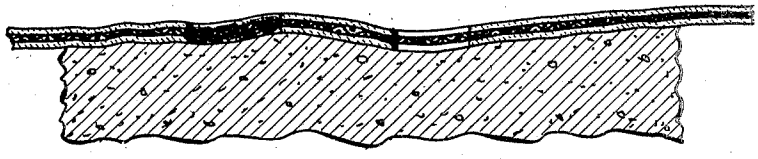
Aug. 13, 1929. G. W. KRICK 1,724,206

TILE ENAMEL PROCESS

Filed Dec. 6, 1927



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Patented Aug. 13, 1929. 1,724,206

UNITED STATES PATENT OFFICE.

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TILE-ENAMEL PROCESS.

Application filed December 6, 1927. Serial No. 238,087.

This invention relates to methods and means by which desired colors or coloring is applied to decorate tiles by the use of a stencil arrangement.

One of the objects of this invention is to simulate hand-painted or hand-decorated tiles.

Another object is to facilitate the production of tiles of hand made appearance more economically than hand-decorated tiles.

Another object is to facilitate the use of stencils.

Another object is to make use of non-absorbing but elastic stencils of a certain thickness to allow a building up of coloring material upon the comparatively absorptive surface of a tile to stimulate hand-decorating.

Other objects will appear from the following description and appended claims as well as from the accompanying drawing, in which—

The figure in the drawing is a general cross section through a tile with a stencil placed on the top to illustrate the process of applying decorating material on the surface of the tile by means of a flexible stencil placed on the absorptive surface of the tile.

The illustration is principally used to merely facilitate a description of the process and means, of accomplishing the result set forth hereafter, and it must be understood that the particular or peculiar stencil alone is not to be considered the sole matter of this invention.

In decorating tiles by hand, the coloring or other material is generally applied by hand and brush or other means to the various spots to be decorated, and such coloring is, as a rule, applied comparatively thick to assure a retaining of raised spots and surfaces on a tile, so as to retain the hand-decorated effect on the surface of a tile after the baking of the enamel or glazing material.

The more mechanical way of decorating by the use of stencils produces generally a too evenly spread appearance on the finished baked enamel surface, inasmuch as stencils are preferably used of a thin type to avoid a passing of coloring material under the edges of the stencils.

Stencils are, furthermore, preferred of a flexible type that can be pressed to the generally uneven surfaces of tiles. The stencils are, for this reason, selected of comparatively thin and flexible material, as thin paper, or thin pasteboard. However, this material is liable to absorb coloring material to such an extent to cause a tearing or falling apart, or, if the coloring material and a stencil is allowed to dry, such a stencil is liable to become brittle and any dried-on coloring material is liable to produce an uneven surface on the underside of the stencil and thereby cause still more coloring material to pass through the stencil around the edges to the underside of the stencil, so as to make such stencil unsatisfactory, since the finished material is likely to be unattractive on account of such undesired additional coloring on the surface of a tile.

Heavier stencils, on the other hand, are entirely undesirable on account of the unevenness of the surface of a tile.

Metal stencils are, for this reason, not at all suitable.

Flexible stencils of paper or other thin flexible material are, furthermore, not exactly desirable for the reason that the real hand-decorated effect can not be produced with or by them.

It is actually necessary to have comparatively thick stencils which facilitate an application of a comparatively heavy layer of coloring material to the surfaces of tiles to simulate real hand-decorated tiles.

A simulating of real hand-decorated tiles is made possible by following the method set forth hereafter.

Tile is comparatively absorptive. This quality is made use of to hold a stencil snugly to the surface of a tile that is to be decorated.

A stencil is preferably made of a flexible material having non-absorbent surfaces, such as rubber.

A very practical stencil construction is indicated in the drawing being made of several plies of material, the central ply or plies eventually of cloth or any other absorbent material while the other plies are made of a non-absorbent material, such as rubber. A stencil constructed in this manner is comparatively flexible and still not absorbent.

To apply coloring to the surface of a tile, a stencil of this type is made damp or wet and then placed on the surface of a tile. The absorptive tendency of a tile draws the stencil closely to the uneven surface of the

tile, so that it is practically certain that no coloring material will pass between the stencil and the surface of the tile while the coloring material is disposed in the openings of the stencil.

The comparatively thick structure of this sort of stencil, on the other hand, allows a desired heavy application or building up of coloring material on the surface of a tile.

On the other hand, it is not likely that the underside of this sort of stencil becomes soiled easily, though even if the underside becomes soiled this may easily be cleaned, since the rubber surfacing makes it easy to remove any material from the stencil.

This stencil structure as a whole may easily be cleaned on the underside or the top surface or at the perforations or openings and thereby assures the most perfect use and the most perfect work and facilitates a quick, and economical, and efficient application of decorating material to the surface of tiles.

Such heavy stencil structure also allows a building up of coloring material in uneven lumps within the openings or perforations of the stencil in very much the same manner as in hand-decorating tiles though not at all requiring any skilled person for such decorating work, since stencils can be prepared by artists ahead of the plain labor of the coloring of tiles in a shop or working place.

The process then consists principally of wetting a stencil preparatory to placing the stencil on the surface of a tile, thereby assuring a firm holding of the whole stencil over the whole surface of a tile and thereby facilitating an application of comparatively heavy layers of coloring material through the perforations of such a stencil, or causing drawing of the stencil by the applied coloring.

A coloring of tiles is in this manner made more economical and practical to assure manufacturing at the least costs by unskilled labor and in the shortest time possible.

An underglaze is preferably first applied to the surface of a tile, and, before firing, or heating, or setting of this glazed surface the stencil is applied in a manner set forth above.

The rubber layers on the outside of the stencil serve to make the stencil flexible, while the central cloth layer serves to prevent an undue stretching of the stencil so as to assure a correctness of application of the different colors through the different apertures or openings of a stencil.

The coloring is either brushed or sprayed on through the stencil and built up to any desired elevation within any of the openings of the stencil as set forth above.

It must also be understood that generally the dampness of the coloring material will suffice to draw the non-absorbing stencil to the absorbing surface of the tile.

Having thus described my invention, I claim:

1. The method of coloring tiles by means of a stencil which consists in using a stencil made of flexible, elastic, non-absorbent outer layers and a non-elastic, absorbent inner layer of a certain thickness to allow an application of a comparatively heavy layer of coloring to simulate hand-decorating, dampening the underside of such a stencil to assure an adherence of every part of the stencil to the uneven top surface of a tile, and then applying the coloring material in an exceedingly damp state through the stencil by building up the coloring material to various thicknesses to simulate hand-decorating and at the same time utilizing the excess dampneses of the coloring material to draw and hold the stencil to the absorbent surface of the tile.

2. The method of coloring the surface of a tile which consists in applying an underglaze to the surface of a tile and before firing or setting the underglazing applying a stencil, a liquid being applied between the stencil and the surface of the tile preparatory to applying the stencil making use of the absorptive tendency of the tile to draw the stencil to the uneveen surface of the tile to prevent a creeping of coloring material under the stencil, and then applying coloring material in an exceedingly damp state through the stencil to a desired thickness and in any desired unevenness to simulate hand-decorating and at the same time utilizing the excess dampness of the coloring material to draw and hold the stencil to the absorbent surface of the tile.

In testimony that I claim the foregoing as my invention I have signed my name.

GEORGE W. KRICK.