were it not for gas.

Ventilation.—A 6-horse steam fan assists to ventilate this mine. Its diameter is 6 feet and condition but temporary. The shaft is used as a down-cast, the air split into both gangways, a narrow air-hole on the west side, which is used for an out-let and air-hole. The air is passed in the gangways to their face, thence back through the breast to an air-way. Both these air-ways are 30 yards from the gangway face. I have given instructions for remedying the bad air, as gas accumulates very fast and safety lamps are necessary to be used, and the requisite improvements are to be at once commenced.

Engines.—A 40-horse shaft and pumping engine in use, a 20-horse breaker and a 6-horse steam fan engine, with 4 boilers. Their condition is not known, as they are second-hand boilers and appear to be long in use. The character of the engines, machinery, wire ropes and tackle is not as satisfactory as that required by law, but preparations are now on foot to improve the condition of things so as to give satisfaction.

Remarks.—I have carefully inspected the mines and found their condition to need some improvement. I directed a second out-let to be commenced forthwith, with three shifts of hands to drive the gangway eastward to a point where a permanent pillar be left, and in its centre open an out-let to the surface, and have it well stepped for the men to travel in; and a like one on the west side. I have instructed the boss and men in their duties, as regards riding in the shaft and working amongst gas, &c., and in the other needful improvements inside and outside, which are proper and necessary, and to improve the condition of the air as is required. Some 65 hands are employed, with a shipment of some 15 cars per day.

The temperature outside was 56° , do. inside 54° —difference, 2° , against natural ventilation, with the fan even in operation; by the barometer at $29\frac{2}{10}$ inches outside and $29\frac{5}{10}$ inside, indicating $\frac{3}{10}$ of choke damp in the

air. Part of the mine was poorly ventilated whilst in another district it was fair. My attention will be directed to this colliery until proper ventilation is established.

No. 27.—*Inspected November 6, 1870.*

Description.—Abraham Focht's Warrington colliery, situate near New Philadelphia, on the estate of Gideon, Bast and others. This colliery consists of three slope openings on the Holmes vein. No. 1 and No. 3 slopes are sunk on the south dip of 50° , and No. 2 slope is sunk on its north dip at an angle of 65° . No 1 slope is nearly worked out and is to be henceforth used as a pumping slope, and No. 2 slope is also nearly exhausted of coal; and a further description of them is unnecessary at present. The No. 3 or new slope is 810 feet deep, some 60 yards west of the No. 1 slope, which is 310 feet deep; the No. 2 slope is 810 feet deep. These slopes are sunk on the anticlinal of the coal seam, so the buildings are grouped together, and for advantageous purposes. A new tunnel is driven north 82 from the slope 178 yards, to what is claimed to be the E or Mammoth vein. In this new tunnel the Seven Feet vein was struck 114 yards from its mouth, and the E or Mammoth vein struck at 65 yards north of it; in this distance the seam passed over a saddle and abruptly dipped south and north. The vein was just discovered but not fully developed.

The Seven Feet vein is open in gangways east and west, each of a section area of $64\frac{1}{2}$ square feet. The character of workmanship done in the mines and new slope gives evidence of skill and durability. Mr. William Herman is superintendent for owners, assisted by Patrick Doyle, as boss miner.

Gangways.—There are at present 4 gangways open, 2 on the Holmes and 2 on the Seven Feet veins; and the character of mining doing is extensions of gangways and tunnelling, which is a safe operation.

Ventilation.—This is effected by air-holes at present, until the character of the E vein is once permanently established; then a 20-horse steam fan will be employed and permanent air-courses established for that purpose, so as to insure a safe ventilation for the future of the colliery. By measurement I found the complement of air to be satisfactory and double the quantum required by law.

Engines.—A 60-horse hoisting engine in the new slope with 8 good boilers; a 150-horse pumping steam engine of two 16-inch columns, and a pole pump of a 28-inch barrel in the north slope, with 9 good boilers; a 60-horse hoisting and an 80-horse pumping engine in the old slope, of two 16-inch columns, and a 25-horse breaker engine, with 3 boilers; 5 engines of an aggregate power of 375-horse, with 20 boilers, and 1,800 feet of $1\frac{3}{8}$ inch or 40 tons ropes, and 650 feet of $1\frac{1}{2}$ inch or 35 tons ropes, and 829 feet of $1\frac{1}{4}$ inch or $27\frac{1}{4}$ tons rope. Their tackle and appearance is good.

Remarks.—5 veins can be worked east and west in this colliery, i. e. first the Primrose, the Holmes, the Seven Feet, the Mammoth and Skidmore veins; there are other veins of less note which at present claims little attention. The engines, boilers, machinery and slope tackle belonging to each of these slopes and breaker are all in excellent order and well conditioned, and its future prospects are very encouraging to both land-owners, operator and the community at large. As the sinking of this slope and driving of the tunnel was considered a doubtful operation—by some to be a futile undertaking—yet the proofs which accurate surveys gave of the