Feb. 15, 1938. A. F. REILLY 2,108,444

ENAMELED PLAQUE AND METHOD OF MAKING SAME

Filed Oct. 3, 1935

Fig. 1.

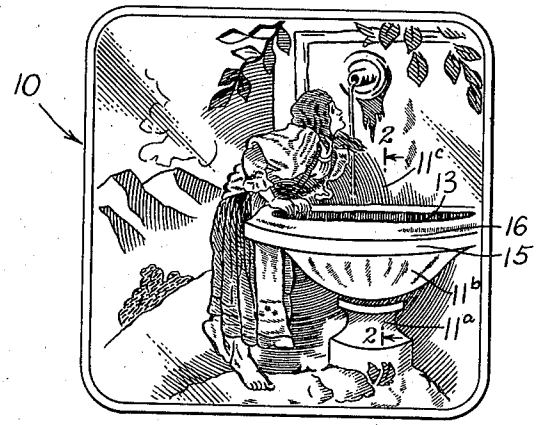
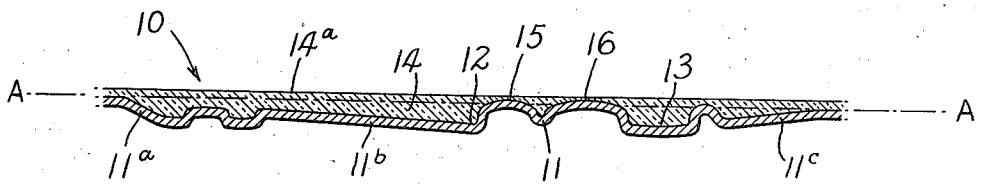


Fig. 2.



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ENAMELED PLAQUE AND METHOD OF MAKING SAME

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3 Claims. (Cl. 41—22)

This invention relates to an ornamental enameled plaque or the like and to a method for making the same.

One of the objects of this invention is to provide an ornamental enameled plaque which is light in weight yet sufficiently strong for application to a useful article such as a powder compact, for example. Another object is to provide an article of the above nature which may be inexpensively manufactured in large quantities. Another object is to provide an article of the above nature which is attractive in appearance, durable under conditions of rigorous use, and not subject to chipping. Another object is to provide a method of making an article of the above nature which lends itself to mass production and the use of unskilled labor. Other objects will be in part apparent and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements, arrangements of parts and in the several steps and relation and order of each of the same to one or more of the others, all as will be illustratively described herein, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawing in which is shown one of the various possible embodiments of my invention,

Figure 1 is a plan view of my enameled plaque; and

Figure 2 is a section taken along line 2—2 of Figure 1.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Referring now to the drawing and particularly to Fig. 1, an enameled plaque is generally indicated at 10, this plaque being shown as square and flat. It may, however, have any suitable border configuration and may be either concave or convex depending in each instance upon the shape and size of the article to which it is to be attached as an ornament.

The design appearing on plaque 10 is preferably in low relief, that is, some of the surfaces are elevated with respect to others, this being more clearly shown in Fig. 2. In order to impart the design upon the metal base plate 11 of the plaque, I preferably form mating dies (not shown) in which the design to be formed on metal plate 11 is sculptured. Thus on the male die certain portions thereof are cut out, these portions, in effect, causing the rest of the die to stand out. The female die is cut in reverse order, that is, those portions which are depressed in the male die stand out in the female die. Thus when metal plate 11 is stamped or bent between the two dies it takes the configuration of the complementary designs of the dies and a design in low relief is formed on the plate. It will be noted, in this connection, with reference to Fig. 2 that the thickness of metal plate 11 is substantially uniform as is the surface thereof; that is, sharp edges and sharply inclined surfaces are avoided to a substantial degree. This permits an even refraction of light rays rather than concentrated beams which sometimes impair the appearance of the design when enameled, and often detract from the illusion of depth and perspective afforded by a low relief.

Still referring to Fig. 2, it may further be seen that certain portions, such as portions 11*a*, 11*b*, and 11*c*, are inclined with respect to the horizontal, these portions in the example shown corresponding to various portions of the bowl in the ornamental design in Fig. 1 and being inclined for a purpose to be pointed out hereinafter. Still further it is to be noted that the depth of any depressions in plate 11, such as depressions 12 and 13, is not limited by the thickness of plate 11 as the plate is bent or otherwise formed into the shape shown; hence depressions of any reasonable depth may be formed in the plate for a purpose described hereinafter. Accordingly it will be seen that portions of the surface of the plate lie above and below the median line A—A of the plate.

After the design in low relief has been formed on plate 11 by stamping the plate between the mating dies, the top surface of the plate is coated with a suitable enamel 14 of any desired color. Sufficient enamel preferably transparent is applied to fill completely the depressions in plate 11 and to cover to the desired depth the uppermost surfaces of the plate such as surfaces 15 and 16. The exposed surface 14*a* of enamel 14 is substantially flat (Fig. 2) thus the enamel coating is uneven, varying in accordance with the depth of the various depressions making up the design. The varying depths of enamel 14 thus produce shaded effects and high lights. Where the enamel is deepest, that is, in the depressions, as depressions 12 and 13, the shading will be deepest even though the enamel itself is quite uniform in color. Similarly where the enamel is thinnest e. g., over surfaces 15 and 16 which may lie above the original plane (indicated by the line A—A) of the plate, it will be rela-

tively pale, hence affording a pleasing contrast. The appearance of the plaque is thus further enhanced in that it is possible to vary the shade of enamel having a uniform color to bring out the design in attractive relief. As noted above, the thickness of plate 11 has no limiting effect on shade variation. Thus it is possible to obtain a purple, for example, almost black in shade in depression 13 although the shade of the purple enamel 14 itself is comparatively pale.

In practicing my method I prefer to form mating dies as pointed out above, which may be conveniently mounted in an automatic stamping machine. A piece of flat metal stock, or, if desirable, a metal blank of suitable size, is placed in the machine and stamped between the dies to form the design in low relief. If necessary the edges of the stamped blank may be trimmed and the surface to be enameled may be cleaned or otherwise treated. Thereafter enamel of any desired color is applied on one side of the blank or plate to a suitable depth, and the plate is placed in a baking oven for a length of time necessary for hardening or glazing the enamel. The finished plaque is then ready for mounting on the article for which it was intended.

Under certain circumstances as, for example, where a softer though more pronounced effect is desired in the design, I have found it advantageous to impart engine turning to the design. The engine turning may also afford a better gripping surface for the enamel and as a consequence cause the enamel to adhere more firmly to the plate.

Thus it may be seen that I have provided an enameled plaque having a design in low relief which is quickly formed by stamping a piece of metal, without causing any loss in strength through lessening the thickness of the metal in any portion thereof. In fact the metal is strengthened somewhat in that it is more rigid and hence more able to withstand forces which would bend it and cause the enamel to crack. Also substantially any depth of color shade is attainable regardless of the thickness of the metal which carries the design.

Accordingly I have provided an enameled plaque and a method for making such a plaque which achieve the several objects hereinabove set forth in a thoroughly practical and efficient manner.

The word "enamel" as used hereinabove and hereinafter contemplates any kind of material which, when applied to the plate 11, produces a veneered finish. Preferably this material is translucent so that the features of the design on the plate as described above are visible therethrough.

As many possible embodiments may be made of the mechanical features of the above invention and as the art herein described might be varied in various parts, all without departing from the scope of the invention, it is to be understood that all matter hereinabove set forth, or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

I claim:

1. In an article of the class described, in combination, a metal plate having a design in relief formed thereon, said plate being engine turned, and a coating of enamel on said plate, the surface of said plate having areas of varying depths to produce said design whereby a varying shading effect is imparted by said enamel over said areas.

2. In an article of the class described, in combination, a metal plate of uniform thickness having a design in low relief formed thereon, said design being engine turned, and a coating of enamel applied over one surface of said plate.

3. The herein described art which consists in stamping a flat metal plate of uniform thickness between mating dies to form on said plate a design in low relief, imparting an engine turned effect to the design on said metal plate, applying enamel to said stamped plate, and hardening said enamel.

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