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J. MICHAELSON ET AL
PROCESS OF MOLDING ORNAMENTAL OBJECTS

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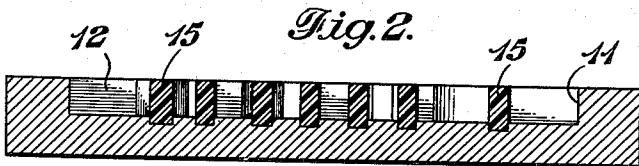
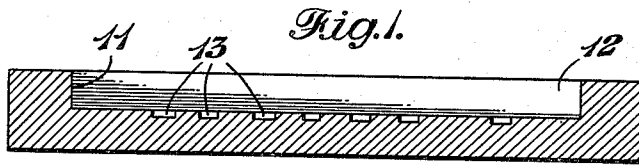
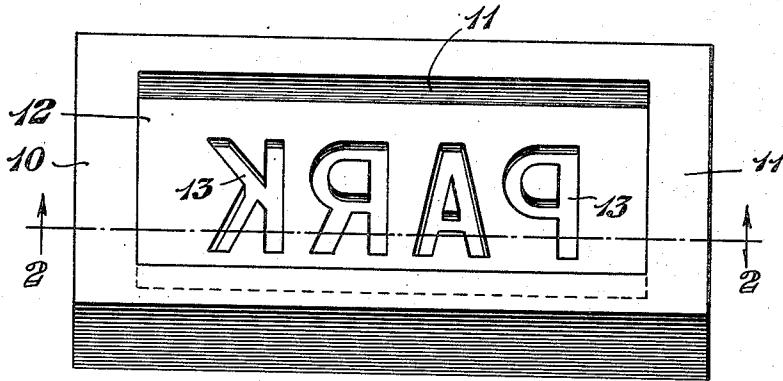


Fig. 5.



Fig. 6.

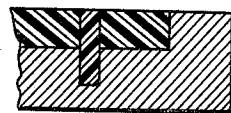


Fig. 8.

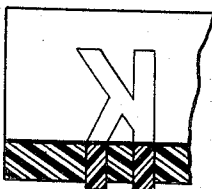


Fig. 7.

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PROCESS OF MOLDING ORNAMENTAL OBJECTS

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1 Claim. (Cl. 18—61)

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This invention relates to an ornamental object and to a process of manufacturing the same. More particularly, the invention relates to signs, insignia, plaques, ornamental blocks, decorative panels and the like and to a process for their manufacture.

It is an object of this invention to produce a sign, insignia, plaque or the like having inlaid portions of different materials or colors, which may be opaque, translucent or transparent, and to provide a process whereby the inlaid portions may be of any shape desired, and arranged in any manner desired.

It is a further object of the invention to produce a sign, insignia, plaque or the like displaying letters, numerals, or designs of any shape in a three dimensional manner.

It is a still further object of the invention to produce such a sign, insignia, plaque or the like in which the letters, numerals or designs are embedded in a background panel so that they are either flush with the faces of the background panel or project above the aforementioned faces.

A still further object of the invention is to provide a method of producing a sign, insignia, plaque or the like in which letters, numerals or designs are displayed in a background panel comprising a synthetic resin.

Other objects and the nature and advantages of the instant invention will be apparent from the following description taken in conjunction with the accompanying drawings, wherein:

Fig. 1 is a view in perspective of a mold used in the process;

Fig. 2 is a vertical sectional view of the mold on the line 2—2 of Fig. 1;

Fig. 3 is a view similar to Fig. 2 after the characters have been inserted;

Fig. 4 is a view similar to Fig. 3 after the background panel has been filled in;

Fig. 5 is a fragmentary view similar to Figs. 2 and 3 showing a background panel of two different colors;

Fig. 6 is a view similar to Fig. 5 showing a mold with deeper indentations to receive letters that will project beyond the face of the background panel;

Fig. 7 is a fragmentary view in perspective of a portion of a sign when first removed from the mold, and

Fig. 8 is a view similar to Fig. 7 showing the protruding portions removed.

Referring to Fig. 1, the mold 10 comprises walls 11 and cavity 12. The bottom of the mold cavity is provided with mold recesses 13 to receive and align the characters such as, letters, numerals,

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designs or the like which are to become an integral part of the product. In the example shown in Fig. 1, the recesses are adapted to receive the letters P, A, R and K. The mold recesses 13 are shallow, but sufficiently deep to hold the letters in proper alignment during the subsequent molding of the background panel. The molds used in the process may be made of any material, such as metal, rubber, plastic, plaster or the like. The recesses in the mold cavity that receive and align the letters may vary in depth as desired.

The characters, such as, letters, figures or designs 15, to be displayed are produced in any suitable manner such as by molding, casting, cutting, forming, stamping or the like, and may be opaque, translucent or transparent and made of any material, such as plastic, metal, wood, plaster or the like, in any desired color. The background panel 16 is preferably made of a transparent synthetic resin.

The method of manufacture of the product is as follows: The mold 10 is first prepared with side walls 11 of a height equivalent to the final desired thickness of the product. The bottom of the mold cavity 12 is provided with recesses 13 which correspond to the shape of the characters 15 to be incorporated into the final product. The characters 15 which have been prepared as described above are then inserted into the mold and are aligned with the recesses 13 in the bottom thereof, so as to be held firmly in position during the casting operation. The background material 16 is next filled in, usually by pouring the material in molten or plastic condition. This material fills all the spaces between the characters 15 and the mold 10 until the mold is completely filled, as shown in Fig. 4. The material is allowed to harden and thus consolidate the characters 15 and the background material 16 into an integral structure. In the preferred embodiment of the invention the characters are molded from a colored opaque plastic material, and the background material is transparent. In this manner, the sides of the characters are visible below the surface of the background panel, thus showing the characters in a three dimensional manner. The height, width and depth of the characters are clearly visible. In the preferred form of the invention, the mold recesses are made shallow, with a depth sufficient merely to correctly align the letters. The resulting slight projections on the face of the panel when it is removed from the mold due to the recesses therein are removed by any suitable manner such as by grinding so that the face of the characters

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15 in the final product is flush with each surface of the background panel.

In a variation of this process, as illustrated in Fig. 5, the characters 15 are inserted into the mold cavities 13 as previously described. A plastic material is then molded around the letters filling the mold to a point about one-half the height thereof. After this plastic material has hardened, a second plastic material of a different color is molded about the upper half of the letters filling the remaining unfilled portion of the mold. When the resulting structure is removed from the mold, the projections of the characters above the surface of the background panel are ground off. If the top half of the background panel is made of a transparent resin and the lower half of a colored opaque resin, a three-dimensional sign with a distinctive color below the transparent face of the background panel is obtained. It should be understood that more than two layers can be incorporated into the background panel as desired.

In a second variation of the process illustrated in Fig. 6, the recesses 13 in the bottom of the mold 10 are made deeper than in the previous embodiments. The characters 15 are inserted into the recesses extending to the bottom thereof. The background panel is again molded around the characters as previously described. When the sign is removed from the mold, the characters project above the face of the background panel, thus giving a decorative sign with the tops of the characters extending upwardly from the background and the lower portions of the characters visible through the transparent background.

It should be noted that the characters may be made of a phosphorescent material so as to be visible in the darkness, or of a light conducting material such as Lucite, and many other variations could be incorporated. When the background panel is molded hot, the only requirement is that the material from which the characters are formed be resistant to the heat at which the background panel is molded.

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The signs, insignia, plaques, decorative panels and the like made in accordance with this invention are highly decorative, colorful, distinctive and easily manufactured.

It will be obvious to those skilled in the art that various changes may be made without departing from the spirit of the invention and therefore the invention is not limited to what is shown in the drawings and described in the specification but only as indicated in the appended claim.

We claim:

In a process of making a molded ornamental object comprising the steps of forming a plurality of bodies into desired configurations, forming the bottom of a mold cavity a plurality of recesses corresponding in shape to the configurations of said bodies, placing said bodies into said mold in a horizontal position with a portion only of said bodies extending into said corresponding recesses, filling the spaces between the bodies and between the mold and the bodies with a plastic material to form a background panel, allowing the bodies to become firmly set in the background panel, thereby forming the ornamental object, removing the object from the mold, and finishing off the extended portions of said bodies so that the bodies and the background panel are of the same height.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
233,869	Morris	Nov. 2, 1880
1,308,330	Brown	July 1, 1919
1,668,590	Hilfreich	May 8, 1928
2,062,880	Hansen	Dec. 1, 1936
2,086,493	Ellingwood	July 6, 1937
2,143,141	Cooley	Jan. 10, 1939
2,319,802	Dreyfus	May 25, 1943
2,428,977	Mares	Oct. 14, 1947