"The Freestone Quarries at Pyrmont, Sydney, New South Wales"

(Australia)

In Scientific American Supplement, Vol. XVII, No. 427 New York, March 8, 1884



Scientific American Supplement, Vol. XVII., No. 427. Scientific American, established 1845.

NEW YORK, MARCH 8, 1884.

Scientific American Supplement, \$5 a year.
Scientific American and Supplement, \$7 a year.

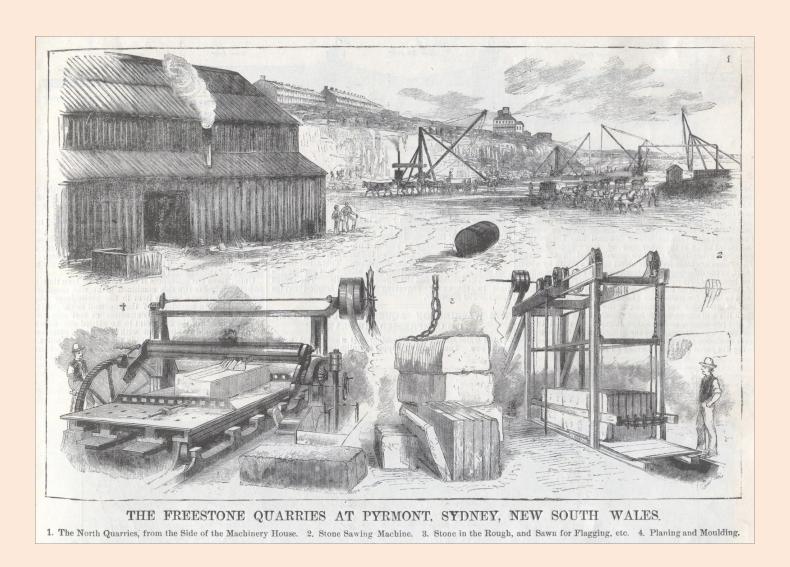
This article, which begins on the next page, is presented on the Stone Quarries and Beyond web site.

http://quarriesandbeyond.org/

Peggy B. Perazzo Email: pbperazzo@comcast.net July 2013

"The Freestone Quarries at Pyrmont, Sydney New South Wales" (Australia)

In Scientific American Supplement, Vol. XVII, No. 427 New York, March 8, 1884



Stone Quarrying at Sydney.

"The illustrations in this issue will afford those who have not the opportunity for witnessing the works, some idea of the immense development of stone quarrying at Pyrmont. The streets of Sydney, and many of the towns of this and the neighboring colonies, bear evidence of the substantial beauty and durability of Pyrmont stone. The quarries illustrated are those of Mr. Robert Saunders, who has shown marked skill and enterprise in developing this business. His operations are carried on at three different quarries of Pyrmont and Ultimo. Some of the works have been in operation more than 30 years, others have been opened out by Mr. Saunders during the last five or six years. At the present time he employs over 100 men and among them being

the remarkably fine teams of powerful mottled grays (stallions) seen drawing the immense blocks of brown stone used in the General Post Office and other buildings now in course of erection. Stone from these quarries, when in competition with Tasmanian and other stone, has won the prize medals Mr. Saunders got the bronze medal at Melbourne, and a silver medal for stone sent to the Amsterdam Exhibition.

"The quarries face Glebe Bay, in Sydney Harbor. The point of view of our main sketch is just above the waterline of the bay. There the face of the quarries varies from 40 ft. to 60 ft. in depth, and there are immense stretches of it in which the solid, rich brown stone occupies the whole face. To facilitate the work, Mr. Saunders has gone downward from 16 ft. to 20 ft. deeper than the quarries were formerly worked, until the rock bed is reached. And now, by the aid of the huge blasts of powder, put in from the top right down to the bottom of the layer of freestone rock, the whole mass is shifted or rent apart, and made available for cutting into any sized blocks that may be required. In order to shift such huge masses, Mr. Saunders brings in the aid of steam very freely. He has, in these quarries, seven steam cranes, and about 20 other cranes, several of them lifting from 20 to 25 tons at a time. Wagons of proportionate strength are used for carrying the blocks, and they are drawn by the grand teams already mentioned. At Johnston's Bay, not far from the quarries, a stone wharf, 400 ft. in length, has been erected into deep water, and then stone is shipped for various ports of Australia, and in such blocks as may be required. There are three cranes on this wharf.

"The stone sawing and stone planing machines at work at these quarries, some of which are shown in our illustrations, are a comparatively new development of the stone trade in this colony. The saw cuts into any sized slices blocks (sic) of stone up to 11 ft. in length and 4 ft. by 5 ft. 6 in. in depth and width. The sawing machines are by John McDowall, of Johnstone, Scotland. The saws are powerful blades of iron 4 in. by 1/8 in., carried backward and forward in a strong frame, moved by steam power. Water and sand are used as cutting agents under the blades. The sand is imported, and is a hard, flint-like substance. Water drips from pipes under the stone as the cutting goes on. The work is done rapidly and there is no waste, as the case is when stone has to be chiseled out of the block. By this means, flagging for verandas and paving and for various other purposes is got out with much facility, and at rates of cost which bring it below the price of concrete work.

"The planing machines are by Coulter, Harpin & Co., the agent here for whom is Mr. Charles Dobson. These machines deal with stones of any size to 10 ft. long by 5 ft. wide and 2 ft. 6 in. deep. They plane one or more faces of the stone, bevel, and mould them in various forms, and with the necessary precision for such work as sills, landings, steps, and other work. The cutting tools operate on hard as well as soft stone; indeed, the stones going through at the time of our visit, and being turned out as handsomely moulded steps, are so hard and tough that men did not care to tackle them with ordinary hand tools. It is noticeable in these quarries that the stone in the northern division is harder than that got in the southern portions. Thus all purposes can be suited, much of the stone being very hard, close, and dense, and suitable for buildings of the most elaborate character.

"Of this type – that is, hard, close, brown freestone – may be mentioned the new buildings going up for the Australian Mutual Fire Insurance Society, at the corner of King and Pitt streets. This building would be a credit to any city. The General Post Office also is being built from these quarries, and immense blocks are being used in them. The new buildings of the Joint Stock Bank, corner of George and King streets, are also to be of brown Pyrmont stone. The grand

building of Messrs. Vickery, in Pitt street, and many others in our leading thoroughfares are of stone got from these quarries, and some of the buildings are becoming of an age to test the quality of the stone very fully. For durability, solidity and substantial work, it would be difficult to find better in any city.

"The stone sawing and stone dressing machines in Mr. Saunders' quarries are in a large building of handsome elevation, part of which is seen in the foreground of our principal picture. It is roofed with iron, and is 180 ft. in length by 72 ft. wide. A traveling crane overhead moves the huge masses of stone about as may be required. Motive power is got from an 18 h.p. condensing engine, made specially for the work by Messrs. Fowler, England. The boiler and gearing are all of steel, and though considerable strain is put on the engine while the planing machines are at work, the whole goes on with quietness and ease that are remarkable Indeed, the whole of the work is conducted with the system, skill, and care which prove there is a thoroughly competent man at the head of affairs, and such undoubtedly is Mr. Robert Saunders, of the Blackwattle Bay Quarries, Pyrmont. The property, it may be added, is worked under lease from Messrs. Harris. The newer portions shown in our illustration were first commenced many years since; but steam was not the effective agent that it is now. After taking off a portion of the softer top stone, the quarry was abandoned, and remained in that state some 20 years. But Mr. Saunders saw there was grand stone under the top layers, and though Messrs. Harris had determined not to reopen the ground, they made an exception in his case, and the splendid quality of the stone, and the effective manner in which it is worked, show that they adopted a course which is decorating Sydney and many other parts of the country with buildings of the most substantial character. – Town and Country Jour."

* * * * * * *

Information on Pyrmont, New South Wales, Australia, and the Blackwattle Bay Quarries at Pyrmont is available in the "Pyrmont, New South Wales" section of Wikipedia. http://en.wikipedia.org/wiki/Pyrmont, New_South_Wales