

(No Model.)

F. J. FRENZEL, Jr.  
ENCAUSTIC TILE.

No. 332,389.

Patented Dec. 15, 1885.

fig. 1.

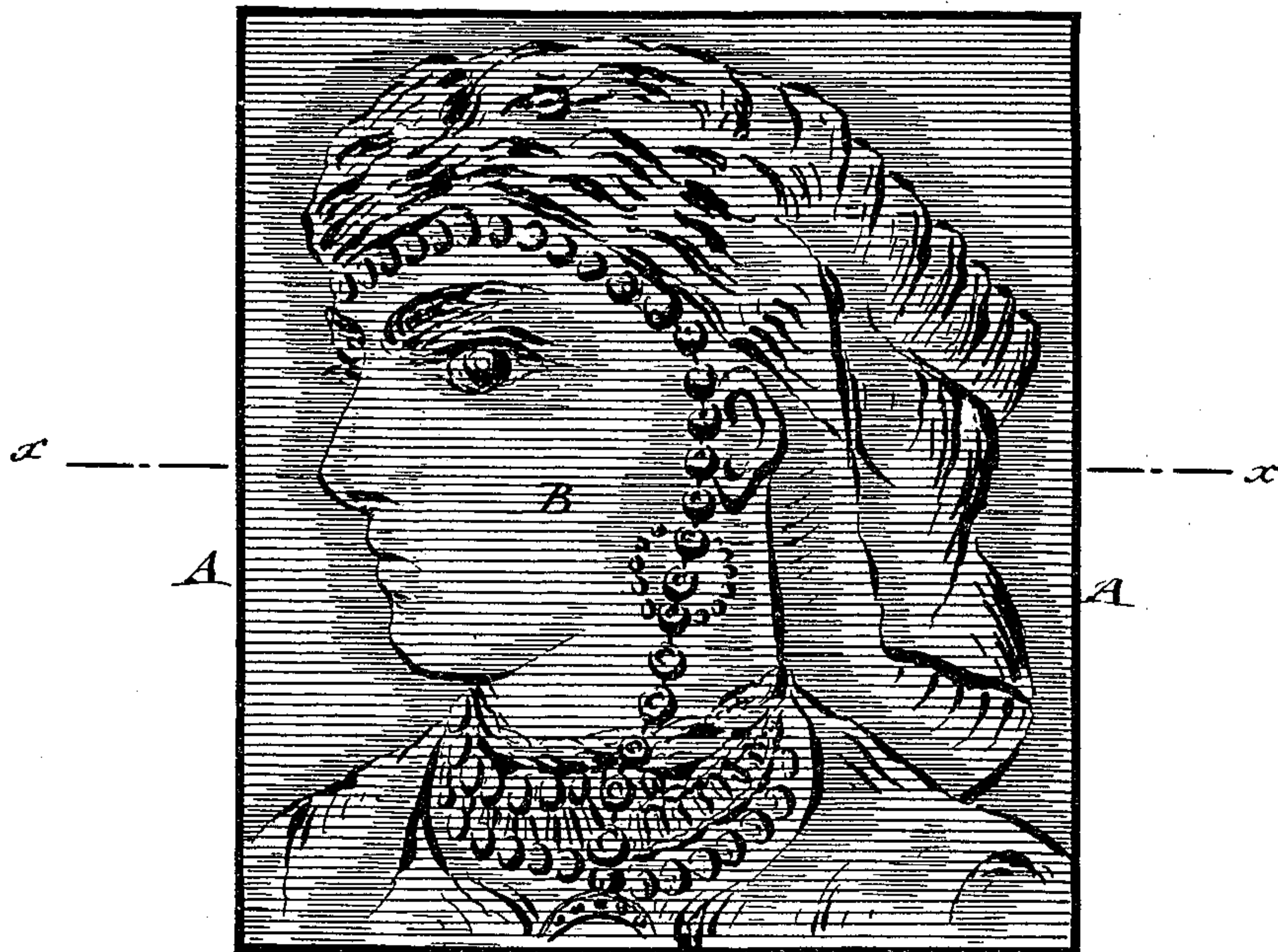


fig. 2.

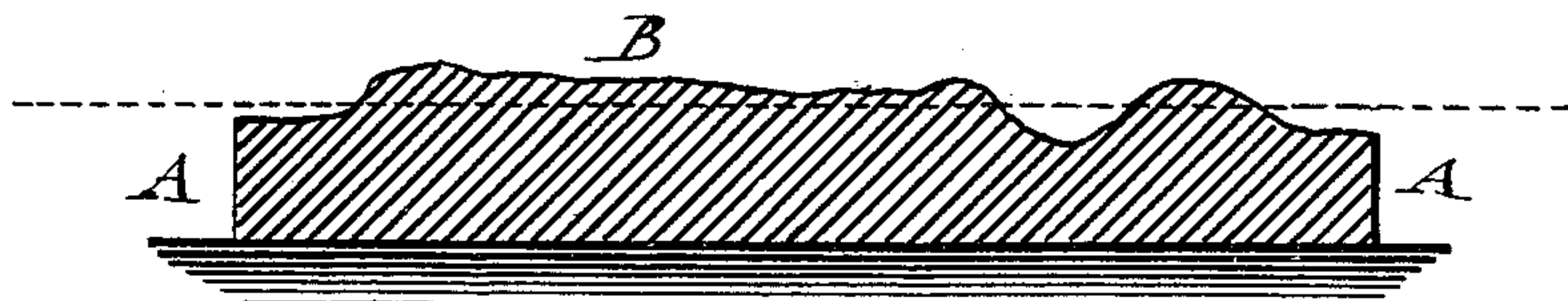
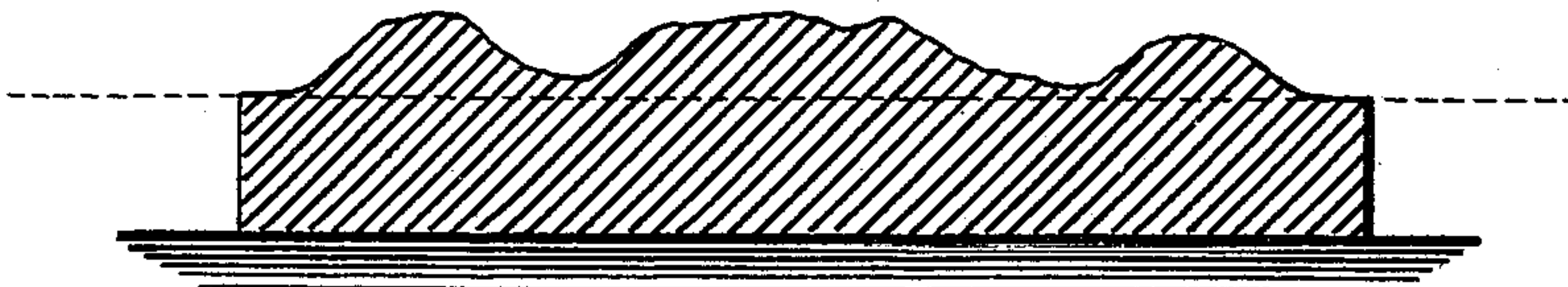


fig. 3.



WITNESSES

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# UNITED STATES PATENT OFFICE.

FRANZ J. FRENZEL, JR., OF NEW YORK, N. Y.

## ENCAUSTIC TILE.

SPECIFICATION forming part of Letters Patent No. 332,389, dated December 15, 1885.

Application filed June 1, 1885. Serial No. 167,156. (No model.)

*To all whom it may concern:*

Be it known that I, FRANZ J. FRENZEL, Jr., of the city, county, and State of New York, have invented certain new and useful improvements in Encaustic Tiles, of which the following is a specification.

The object of this invention is to furnish an improved encaustic tile for floors, walls, mantel-pieces, and other purposes, in which the design is produced in relief in such a manner that a more artistic and plastic representation of the design is obtained, owing to the more perfect distribution of the light and shade in the same; and the invention consists of an encaustic tile the face of which has a design in relief which is the negative of a diaphanous representation of said design covered with enamel.

In the accompanying drawings, Figure 1 represents a front elevation of my improved encaustic tile. Fig. 2 is a vertical transverse section of the same on line *x x*, Fig. 1; and Fig. 3 is a vertical transverse section of a relief-tile made according to the method heretofore in use.

A in the drawings represents the body of my improved relief-tile, and B the relief-design on the face of the same.

The artistic distribution of the light and shade in the design is obtained in the following manner: A plate of glass is covered with a layer of colored wax about one-eighth of an inch thick. The glass plate is held toward the light in such a position that the light can pass through the same. The design is then worked into the wax, so that a diaphanous representation of the design in "intaglio" is obtained in which the lighted portions are thinnest and the shaded portions thicker. An electrotpe is then made from the wax-plate in the usual manner which is employed in making a galvano-plastic matrix, by which the relief on the faces of the tiles is formed. The relief-design on the face of the tiles is a

negative of the diaphanous representation of the design made in the wax. The relief is then covered with enamel while holding the tile in a horizontal position, whereby a coating of enamel is obtained on the tile. By burning or drying the tile the enamel settles in the depressed portions, forming a thick film in the same, while a thin film is formed on the raised portions; consequently a darker shade is obtained at the depressed portions and a lighter tint at the raised portions of the design. The result thus obtained forms a kind of helio-relief on the tile, which has the same characteristics as the diaphanous representation of the design first produced in wax.

The tile is adapted for use on floors, walls, and general ornamentation; also for plaques and wall-pictures.

The characteristic of a tile in helio-relief is that the relief projects but little above and below the face of the tile, its raised and lighted portions being above and the depressed and shaded portions below the plane of the face, as shown in Fig. 2, while in the tiles heretofore in use the relief projects bodily above the face of the design, as shown in Fig. 3.

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

1. An encaustic tile having a face made in helio-relief, or in a relief that is a negative of a diaphanous intaglio of the design, substantially as set forth.

2. An encaustic tile having a face made in helio-relief, or in a relief that is a negative of a diaphanous intaglio of the design, said relief being coated with enamel, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

FRANZ J. FRENZEL, JR.

Witnesses:

PAUL GOEPEL,  
CARL KARP.