

UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN MARBLING STONE.

Specification forming part of Letters Patent No. **149,344**, dated April 7, 1874; application filed March 11, 1874.

To all whom it may concern:

Be it known that I, RICHARD P. SAUSE, a resident of the city and county of St. Louis, State of Missouri, have invented new and useful Improvements in Marbling Stone, of which the following is a full, clear, and exact description.

Hitherto in this art it has been customary, for a base, to use iron, slate, or some material impervious to the marbling compounds. In consequence the articles used in producing the desired effect have not entered and become incorporated in the base, but have remained on its surface like a paint. Further, such a base as iron must first be prepared for the reception of the marbling process by having a heavy foundation coating of suitable material painted thereon and smoothed down.

The object of the present invention is to cheapen the cost of marbled stone, and to render it more durable. It consists in subjecting a porous stone, like magnesian limestone, to a peculiar process, substantially as is hereinafter described, by means whereof the materials employed in producing the marbling are caused to enter into the base and become ingrained therein. It further consists in the nature of the preparatory compound that is applied to the base before the marbling compounds proper are applied. It further consists in the tempering of the water-bath, on which the marbling compound floats. It further consists in the method of preparing the colors for marbling, all substantially as is hereinafter described.

In operation, take magnesian or oolite limestone, and, having suitably dressed it, apply thereon what I term the foundation or preparatory compound. This foundation is composed of the following: Of baking asphaltum, take one-half gallon, and to it add dry drop-black sufficient to thicken the mixture as if for painting. Further, add thereto a piece of alum the size of a nutmeg, previously dissolved in a half pint of turpentine. Paint this foundation compound upon the base or limestone, and subject the same for four (4) hours in a suitable kiln to 140° Fahrenheit of heat. The stone is then ready for the marbling colors. These are

floated on a water-bath in the usual way; but to enable the water to break up readily I temper it in the following manner: To seven hundred gallons of water add three-fourths of a pound of potash or caustic soda, one-fourth of a pound of alum, and two ounces of salts of tartar. To enable the colors used in marbling to be readily prepared, grind them in bleached linseed-oil, and add thereto one part of turpentine. Then expose the same in a suitable kiln for four (4) hours to 130° Fahrenheit of heat. On withdrawing from the kiln, carefully skim the oil off from the colors. To the colors used in veining turpentine must be added to render them elastic and capable of being drawn out. To the floating or body colors, to render them brittle, dammar varnish and bleached linseed-oil must be added. The floating or body color is first placed on the water. The veining colors are then drawn through the body color; the bath is then agitated; the color closed up; and then the stone is dipped, all in the ordinary way. Afterward expose the stone to 140° Fahrenheit of heat for four hours in a suitable kiln. It is then withdrawn, varnished, and re-exposed to 130° Fahrenheit of heat, in the customary way, and then withdrawn and polished, as is usual.

In the preparation of the foundation compound above described, the drop-black is added to intensify the blackness of the asphaltum, for with a black foundation a much greater number and variety of marbling colors can be used than with any other foundation color. The alum is added for the purpose of neutralizing the oil in the asphaltum, a special advantage thereof being that, when the marbling colors are applied subsequently, they more readily combine with the asphaltum than would be the case if the oil were left in it; but the principal reason for using asphaltum for a foundation is that, for an hour or two after the stone has been placed in the kiln, the asphaltum remains moist. Meanwhile the stone has become thoroughly heated and its pores have opened. This enables the asphaltum to enter the stone before it begins to dry. Another advantage is, its gummy nature prevents its peeling off.

When the marbling colors have been applied, and the stone has been again exposed to heat, its pores again open. By reason of this, and the above-mentioned affinity of the colors for the asphaltum, when treated with alum, both the colors and the foundation are fixed in the surface of the stone.

Having described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. The composition of the primary coating of magnesian, or similar limestone, preparatory to marbling, consisting of asphaltum, dry drop-black, alum, and turpentine, applied and treated in the manner described.

2. The mode of applying and treating coloring substances for marbling purposes in a floating or water bath tempered by water, potash, caustic soda, alum, and salts of tartar, substantially as described.

3. Preparing the marbling colors for use by grinding in oil and turpentine, heating, and afterward separating them, as and for the purpose shown.

4. Preparing the marbling colors for use by heating, as and for the purpose described.

RICHARD P. SAUSE.

Witnesses:

CHAS. D. MOODY,
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