(No Model.)

R. G. JONES.

ORNAMENTAL TILE.

No. 307,395. Patented Oct. 28, 1884.

Fig. 1.

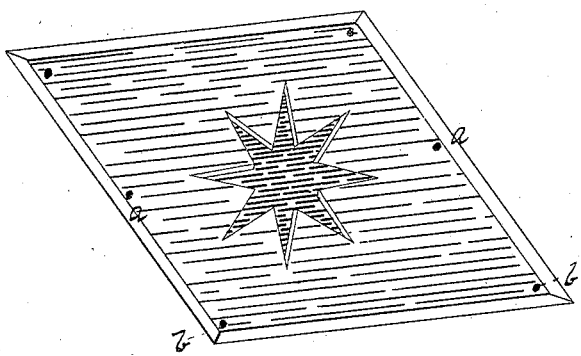


Fig. 2.

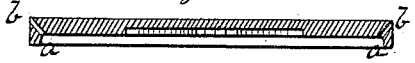
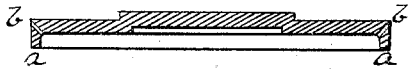


Fig. 3.

Fig. 4.

Fig. 5.



Witnesses.
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UNITED STATES PATENT OFFICE.

ROBERT G. JONES, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO WILLIAM W. CURTIS.

ORNAMENTAL TILE.

SPECIFICATION forming part of Letters Patent No. 307,395, dated October 28, 1884.

Application filed March 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, ROBERT G. JONES, a citizen of the United States, residing at Washington city, in the District of Columbia, have invented certain new and useful Improvements in Ornamental Tiles; and I hereby declare the following to be a full, clear, and exact description of the same.

Heretofore, so far as I am aware, ornamental tiles for architectural purposes have been formed of porcelain, clay, terra-cotta, and like material, ornamented on the exposed surface by painting or otherwise coloring and glazing, the more finely finished and artistic being hand-finished, which added materially to the cost of manufacture. Such tiles, besides the first cost, are objectionable in other respects, viz.: Where relief or raised figures are formed on the tile there is constant danger of disfigurement and loss by the chipping of the glazing or their vitreous coating, and the character of material and surface ornamentation of flat tile detracts from the depth and brilliancy of the colors, so that high effects are not readily attainable.

The object of the present invention is the production of a tile of a character which will preserve and enhance the brilliancy and effect of the ornamentation, will not be easily disfigured in handling, transporting, setting, or from other causes, and can be cheaply manufactured.

To this end the main feature of the invention consists in the formation of the tile from glass or like transparent material, and applying the ornamentation to the under surface, or that which will be protected from wear, as will hereinafter more fully appear. As this method of ornamentation demands, in order to obtain the best effects, that the under surface of the tile should be as free as possible from marks or figures other than the ornamental pattern formed in or on the glass, I have devised special means for getting rid of the air when setting the tile, and said matter forms the second feature of the invention, and consists in forming on the under surface of the tile at the edges thereof relief-ribs perforated at suitable intervals to form air-vents for the escape of any air which shall be trapped in setting the tiles.

I will now proceed to describe my invention more specifically, so that others skilled in the art to which it appertains may apply the invention.

In the drawings, Figure 1 is a perspective view of the under side of a tile embodying the features of construction devised by me. Fig. 2 is a cross-section of the same, showing a sunken pattern for ornamentation. Fig. 3 is a similar section showing a raised ornamental pattern upon the under surface of the tile. Fig. 4 is a similar section showing a raised ornamental pattern on the upper or exposed surface. Fig. 5 is a section where the figure is raised on the exposed surface and depressed or sunken in the under surface of the tile, the tile being of substantially uniform thickness throughout.

Like letters refer to like parts wherever they appear.

The tile will be produced of glass by molding in the usual way of pressing glassware, and may be of any given form demanded by or which will best show off the ornamental design. In so producing the article the figure or design may be produced in alto-rilievo, bas-relief, or in intaglio upon or in either the upper or under surface of the tile, but preferably upon the under surface, as shown in Figs. 1, 2, and 3, and when the figure is produced in or on the under surface it must be borne in mind that the figure must be in reverse of what is required in the ornamentation—for instance, if the figure is to appear in relief it must be sunken in the tile, and if it is to appear in intaglio it must be raised on the under surface of the tile.

Having a tile of transparent material or glass of the character specified, the ornamentation for the figure, which may be in any color or combination of colors desired, is applied to the sunken or raised figure on the under surface of the tile and in proper relation, and the plain surface of the glass is finished with a background of desired shade, the whole surface being finally covered with a protective coating, and the sunken figures filled out with plaster or any plastic substance, if desired.

I would here say that the benefit derived from filling the sunken portions of the under

surface of the tile is more than the protection given to the ornamentation, as it also serves to close any air-pockets, and thus facilitates the expulsion of air in setting the tiles.

I have found the following to be a very effective manner of ornamenting tile, but do not intend or desire to be limited thereto, as it is here introduced simply for purposes of illustration. Take any of the desired shades of bronzing-powders—as, for instance, a silver-gray, gold, German-gold, copper, or brass powder—and mix the same with a vehicle or varnish. Apply this mixture to the surface to be ornamented, giving the same one or more coats, as may be required, to evenly or uniformly cover the surface; or, having prepared the varnish, apply one or more coats to the surface to be ornamented and apply one or more of the bronze-powders, according to the color or colors desired, in a dry state, taking care to remove the surplus powder. When the coat thus applied has sufficiently set, apply over the same a backing or protective coat of any elastic solid opaque varnish or like composition, which backing will aid materially in developing the brilliancy and solidity of the colors first applied.

As tiles are ordinarily constructed the under surface is ribbed to permit the escape of air in setting; but as such ribbing would in many cases materially interfere with the artistic ornamentation, I have formed the under surface of the tile with ribs *a* at or near the edge of the tile, which ribs enter the plaster as the tile is set, thus excluding the external air, and the included air is forced out through a series of perforations or vents, *b*, which may be made through the tile either vertically or at an angle.

The advantages of my invention are, first, the facility and cheapness with which the article may be produced; secondly, the durability of the tile and its non-liability of becoming defaced; and, thirdly, the brilliancy and solidity given to the ornamentation, especially metallic ornamentation, by the transparent body of the tile.

Where brass-colored powders are employed, a very cheap and effective substitute is obtained for the expensive brass fittings for grates and like purposes now in vogue.

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

1. A glass ornamental tile having the design in intaglio or relief, and the colors applied on the under surface of the tile, substantially as and for the purpose specified.

2. A glass tile for ornamental purposes, said tile having ribs on its under surface at or near the edge of the tile, and an air vent or vents to permit the escape of included air in setting the tile, substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 26th day of March, 1884.

ROBERT G. JONES.

Witnesses:

F. W. RITTER, Jr.,

C. A. NEALE.