The Newcastle Brewery.

(Pilot of Saturday.)

For some time past Messrs. Wood Brothers, of this city, conjointly with Messrs. Proctor and Fitzgerald, the well-known proprietors of the Castlemaine Brewery, Sydney, have been engaged in the erection of the first brewery yet established in the Newcastle district, situated at the junction of the Hamilton and Maitland roads. Like wise men, the enterprising proprietors satisfied themselves of the quality of the water by subjecting to chemical analysis before deciding on their project: That the tests were most satisfactory we can at least well understand; for, of course, the water at Hamilton is always held in high repute for its purity, which is accounted for by the circumstance that it is conserved in a basin of clay, after having percolated through a natural filter formed by the sand, which is many feet deep from the surface.

Having mentioned the superior quality of the water, we can hardly do better in describing the brewery than take as a starting point the means by which the supply of water is obtained. In the first instance, an Abysinian or tube well (the first experiment of the kind made in the district) was sunk through the sand to decide how deep it would be safe to sink a well properly, with a view to the avoidance of the least indication of brackish water. At a depth of about 18 feet, the water was proved to be as fresh as at the surface, so the sinking of the permanent well was proceeded with. To dig into the sand for such a purpose, is, of course, no easy matter, and it was found necessary to build on a strong drum constructed of Kauri timber. This drum having been first lined with bricks was gradually caused to sink by its own weight, as the sand within it was removed, and when the drum sunk below the ground surface at once, the course of bricks were built on its edge, adding, of course, naturally to the weight and thereby assisting the downward progress. The well, as now finished, is 8 feet in diameter and 16 feet deep. Notwithstanding the exceedingly dry season, there is now more liquid than 5 feet, or 1000 gallons of water therein, and as quick does the water “make” that in building the well it was found impossible to sink lower than the depth mentioned, although it was attempted by the aid of a very powerful lift pump. The quantity of water contained in the well, however, conveys no idea of the arrangements for conserving water in the brewery, which are very extensive, and equal in capacity to about 5000 gallons. As the vessels containing this large quantity of water are placed at the top of the building (being filled from the well by pumping machinery), it will be readily understood what an abundant supply of the useful element is always on hand to be applied for beer making, cleansing purposes, or even to extinguishing fires (should such unfortunately occur) with the greatest facility.

The brewery building itself is formed by a central tower nearly square, with two wings at right angles running east and west. The tower is 27 feet by 30 feet in breadth, and is 62 feet high. The wings are each 50 long, 20 feet broad, and 33 feet high to ridge of roof. In front of the building, sheltering the lower part of the tower and a broad platform giving access thereto, is a verandah, chiefly designed to protect casks of beer awaiting transit from the weather. The platform is raised sufficiently above road level to make the loading of drays as labour-saving as possible, and communication with the interior of the building is arranged with similar intent.

In the rear of the main building is the engine-house, and the department for cask cleaning. The machinery (supplied by Messrs. Moyes and Donald), comprises a 16-horse p. horizontal engine; boiler, 20 feet long and 6 feet in diameter; and two pumps (one with a separate steam chest), which are made use of for lifting water from the well and forcing it up into the tank at the top of the tower. The plan for cleansing the empty casks is most perfect in effect, although simple in action, and consists of hot and cold water-pipes, rising vertically from the ground, and discharging fluid being forced upwards into the casks through hose-headed nozzles. After washing, the casks are turned downwards to drain; and to assist this process, four brick and cement alleys are sunk in the floor-way, and they are capable of accommodating at least 200 hogsheads at one time.

Touching the construction of the buildings, it may be mentioned that the foundations are of Waratah and Sydney stone, the bottom course being 4 feet broad. The walls are of brick; the tower portion 22½ in. thick up to first floor, and reduced for the succeeding floors to 14 inches. The wing walls are 14 in. up to first floor, and 9 in with 14 in. piers in continuation. Both tower and wings have numerous window openings, for light and ventilation. All the windows in the towers are fitted with sliding louvres, and some in the wings also. The general appearance of the building is assisted by the finish of the roof of the tower, it having dormer louvred windows on each side, and being surmounted by a lantern and vane.

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The ventilation of the interior of the building has been carefully attended to. The cellars on the ground floor of each wing are floored with chequered tiles, and provided with efficient and quick means of drainage, so that they may easily be kept clean and sweet. Each wing has an upper floor, and the tower four floors. At the very top of the tower in the lantern are two 400-gallon tanks, always kept full of water from the well already described. On the fourth floor are placed two immense water boilers, the contents being heated by steam for brewing purposes. On the third floor are four 400-gallon tanks (also kept supplied with water from the well); the mash tun and the upper part of the "wort" tun or boiler, the latter being a most capacious vessel capable of holding 45 hogsheads of liquor. [A description of the process of brewing follows. It contains nothing new; but shows evidently the most complete arrangements for brewing good beer.]

In connection with the steam machinery mentioned, shafting is being erected in the building for working the malt mill, the "elevator," a powerful American hoist, and other matters. No expense would appear to have been spared in having every appliance necessary for carrying on the business of brewing in the most effective manner. The system of pipes for hot and cold water which run through the building is alone marvellous. Even tell-tales to show the height of water in the tanks, and pneumatic speaking tubes for communicating in different parts of the building have not been forgotten.

When we visited the Brewery on Thursday, the first brew was under way, and we believe that Mr. Fitzgerald had no cause to be dissatis-

fed with the result; but very shortly we hope to hear of the brewery being in full work and the beer in request, which we have not the slightest doubt it will deserve. What a triumph for the district should our local brewery be the means of sweeping away the prejudice which still obtains in some directions against colonial beer.

It has been already mentioned that Messrs. Moyes and Donald supplied the steam machinery. The plans for the building were originally drawn by a practical brewer, and with some modifications of the original design, the work has been carried out under the able supervision of Mr. Hodgson, who is superintending the erection of Messrs. Woods' new store in Bolton-street. The builders' contract for the brewery was originally taken by Messrs. Lang and Wylie, and they sublet the brickwork and masonry to Mr. Thomas Smith.