CAVE HILL IMPROVEMENTS.

THE STONE CRUSHER.

It is now close upon 30 years since Mr David Mitchell first opened up his lime quarries at Cave Hill, Lilydale. The quarry was then in its infancy, but since that time, under the wise direction of the owner, it has developed into one of the foremost industries of its kind in the state. The quarry itself has been enormously enlarged, and several other important branches of industry have been established on the estate, to the evident benefit and advantage of the township and the district generally.

The most recent addition to the establishment is an up to-date stone crushing plant, the erection of which was completed on Monday, and, by the courtesy of Mr Charlie Mitchell, our representative was enabled to view the machinery in full working order.

Right through the limestone in the quarry there runs a seam of what is known as "bastard" stone, a kind of bluestone or granite, which has always to be carefully separated from the limestone before the latter is deposited in the kilns. Thousands of yards of this stone, the accumulation of years, lie in the vicinity of the quarry, and now it is to be converted by the crusher into metal which will be utilised in the construction of Monier pipes and also by shire councils for road making and repairing. When it is mentioned that the plant, complete, incurred an outlay of £600, and that it will give practically constant employment to several men, besides carters, the significance of the undertaking will be appreciated. The machinery, which has been constructed by Messrs Jaques Brothers, of Coppin-street, Richmond, and was erected by Mr A. G. Goodwin, one of their engineers, under the supervision of Mr C. Mitchell, consists of the crushing machine and a large circular screen, perforated so that the stone riddled through it into the hoppers below is of uniform sizes :—½ inch, 1 inch, 1½ inch, and 3 inch. The crusher, which weighs 6 tons, is driven by a 10 h.p. portable engine, and is similar to those now generally used by the city corporations. The crushing parts consist of two serrated jaws, one of which is stationary, whilst the other works upon an adjustable block in a horizontal position. The range of the movement of this jaw at the point of contact with the stationary block is very small, but it is adjusted so that when contracted against its coadjutor, the stones fed in at its mouth are easily fractured and crushed. On passing between the crusher, the metal drops over a shoot into an elevator, 38 feet in length, which raises it a height of 15 feet and delivers into the revolving screen. The screen is placed in a slanting position, so that the stone is kept continuously moving from one end to the other. The metal passes through the perforations in this arrangement into the hoppers constructed below to receive it according to the various guages to which it is broken, and is afterwards discharged through shoots into trucks on the railway line below. Trap doors are also provided so that the metal can be conveniently loaded into drays. At high speed the wheels of the crusher make 400 revolutions per minute, and the elevator runs at 30 feet per minute. The output will be about 50 yards per day, but the plant is capable of much larger quantities than that when in full going order. Already a number of large orders are coming to hand, one of which is from the Munawading shire council for 3,000 yards. The plant is under the general supervision of the manager of the quarry, Mr Fuller.

It might be added in conclusion that the building in which the apparatus is housed is built of the best Warburton sawn timber, upon a solid concrete foundation.

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