THE SNEYD COLLIERY AND BRICKWORKS.

The No. 1, or upcast, shaft is 12 feet in diameter and 1,836 feet deep to the return air-cruts. The No. 2, or downcast and winding shaft, is sunk to the depth of 1,864 feet to the insetts, whence cruts pass east and west to six coal-seams:—the mossfield, yard, and main coal-seams on the west, and the bowling alley, holley lane, and hard mine coal-seams on the east. The holley lane and yard coal-seams, each 3 feet thick, are worked by the spunney system, recently described by Mr. John Heath.* The No. 3 downcast and winding shaft is 1,140 feet deep, and communicates with the burnwood, mossfield, two-feet, and seven-feet coal-seams.

The No. 2 winding engine has two horizontal cylinders, each 36 inches in diameter and 6 feet stroke, fitted with Melling steam reversing-gear and Woodworth automatic progressive cut-off gearing. The

cylindrical drums are 21 feet in diameter and 7\(\frac{2}{3}\) feet wide. The engine is capable of raising 1,200 tons from the depth of 1,864 feet in 8 hours.

The No. 8 winding engine has two horizontal cylinders, each 16 inches in diameter by 4 feet stroke, and is capable of winding 800 tons in 8 hours from the depth of 1,140 feet, owing to the use of the Kröpe system of winding.

Locked lamps of Mueseler type (bonneted) are used, adapted to burn petroleum by the Heath and Frost petroleum-burner for safety-lamps, the cost being only about half that of prepared colza oil and the light much better. About 1,200 lamps are in use at the colliery.

Tonite is the explosive used, surrounded by a gelatinous cartridge, the contents of which are liquefied by the explosion, thus destroying any flame or fumes that might otherwise arise. The shots are lighted by the Heath and Frost shot-firing lamp, by which the fuze is ignited in a completely closed chamber.

Four shaker-screens of the bar type are in operation at the truck-sidings, and a picking-band by which the coal is carefully sorted. Heath and Woodworth through-way end-tipplers are used; these, with the elevator, screens, and picking-bands, are driven by an horizontal engine with two cylinders, each 8 inches in diameter.

The trucks, when loaded, gravitate from the screens to the sidings, the gradient being 1 in 30. A stationary hauling-engine with two cylinders 12 inches in diameter by 4 feet stroke, fitted with a drum 10 feet in diameter and geared 5 to 1, is used to bring the empty trucks to the screens. The sidings are connected with the North Staffordshire Railway Company's loop line.

Steam is generated in six Lancashire boilers, each 30 feet long and 7 feet in diameter, and two elephant boilers, all worked at a pressure of 90 lbs. per square inch.

The head-gear (56 feet high) of the No. 2 shaft is made of steel H girders.

There are three underground hauling-engines, driven by steam generated in underground boilers. The furnaces and the exhaust steam of the underground engines produce a ventilating current of 100,000 cubic feet of air per minute, under a depression of 1 4 inches of water in No. 2 pit, and of 68,000 cubic feet of air per minute under a depression of 1 inch of water in No. 3 pit.

The surface-haulage, on an incline 1,800 feet long, is worked by means of an electric motor of 3 horse-power, and nine coal-tipplers at the land-sale wharf are driven by another motor of 1 horse-power.
The electric plant includes two dynamos of 15½ kilowatts each, driven by two horizontal engines.

There are four dip pumps and one shaft pump. The latter pump, placed at the bottom of the No. 3 shaft, has a steam cylinder 26 inches in diameter by 4 feet stroke, and works a double-acting ram-pump 7 inches in diameter. These pumps and the water-tanks control the whole of the water.