METHOD OF MAKING PLASTIC OBJECTS

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3 Claims. (Cl. 117—5.5)

1. This invention relates to improvements in plastic objects and is directed more particularly to the manufacture of ornamented or decorated plastic objects.

The principal objects of the invention are directed to the provision of ornamented plastic objects and the method of making the same and the invention is particularly adapted to the manufacture of name plates such as are used on machinery and equipment of all kinds as well as for other various and sundry purposes.

The various metals from which name plates have been made, due to present day conditions, have become scarce but according to this invention name plates and other objects of plastic are provided with ornamentation, indicia and the like which are equal to if not superior to those of the prior art.

With the foregoing and various other novel features and advantages and other objects of my invention as will become more apparent as the description proceeds, the invention consists in certain novel features of construction and in the combination and arrangement of parts as will be hereinafter more particularly pointed out in the claims hereto annexed and more fully described and referred to in connection with the accompanying drawing wherein:

Figs. 1 to 3, inclusive, are plan views to explain various steps in the novel method of making the plastic object of the invention.

Referring now to the drawing in detail the novel features of the invention will be fully described.

An object such as a name plate is represented by 2 which according to the invention will be of plastic material such as cellulose acetate, nitrocellulose or the like.

Such plates, as is the case with metal, plates, may carry various indicia or ornamentation which may be in one or more colors in contrast to the main body of the plate.

As one feature of the invention it is possible to carry in stock sheets of a single color obviating the necessity of carrying stock of various colors since the body or background may be colored as well as the indicia or ornamentation.

The form of the indicia or ornamentation may vary but to explain the invention one form of ornamentation is represented by 4.

As a first step the ornamentation is applied by printing, stenciling or any convenient method by the application of ink to the plate 2 which, for purposes of description, may be white. This may be called a masking operation and the material used may be called a mask. The material may include an ink which is acid resisting and soluble in some medium such as benzine or the like.

When the mask has been applied, the plate is subjected to heat so as to set the masking material and not injure the plastic.

Then the plate is colored with such a color as is desired and may be accomplished by various coloring materials such as dye or the like. The coloring material will be such as to provide the body or background color around the masked portion.

In the illustration the color is yellow and may be called body color. The coloring material will be such as to not affect or remove the masking material and for best effects it may be of such a nature as to penetrate the plastic material to some extent. Preferably, of course, the dye or body coloring material will be of such a nature as to not be affected by the mask removing medium.

Finally the masking material is removed by subjecting the plate to a solvent thereof. Certain inks may be soluble in benzine in which case the mask removing medium may include benzine.

When the masking material has been removed the plate has a body color such as yellow with the ornamentation of a different color, which, in the instant case, is white since the material of the plate is white.

The ornamentation may be of various colors and to explain how it may be accomplished it will be assumed that it is desired to provide an area 6 in red.

This area 6 is masked as is the area 4 and after the body coloring operation, the masking material is removed in the manner already described which leaves the yellow body and white areas 4 and 6.

Then the plate is masked again leaving the area 6 exposed after which the plate is colored with a red color so that area 6 bears that color and finally the masking material is removed as described so there is provided a plate having a yellow background with a white area 4 and a red area 6.

Thus it is possible to provide a plate having any desired background color with various areas of similar or contrasting colors.

According to the invention it is possible to carry in stock, material of a single color and to treat the same to provide various color combinations. This makes it unnecessary to carry stock of various colors as has been customary and con-
tributes to more economical and efficient manufacturing. While there has been shown a name plate made from sheet stock, the invention is equally applicable to rods, tubes, molded shapes and the like made from molded material.

If, for instance, white plastic material is carried in stock, it may be treated to have a background color and an area or areas of another color or colors or that of the original stock. It may be desired to provide, using white stock, a white member having black areas. To accomplish this the member is first colored black in any suitable manner as by immersion in a dye or in otherwise subjecting it to a coloring step. Then the area to be black is masked by ink or some suitable masking material adapted to withstand the action of a medium adapted to remove the black coloring material.

As an example, the masking material may be an acid or alkaline resisting ink and the material for removing the black coloring may have as a constituent an acid or alkali adapted to react with or absorb the black coloring material, except where masked, and at the same time preferably remove the particles at the surface of the member except the surface where etched. In this way the background will be white, while the masked area will be black when the masking material is removed. Preferably the plane of the black area will be raised slightly above that of the background surface portion to produce a relief or embossed effect.

The invention may be embodied in other specific forms without departing from the essential characteristics thereof. Hence, the present embodiments are therefore to be considered in all respects merely as being illustrative and not as being restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all modifications and variations as fall within the meaning and purview and range of equivalency of the appended claims are therefore intended to be embraced therein.

What it is desired to claim and secure by Letters Patent of the United States is:

1. The method of making plastic name-plates and the like having an area of a color contrasting with that of the plate which consists in, masking a predetermined area with masking material which is soluble in a mask removing medium, coloring said name-plate with a coloring medium around the masked area thereof, removing said masking material by a medium in which said material is soluble thereby providing a name-plate colored around the predetermined area, which corresponds in color to that of the said plate.

2. The method of making plastic name-plates having areas of different colors which consists in, masking separate predetermined areas with masking material which is soluble in a mask removing medium, coloring the body of said name-plate with, a coloring medium of contrasting color around the masked areas, removing said masking material by a medium in which said masking material is soluble, masking the body of said plate and one of said areas leaving another area exposed, coloring said exposed area, and then removing said masking material providing a plate colored around areas of different colors.

3. The method of making plastic name-plates having areas of different colors which consists in, masking predetermined areas of the plate with masking material that is soluble in a mask removing medium, baking said masking material, coloring the body of said plate with a coloring medium around the masked areas to change the color of the body of the plate, removing said masking material by immerging the plate in a medium in which said masking material is soluble, masking the body of said plate and one of said areas leaving another of said areas exposed, baking said masking material, coloring said exposed area of the plate, and then removing said masking material providing a plate that is colored around areas of different colors.

LOUIS JOSEPH AIME LAVALLE.