"Carrara and Its Quarries"

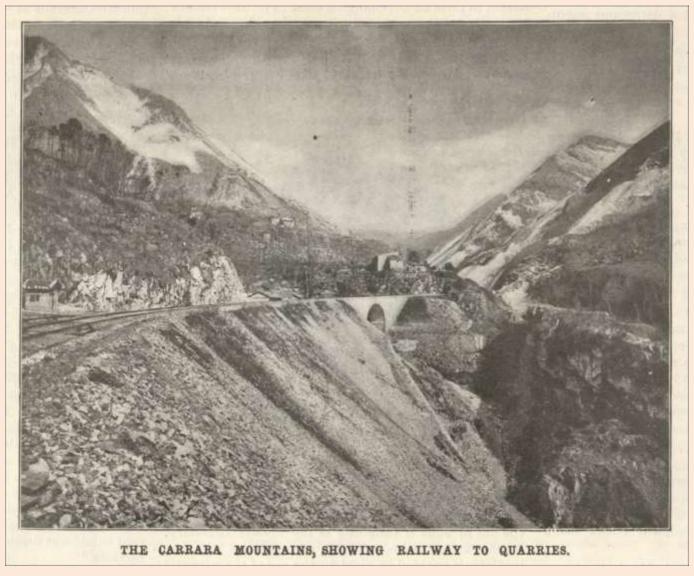
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This article, which begins on the next page, is presented on the Stone Quarries and Beyond web site.

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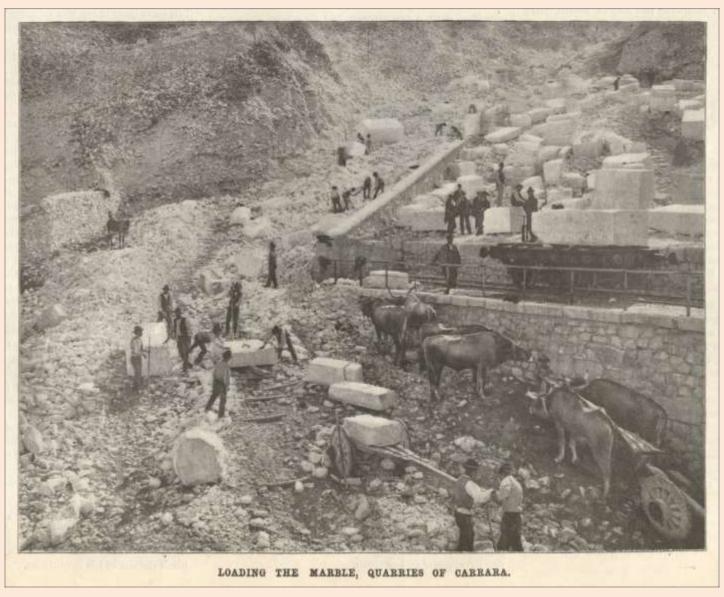
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(photo caption) "The Carrara Mountains, showing railway to quarries."

"Carrara and Its Quarries"

"Carrara marble is known throughout the world, yet few of the many tourists who are whirled along the Mediterranean Railway from Rome to Genoa ever stop to visit the spot from which this famous stone is obtained. Carrara lies on the railway between Pisa and Florence, and an excursion to the Carrara Mountains is not difficult. Carrara itself is hardly worth visiting, being simpy an aggregation of homely houses on the banks of a muddy torrent at the base of the mountains. The mountains themselves can be seen even from the line of the Mediterranean Railway, the marble cropping out in numerous places. All the inhabitants of the little town are directly or indirectly interested in the quarrying, working, and shaping of the marble, and the glare of marble dust and marble meets one on every side. The marble quarries are entirely different from what might be expected, and in place of craning the neck to gaze down into the bowels of the earth, one only has to admire the long, irregular rift in the flank of the mountain, for the quarrying is all done on the surface and does not require the construction of pits or galleries. The quarries have been likened by one writer to a cascade of water suddeny hardened into stone.



(photo caption) "Loading the Marble, Quarries of Carrara."

"The percentage of men who meet horrible deaths in the quarries is very large, notwithstanding the fact that powder and not dynamite is used. Of course many of these accidents are caused by carelessness on the part of the workmen, but these could, in nearly every case, be safeguarded against by proper appliances. When the great blocks are detached, they either roll down the mountain or are lowered to the desired place by means of ropes and tackle. No machinery is employed, and all the work is done with the crudest appliances. A blast is announced by three long notes on a horn, but little attention seems to be paid to this signal by the workmen, and many terrible accidents result in consequence.

"A few years back, when accidents occurred, the cathedral bells were tolled to give warning to the people; but owing to the anxiety and anguish of thousands of poor families on hearing this grewsome sound, the custom has now been abolished, and the workmen all leave the quarries as soon as an accident occurs, in order to assure their families of their safety, and they are allowed their full day's pay. The pay of the workmen is wretched, varying from sixty to eight cents a day. A blast is very exciting to a stranger, who is usually accompanied by a guide, who contrives to get him in a place of absolute safety during the explosion. The marble is blasted high up on the peak, and the pieces bound or leap downward until they strike some obstruction or the valley below. Formerly, all of the immense chunks of marble had to be transported by primitive carts hauled by oxen, but now the railway affords an easy means of transporting to the market, and one of our engravings shows the roughly shaped blocks being put on the ox carts and unloaded on the flat cars on the railway. The huge trucks are met everywhere floundering along, flinging great clouds of choking white dust in their train or splashing mud which is white in this remarkable locality. Each car is drawn by eighteen or twenty pairs of oxen which are covered with the white dust which is everywhere. They are goaded by their cruel drivers, for the Italians are notorious for their cruelty to animals.

"An interesting excursion is to one of the quarries which were worked by the Romans, and the quarries show how primitive were the means employed by men of antiquity. They first marked out the block upon the solid mass, and they actually cut it out by hand labor. In many places one can still see blocks which lie embedded in the rubbish caused in quarrying and shipping them. The Romans split their blocks into slabs by inserting wooden wedges and keeping them continually wet until the swelling of the wood burst assunder the stone. A Roman altar was unearthed some years ago near the quarries, and a few rusty implements have also been discovered.

"The views from the mountain are superb. To the east lies Tuscany, and to the south, on a clear day, can be seen the blue coasts of Corsica and Sardinia. Carrara marble has been a favorite with sculptors for nearly two thousand years, and to-day it is nearly always used by the sculptor in preference to marble from any other locality. It is also largely used in decorating churches, such as altars, etc. We have already ilustrated in the *Scientific American Supplement* for February 12, 1898, the interesting quarries at Serravezza which Michelangelo exploited by the order of Leo X. The methods of sawing and working the stone at Carrara are very much the same as those described in that article."