

United States Patent Office.

CYRENIUS C. FITZGERALD, OF NEW YORK, N. Y., ASSIGNOR TO THE
FLETCHER MARBLE COMPANY, OF SAME PLACE.

Letters Patent No. 104,008, dated June 7, 1870.

IMPROVEMENT IN PRODUCING MOSAICS UPON MARBLE.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, CYRENIUS C. FITZGERALD of New York, in the county of New York, and State of New York, have invented certain new and useful Improvements in the art of Producing Mosaic on Marble; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in the novel manner of producing mosaic on marble or other carbonaceous stone, substantially as hereinafter set forth.

In the application of muriatic acid for cutting, channeling, or countersinking for mosaic and ornamental work on marble or other stone containing carbonate of lime, the following process will be observed first, reduce the marble or other stone to be operated upon to an even surface; next, cut out of paper the figure or design to be inserted in the marble, and lay the figure in its appropriate place on the surface of said marble, and cover the figure and the surface of the marble, with any one of the following glutinous substances, viz., beeswax, gum masti, glue, varnish, or other material that will resist the disintegrating effects of the muriatic acid. The paper pattern will now be removed, leaving its *fac simile* on the marble untouched by the glutinous coating. Muriatic acid is now applied to the exposed surface, and, in the course of a four or five minutes, will, by its action, decompose the marble to the depth of one-eighth to one-half an inch.

If the depth of the channeling is not sufficiently great from the first application of the acid, a second application can be made and the desired result obtained. The mosaic work will then be accomplished by a combination of marble-dust, sand, or other desirable granulations, with silicate of soda, silicate of potash, mixed to the consistency of putty and pressed into the indentations made in the marble and exposed to the air to harden; or, by washing it with the chloride of calcium, the alkali in the silicates will be liberated and the contents or paste which fills the channeling become petrified. It will be remarked that the marble surface is to receive no additional polish after the above-described paste has been inserted in the channeling.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

The within-described method of producing mosaic on marble or other carbonaceous stone, substantially as set forth.

In testimony that I claim the foregoing as my own, I affix my signature in the presence of two witnesses.

CYRENIUS C. FITZGERALD.

Witnesses:

H. B. SMITH,
FERNANDO SALMERON.