

“Slate Quarrying and Manufacture in America”

**In *Scientific American*, Vol. XXVII, No. 11
New York, September 14, 1872, pp. 160-161**

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NEW YORK, SEPTEMBER 14, 1872.

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(IN ADVANCE)]

Slate Quarrying and Manufacture in America.

Vermont is distinguished as the headquarters in this country for the best and most extensive deposits of slates, and the region known as Lake St. Catherine is remarkable for its inexhaustible quarries of argillaceous slate, the commercial value of which is just beginning to be appreciated. From the rude Fairhaven school slates, for cyphering and drawing portraits of the master, this hardened clay has risen to an economical importance that puts it into competition with the choicest marbles. The quarries do not run several hundred feet deep like those of Wales, and are consequently worked with greater facility. Large blocks are blasted out and split with wedges, then raised with derricks, and separated into smaller slabs by deftly directed blows from a wooden beetle. The roofing slate is wet in order to facilitate splitting, the thinly laminated formation rendering the process an easy one with the chisel. It is not expedient to take from the quarry more than can be readily split, as the slate splits more freely when fresh, although it is said that frost will restore the splitting property.

The thickest slabs are readily sawn and planed by machinery. Large, handsome flagstones are prepared by simply sawing. Moldings and other decorative pieces are shaped with tools. A great impetus has been given to the slate trade by the demand which the Chicago fire has created, especially for roofing and tiling. The slate companies interchange pro-

ducts with the marble companies, for interspersing white marble with dark slate for floors. Slate is rapidly taking the place of marble for interior decoration; but so long as our extensive forests remain, we shall not need to substitute it for wood, as the English do. With us it is still a luxury rather than an economy.

For ornamental purposes, the slate, after being properly cut and trimmed, is scoured with pumice stone, then rubbed with powdered pumice stone, and polished with felt. It is now ready to be transformed into marble. The slabs having been prepared, and painted with the groundwork color, they are ready to dip. A vat is at hand, containing water, and we cannot say what else. A man dips a small brush in oil colors, and sprinkles it on the surface; then he fans the water with a palm leaf, and draws the brush through it several times. The oil mixed paint spreads on the surface of the water, like the veining in marble, and the slab being gently raised against it receives the impression. A mere change of groundwork and colors gives the varieties of marble—Egyptian, Spanish, Galway, Pyreneese, etc. The most elaborate work, as for altar pieces, chessboards, and borders, is done by hand. After the application of colors, successive bakings and polishings finish the work. This marbleized slate is quite elegant, possessing sixteen times the strength of marble, and scarcely distinguishable from it. The imitation of marble in slate is employed for coffins, caskets, table tops, mantels, billiard beds, lamp stands, and innumerable domestic and ornamental uses. The best workmen here are from Wales, having learned the business in the immense quarries of Carnarvonshire. They are sober, industrious, moral people, provident for the future, noticeably fraternal among themselves, kind, and generous toward all. They take Saturday afternoons for holidays, and make up their hours during the rest of the week. These slates are not inferior in quality to those of Wales. The quarries are comparatively shallow, but more easily worked, and they are too numerous and extensive to be exhausted by a single generation.

The *New York Tribune*, from which we gather the above particulars, says the Vermont and neighboring slate trade is still in its infancy.

(See the next page for a transcription of this article.)

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