July 9, 1940. L. R. GASPER 2,207,585

GLASS DECORATING

Filed March 9, 1940

Fig. 1

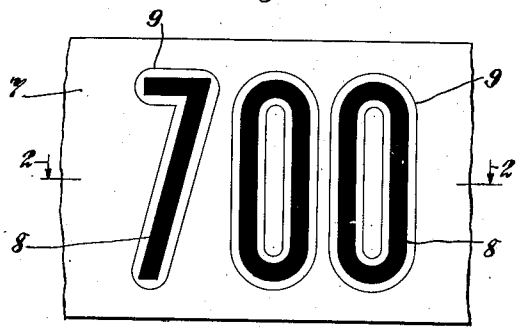


Fig. 2

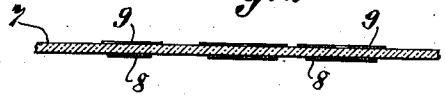


Fig. 3

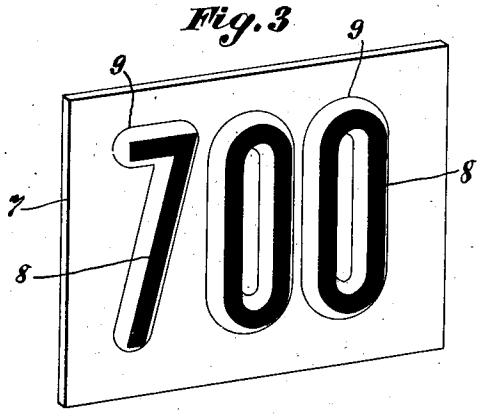


Fig. 4



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GLASS DECORATING

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2 Claims. (Cl. 40—135)

The invention disclosed herein relates to the decorating of glass and other transparent materials, particularly such as used for clock dials, radio dials, instrument dials, signs and the like.

The objects of the invention are to accomplish a depth or third dimensional effect of the letters, numerals, ornaments, trade-marks, borders or other designs applied to the glass or other transparent material and to cause such characters to stand out with a cameo-like appearance and to obtain such results in a simple practical manner and at a minimum of expense.

These and other desirable objects are attained by the novel features of invention set forth in the following specification and broadly covered in the claims.

The drawing accompanying and forming part of the specification illustrates certain practical embodiments of the invention but such illustrations are primarily by way of disclosure and are to be so understood, as the actual physical structure may be modified and changed in various ways, all within the true spirit and broad scope of the invention.

Fig. 1 is a face view of a panel of glass or other transparent material having numbers applied thereto after the manner of and incorporating features of the invention.

Fig. 2 is a sectional view as on line 2—2 of Fig. 1.

Fig. 3 is a perspective view of the panel illustrating the effect of the representation on the back of the panel appearing through the transparent material and merging with the representation on the front to give the figures a sense of thickness, as though extending through the glass.

Fig. 4 is a broken sectional view of a modified form of the invention.

In the several views, 7 designates a layer or sheet of transparent material, such as glass or one of the plastics, for instance, Celluloid, Pyralin, Cellophane, Vinylite, Lucite and the like.

The decorative character, which may be a numeral or any other representation is made up of a design 8, on the face of the transparent sheet and a correspondingly shaped design 9, on the back of the same sheet in register with the design on the face.

The design on the back may be larger than that on the front, so that in all normal positions from which the figure may be viewed, a considerable portion of the figure at the rear will be visible through the glass, appearing through the glass as part of and joined with the figure at the front. The larger size of the rear figure magnifies this impression, giving the character a sense of solidity, as though having a thickness extending from the front to the back of the glass.

The third dimensional effect usually appears to be best obtained by having the figure on the front wholly opaque and darker in color than the corresponding figure on the back.

The figures may be applied to the front and back faces of the transparent sheet by painting, printing, lithographing, screening or otherwise, and the front and back figures each may be in one or more colors.

The imprinting of the figures may be with cold colors, or in the case of glass for instance, with mineral colors which may be fused or fired, thus to enhance the brilliancy of the decoration and add greater durability.

In some cases, two imprints may be applied on the back, one over the other, and one larger than the other to produce a deeper effect.

While a flat sheet is shown, the sheet may be curved, such as with concave or convex surfaces or be angular in cross-section.

Transparent sheets may be decorated as described and made up for various forms of instrument dials, for radio devices, clocks, signs and various other purposes.

Depending on the use, the decorated sheets may be lighted or unlighted and the lighting may be direct, indirect or diffused lighting from the back or edge lighting may be used, the invention lending itself to all these and many other various purposes and modes of use.

In some instances, the figure at the back may be applied by imprinting the same on a piece of paper and adhering the paper to the back of the glass or other transparent medium.

An opaque translucent or other background may be used over or around the figure or figures on the back and similarly an opaque or translucent facing may be used about the figure or figures on the front, provided sufficient space is left about such figure or figures to expose portions of the transparent glass medium between the front and back figures.

The back of the transparent material may be etched or sandblasted and be entirely opaque, in which case it is advantageous to have the back figure lighter than the front figure and possibly more or less translucent.

In Fig. 4, there is indicated a modification, in which there is a solid back coating. In this particular embodiment, the glass is etched or sandblasted on the back at 10, leaving clear outlines

to form the larger sized corresponding figures 9a in register with the more or less opaque figures 8 applied to the face. These roughened background portions 10, are then given an opaque coating 11, of dark paint or the like, and then there is applied over the whole, a coating 12, which may be of lighter color and which in filling in the clear spaces, actually forms the back figures 9a. This particular structure lends itself admirably to back lighting, as for example, for radio dials and clock dials.

The width of the lines forming the figures and the difference in the width of figures on the front and on the back may, to some extent, be governed by the thickness of the transparent layer. For most purposes, the back figures should be enough larger than the front figure to be actually visible about the edges of the front figure, thus to give a sense of perspective when looked at from directly in front at a normal viewing distance and to appear as extending solidly from front to back through the transparent material, when viewed at the different angles which might be usual to such an object.

The perspective, cameo effect produced by this invention, causes the numbers or other delineations on a dial or instrument front to stand out with greater distinctness and the invention therefore has utilitarian, as well as purely ornamental value. Requiring only the one sheet of transparent material and simply the imprinting of the same character on opposite faces, the invention is particularly inexpensive and adapted to many uses. By properly contrasting the colors or shades of the front and back figures, many artistic effects can be produced. Frosting the surface of the glass can be used to produce many interesting effects. The treatment may be governed to some extent by the manner in which the article is used and according to whether it is unlighted or to be illuminated in some way. In all instances, the effect is of the design on the back appearing through the intervening glass or other transparent material as a perspective more or less solid continuation of the front figure.

In another form of the invention, the figures are applied on curved glass, or other transparent material, such as on convexly curved clock and radio dials. The curvature of the transparent layer magnifies, accentuates or exaggerates the cameo effect, making it the more apparent, viewed from any position. With these curved dials, particularly when lighted from the back, it has been found advantageous to make the figures on the back of the glass darker in color and substantially opaque and the figures on the front lighter in color and more or less translucent. Usually in such case also, it is considered best to have the rear figures slightly larger in size than the front figures.

What is claimed is:

1. As a new article of manufacture, an instrument dial or the like, comprising a single layer of substantially transparent material, designs of corresponding outline in registration on the front and back of said substantially transparent layer, the design on the back being of larger outline than the design on the front of said layer and sufficiently larger in extent to be visible about the edges of the design on the front when viewed from directly in front of the article and said smaller design on the front of said layer being darker and more of an opaque character than said larger design on the back of the layer to create the effect of the front design extending solidly through the intervening substantially transparent material and the back design as forming a coextensive rearward enlargement of the front design.

2. As a new article of manufacture, a curved layer of substantially transparent material, designs of corresponding outline in registration on the front and the back of said curved substantially transparent layer and the design on the back being larger in size than the design on the front of said curved layer to appear through the intervening curved substantially transparent material magnified by the curvature of said intervening substantially transparent material as an enlarged continuation of the design on the front of the layer.

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