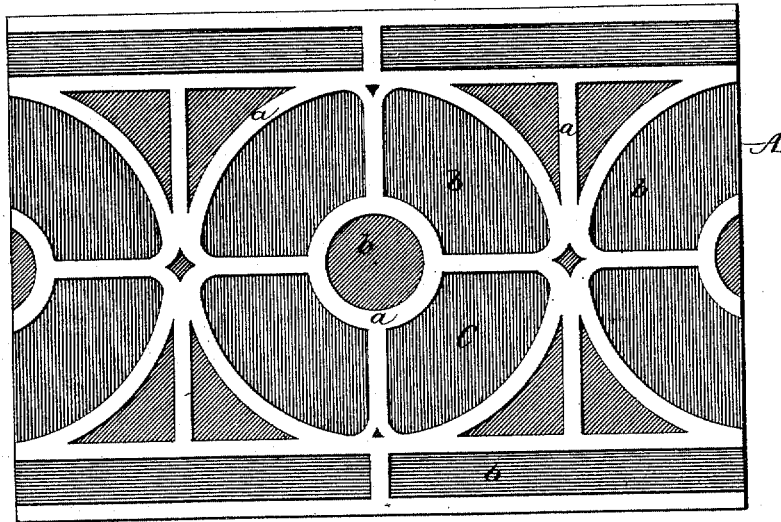
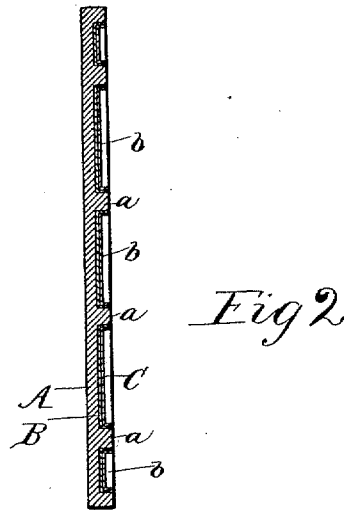


(No Model.)

F. D. COOK.  
TILE.

No. 455,659.

Patented July 7, 1891.



*Fig 1* Frederick D. Cook

INVENTOR -

*by Connolly Bros.*  
Attorneys

WITNESSES -

*Albert B. Blackwood*  
*B. Louch*

# UNITED STATES PATENT OFFICE.

FREDERICK D. COOK, OF ALLEGHENY, PENNSYLVANIA.

## TILE.

SPECIFICATION forming part of Letters Patent No. 455,859, dated July 7, 1891.

Application filed October 9, 1889. Serial No. 326,443. (No specimen.)

*To all whom it may concern:*

Be it known that I, FREDERICK D. COOK, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Tiles or Panels and Methods of Manufacturing the Same; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to decorative tiles or panels and to methods of manufacturing the same, and has for its object the production of a cast iron or steel tile or panel adapted and designed for use as a substitute for the ordinary and well-known terra-cotta or other vitreous tiles and panels now extensively used in the decorative art.

In carrying my invention into effect I first produce a cast iron or steel base or body having any desired pattern in relief on one or more of its surfaces, as by casting iron in a suitable mold, and then, having filled the intaglio or depressed portion of the pattern-surface with a suitable enameling material of any desired color or of various colors at will, I bake the article until the enamel has firmly adhered to the metal, and finally finish the projecting portions of the metallic surface by grinding and polishing, electroplating, or otherwise.

In practice I have found it desirable to coat the entire surface of the article with an enamel of light color, which is baked in previously to applying the colored enamels to the intaglio portions of the surface, and which is removed from the raised portion of the pattern by the grinding operation before referred to.

My invention consists in, first, as a new article of manufacture, a cast iron or steel tile or panel having a raised metallic pattern and interstitial depressed enameled spaces, and, secondly, in the process of producing the same, hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a plan view, and Fig. 2 a sectional view, of a tile constructed according to my invention, the thickness of the enameled surfaces being

greatly exaggerated so as to be easily distinguishable.

A designates the base or body of the tile, which is preferably a malleable-iron casting, and which is formed with the raised surfaces *a a a*, which constitute the pattern in relief. Upon the pattern-surface A is placed first a coating B of vitreous enamel of any color, generally of light hue, which is then well baked. This first coating is laid all over the surface and may be, and generally is, applied to the back and edges as well as the pattern-surface, the article being dipped in a bath of enameling material. After the coating B has dried to the proper degree the article is baked in a suitable furnace until the enamel fuses and adheres to the metal. The article is then cooled and a second coating C of enamel is applied, but only to the intaglio or depressed portions *b b b* of the pattern.

The enamel is applied in a liquid form and allowed to dry, when the article is again baked, as before, and again allowed to cool. In baking the enamel spreads itself smoothly over the surface of the metal and becomes bright and glossy, the surface being similar to that of well-baked tile of fine quality. When the enamel fuses on the surface of the tile, it creeps up the edges of the raised parts of the pattern to the top of the same and covers the sides of the fillets that compose the pattern and add greatly to the artistic effect.

After the enameled coatings have been applied, as described, the raised parts of the pattern are ground, removing the enamel therefrom, are polished, and finally electroplated or otherwise coated with gold, silver, nickel, or other metal.

The bright metallic surface of the raised portions of the pattern contrasting with the enameled intaglio portions produce a highly artistic and beautiful effect not attainable in tiling of the ordinary character.

The enameling of the pattern may be in a single color or in a variety of colors at will and according to the purpose for which the tile is to be used and the taste of the operator.

I am aware that it is not broadly new to construct a tile by first forming a plate constituting the body of the tile with raised figures or ornaments and then enameling the

surface, such a tile being described in Letters Patent No. 321,724, which, however, refers to a tile in which the raised parts as well as the depressions are enameled, thus producing, as stated in said patent, "a surface which will have precisely the same appearance as the glazed clay tiles." I am also aware that it is not new to construct a tile in which the metallic surfaces of the ornamental portions are exposed, as in the well-known "cloisonné" enamel, in which, however, the metal is ground down so as to be flush with the enamel, in which there is no attempt made to produce the effect of metal ornaments in relief. My invention is neither intended to imitate cloisonné ware nor to produce a tile which will have precisely or even approximately the appearance of a glazed clay tile, and I expressly disclaim as my invention any tile of such imitation or appearance, thus lim-

iting my claim to a tile in which the exposed metallic ornamental portions stand in relief.

Having described my invention, I claim:

As a new article of manufacture, a tile consisting of a cast-metal plate having a raised ornamental pattern integral with the body of the tile and having an enamel coating directly upon the surface of the depressed portion, the surface of the enamel being held to the surface of the raised pattern, so as to present the latter in distinct relief and expose the metallic surfaces of the relief portion substantially as described.

In testimony that I claim the foregoing have hereunto set my hand this 20th day of September, 1889.

FREDERICK D. COOK.

Witnesses.

JESSE CONNOR,

FRANK GARVIN.