

manager, Mr. McIntosh, was making bricks for permanent stoppings; which, however, he does not appear to have used, as I hear that the fire has again broken out.

The system of ventilation adopted was that of leading the air in one body through the workings. The downcast air is taken by the incline plane, thence, spreading through the workings, it is taken to a small air-shaft placed to the rise of the measures, thus giving a natural current, which works fairly. At times, however, the air all but balances, owing to the quantity of black damp emitted from the area on fire fouling the main upcast air-course. This could be overcome by giving less spread to the air, and confining its course more to the working-faces.

Very little timbering has been found necessary in this mine, but what is used is amply strong, and is in no way stinted where necessary. The following is the sequence of the measures:—

							Ft. in.	Ft. in.
Surface ...	...	...	...	...	...	...	...	...
Soft yellow sandstone	...	...	...	...	...	...	...	...
Shale ...	...	...	...	...	...	...	1	0
Coal ...	...	...	...	...	...	...	3	10
Shale ...	...	...	...	...	...	...	4	0
Coal ...	...	...	...	...	...	...	1	0
Fireclay ...	...	...	...	...	...	...	0	6
Coal ...	...	...	...	...	...	...	8	0
							—	18 4

Dip, N.E., 1 in $3\frac{1}{2}$.

As a general rule, 6 feet only of the lower part of the lower seam is worked, leaving a thickness of 1 foot to 2 feet overhead, but in some instances a greater thickness is won, the shale and fireclay being used for walling-up.

Since writing the above, I have visited the mine, and find that all the old workings have had to be closed, in consequence of the fire breaking out afresh, the shale stoppings having proved inefficient for their work. A dip drive has since been entered, and the coal struck, so that mining operations are again resumed; but great expense has been incurred and a considerable loss sustained by the company, in consequence of sufficient precautions not having been taken in the first instance to keep the fire under. A shaft is also being sunk to the dip, but at the time of my visit the coal had not been struck.

The Wallsend Colliery, Greymouth, has only been at work for two months, the output to date being 440 tons. The system adopted is that of ordinary square work, and at the date of survey, 25th February, 1878, the workings consisted of two levels breaking off north and south from the shaft, with two headings bearing east. The north level is driven about 200 links towards the river, while that to the south is driven a distance of 100 links, the headings being about 60 links in length.

The levels and headings are driven of a uniform height of 8 feet in the upper part of the coal, but are working down at a slight angle with the coal, in order to gain the floor as the workings advance, which would then be kept, all drives being of a uniform height of 8 feet, and the bords or stalls 8 yards, wide, the total thickness of 16 feet being taken out. These would be large bords to remove, but, in view of the good roof and the dimensions of the pillars, 10 yards x 20 yards, it is not probable that the safety of the mine will be impaired by this, if good substantial shaft-pillars be left. The shaft is circular, 11 feet diameter, lined with brick laid in cement for a depth of 28 feet from the surface, and is bratticed off in three divisions, as follows:—

							Ft. in.
Winding space for two cages	...	...	...	...	...	...	7 6
Space for pumps	...	...	...	...	...	...	2 6

these two divisions being used jointly for the downcast air-current, the remaining space being used as an upcast air-course, connecting, at a depth of 16 feet from the surface, with a small shaft from the surface, at the mouth of which is erected a 15-foot fan, and which it is proposed to drive with a small portable engine. The coal being found to emit a large proportion of gas, it has been found necessary to erect this fan in order to procure the necessary ventilation, and by this means a good current should be obtained so soon as the first bord is broken through; in the meantime the air is led to the working faces by means of temporary screens along the centres of the drives. The foulness of the air has, up to the present time, necessitated the exclusive use of safety-lamps, but when a reliable ventilating current is obtained in the manner just mentioned it will in all probability be found to be perfectly safe to work with naked lights.

Pumps are necessarily used here, 10-inch pipes being employed, the height of the column being 670 feet, consisting of a lower lift of 270 feet to lodgment, worked by a bucket-lift, the upper lift of 400 feet being worked by plunger-pumps.

The winding-gear consists of 2 cages hung on a new $3\frac{1}{2}$ -inch Newall's steel wire rope, the power employed being a 40 horse-power horizontal engine used for pumping and winding.

No timber has as yet been required for these underground workings.

The general condition and repairs of the colliery appear to be in every way satisfactory, and the workmanship is in all cases of the best, due attention being paid both to the strength and quality of the material.

The Coal Pit Heath Mine.—This colliery has only been at work for 10 months; the levels, headings and bords are, however, well driven and well broken off. The full thickness of the coal is wrought out in the bords, while in the headings and levels 10 feet of the upper part of the seam only is worked. The mine has recently been handed over to a new manager, who has begun to take up the bottom coal in the headings and levels, leaving from 1 to 2 feet of coal under foot. The air in the workings is somewhat defective, but when the erection of a few screens, which is about to be undertaken, is completed a good current should be led in to the face. The downcast air is taken by the working shaft and allowed to spread through the workings, the upcast air being discharged by a 6 feet diameter circular