

Aug. 1, 1944.

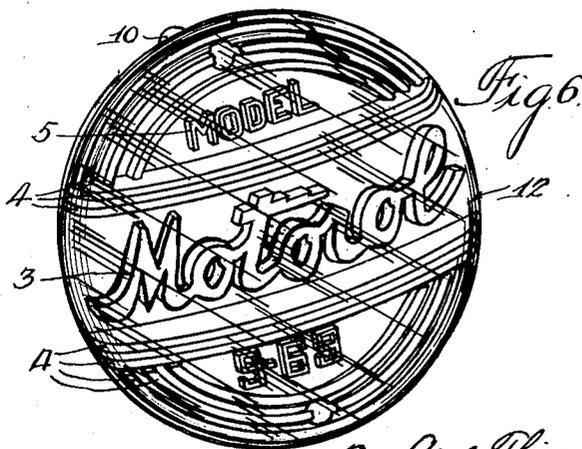
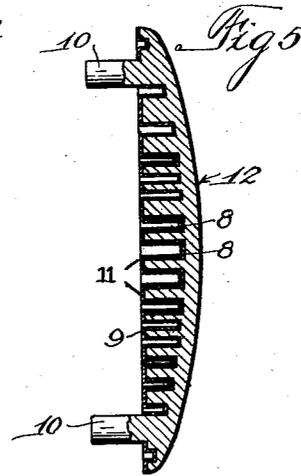
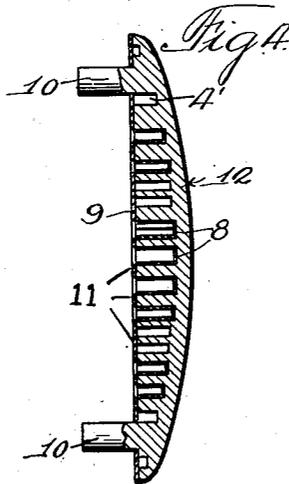
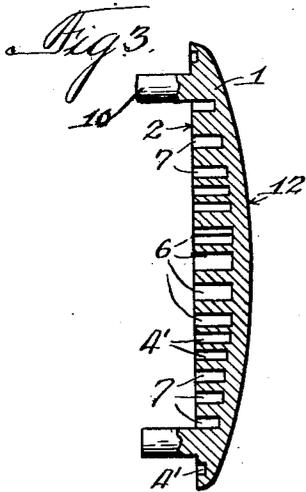
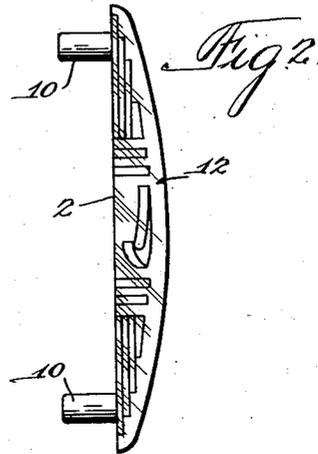
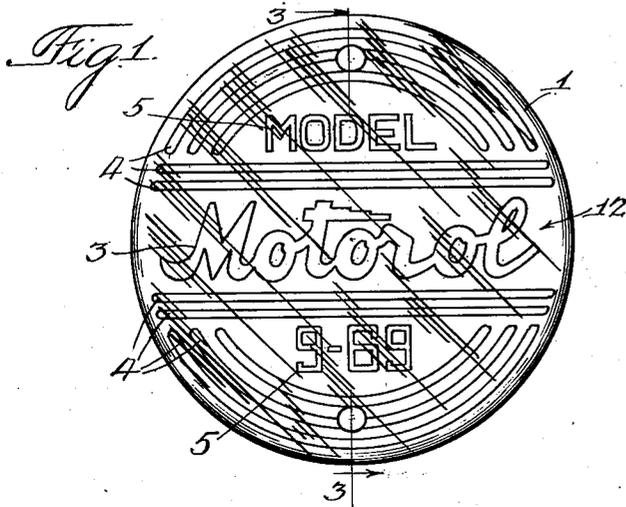
J. A. GITS ET AL

2,354,857

MOLDED INDICIA-BEARING PRODUCT AND METHOD OF MAKING SAME

Filed Sept. 27, 1939

2 Sheets-Sheet 1



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MOLDED INDICIA-BEARING PRODUCT AND METHOD OF MAKING SAME

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2 Sheets-Sheet 2

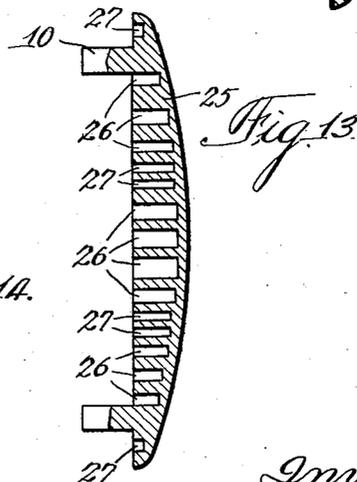
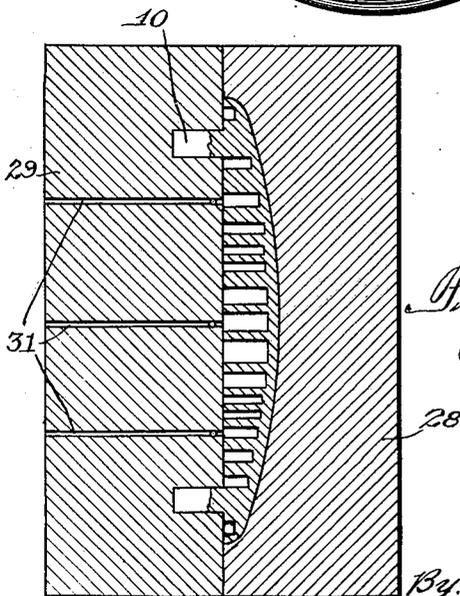
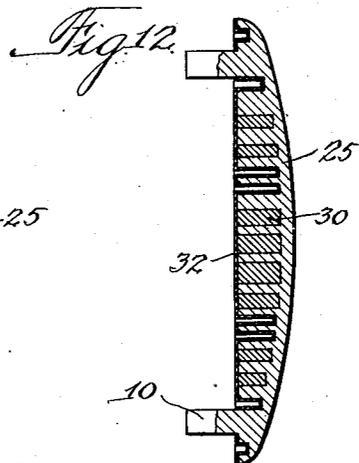
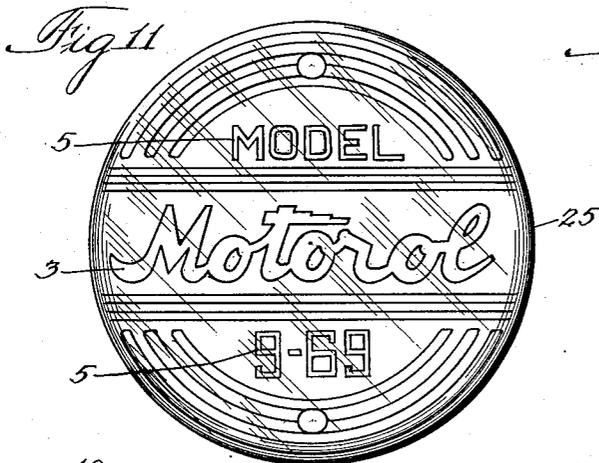
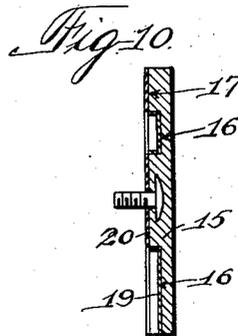
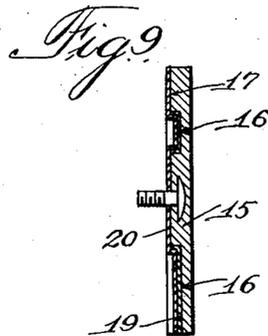
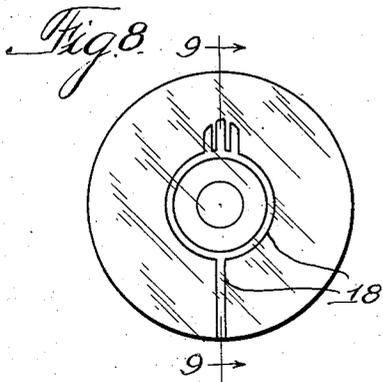


Fig. 14.

Fig. 13.

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# UNITED STATES PATENT OFFICE

2,354,857

## MOLDED INDICIA-BEARING PRODUCT AND METHOD OF MAKING THE SAME

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Application September 27, 1939, Serial No. 296,764

12 Claims. (Cl. 41—22)

This invention relates to a new and novel type of molded product and to the method of making the same.

More particularly, this new and novel type of product may serve as a name plate, an indicia-bearing member, a dial, or like device to which the invention may novelly lend itself.

Such devices are usually made with indicia outlines and designs formed thereon by separate operations and protrude from or lie flush with the front face. The essential consideration is to secure a pronounced contrast of the indicia so that it will stand out and thereby effectively attract attention. Whether in relief, flush or recessed, the indicia and design are usually differently colored with respect to the background and made by separate molding operations.

An object of the present invention is to provide devices of this type of essentially different construction, whereby the characters, design or indicia peculiarly stand out in very decided contrast and present an unique appearance not heretofore obtainable.

According to the teachings of this invention, the body is made of transparent material and is adapted to be molded into any desirable form, the transparent material preferably being a plastic substance and provided with recesses therein at its rear face, these recesses representing the characters, design or indicia to be formed. By a simple coating operation, these characters, design or indicia are then made to assume their distinct and independent form and made to appear to exist independently of the body but embedded within, having the appearance of being molded therein separately and being of differently colored material, the effective contrast being very pronounced. A second coating may be applied upon the rear face, or otherwise provided, in order to accentuate the contrast, this second coating serving, in effect, as a background and causing the transparent body to become somewhat light reflective which tends to make these characters, indicia or design more noticeable and attractive.

Certain variations of the invention may include making the characters, indicia or design slightly transparent in character by using a paint or coating permitting the passage of light there-through so that these portions can be illuminated to stand out in a very novel manner against an opaque background. A very pleasing and attractive appearance can be produced through the transparent body when these portions are of dif-

ferent colors and are illuminated. Also, the background may be transparent to the extent of transmitting light therethrough and the characters or indicia may then be opaque so that further attractive combinations will be obtained that emphasize the characters or indicia and produce an exceptionally novel device.

Moreover, the invention is also directed to a device of this type wherein the indicia characters or letters, and possibly other portions, are formed by a second molding operation of differently colored plastic material, and the remaining recesses are either treated in the manner above described or filled with materials producing the desired effect, in combination with the indicia, through the transparent body.

Other objects and advantages of the invention will be apparent from the following detailed description taken in connection with the accompanying drawings which form a part thereof.

In the drawings:

Figure 1 is a front elevation of a device embodying the present invention;

Fig. 2 is a side elevation of the device;

Fig. 3 is a vertical sectional view taken on line 3—3 of Fig. 1 but showing the recesses before they are coated;

Fig. 4 is a similar view illustrating all other recesses covered by a stencil while the indicia recesses are being coated;

Fig. 5 is a similar view illustrating the second coating applied to the rear face and all the recesses;

Fig. 6 is a view slightly in perspective of the device to illustrate how the indicia and other outlines or designs provided will normally appear in the finished article;

Fig. 7 is a detail view of the device looking at its rear face when covered with a stencil during the coating operation of the indicia recesses;

Fig. 8 is a view similar to Fig. 1, but illustrating another form of device embodying the invention;

Fig. 9 is a transverse section taken on line 9—9 of Fig. 8;

Fig. 10 is a view similar to Fig. 9, but illustrating a modified structure;

Fig. 11 is a view of a slightly modified form of the invention;

Fig. 12 is a vertical transverse section of the device shown in Fig. 11;

Fig. 13 is a transverse section of the same device after the first molding operation; and

Fig. 14 is a section through a mold in which

this device has been placed for a second molding operation.

The device chosen to illustrate the invention is shown in the drawings in the form of a medallion having indicia and design thereon. It will be understood, as pointed out above, that the invention is capable of various applications and may be incorporated generally in various devices.

Essentially, body 1 is transparent or semi-transparent. Material known as "Lucite" or "Tenite" or suitable plastic material capable of being molded in the shape of a body desirable for an article to be made may be used.

In the molding operation, recesses are formed in body 1 inwardly from rear face 2. The extent of these recesses, their shape and their depth depend upon the indicia to be formed, or the design to be made, either in conjunction with the indicia or alone. The term "design," as used herein, may include scroll work of different formations, or relatively flat areas, of various colors to form fanciful patterns, either to be used with indicia or alone, but mainly in connection with name plates or the like.

In Fig. 1, the medallion is shown with indicia 3 and a design or pattern 4. Indicia 3 may be a trade name or other characters like that shown at 5. As illustrated in Figs. 1 to 6, inclusive, indicia 3 and 5 are formed by recesses 6 and 7, while design or scroll 4 is formed by recesses 4'. These recesses may be formed in a single molding operation of body 1.

The walls of recesses 6 and 7 are then sprayed with a material 8 that may be opaque and of a given color. A stencil 9 is placed over face 2 and held in position upon mounting pins 10 formed upon body 1, these pins being used as a means to secure body 1 in position. This is shown in Fig. 7. In this manner, stencil 9 will cover face 2 and protect the recesses that are not to be coated with material 8. We find that spraying material 8 upon the walls of these recesses 6 and 7, with stencil 9 protecting all other portions, affords a quick operation that is inexpensive and very efficient from the standpoint of applying paint to recesses of relatively small size without smearing the same upon surrounding surfaces and causing unnecessary waste of material and labor.

It will be understood that recesses 7 may be provided with a coating of a different color than the coating for the walls of recesses 6. This may be done by employing separate stencils for the spraying operation of each set of recesses. After coating 8 is thoroughly dried, a second coating 11 is applied by spraying across the entire rear face 2 and is allowed to cover the walls of recesses 4', as well as the material 8 upon the walls of recesses 6 and 7 that have already been coated. The second coating is then allowed to dry thoroughly. The second coating thus acts as a background and may be seen through the front face 12 of body 1 everywhere except at those recesses 6 and 7 that we first provided with coating 8.

To illustrate the contrast that may be effectively provided for indicia, such as 3 and 5 with respect to the design designated broadly as 4 and the background surface constituting rear face 2, coating 8 may be a brilliant red and coating 11 may be an aluminum paint which will provide a very desirable contrast and still reflect sufficient light to cause the indicia to stand out in relief in an embedded relation in transparent body 1. The reflection of light both from front face 12 and the coating 11 upon rear face 2 tends

to emphasize the indicia and make it appear as if separately formed but molded in this transparent body 1. The design 4 also tends to add to this result.

The device shown in Figs. 1 to 7, and the process used to produce the indicia and ornamental scroll work are particularly novel. Spraying material 8 upon the walls of recesses 6 and 7 and using stencil 9 to protect recesses 4' and rear face 2 and thereafter spraying the entire surface enables the operator to apply the various colored materials in a simple and inexpensive manner to produce the effects desired, namely, the formation of indicia and like characters in bold relief within transparent body 1 in a way to produce the effect that such indicia and characters have been molded within by separate operations.

Hence, not only has a new product been produced but also a novel process devised that efficiently and economically produces this new product.

The new product is designed to make it appear that the insignia is separately formed and is molded in body 1. Due to the transparency of body 1 and the reflection light from not only the coating 8 but also from face 12, indicia 3 and 5, as well as pattern 4, tend to stand out in relief and very effectively focus the attention thereupon due to the contrast produced.

Another embodiment of the invention is shown in Figs. 8 and 9. Body 15 is also made of a transparent plastic material having recesses 16 extending thereinto from rear face 17 to form a pattern 18 representing in general the pointer of a dial. The walls of recesses 16 are covered with a material 19 of a given color and preferably opaque or translucent. Material 19 may be sufficiently transparent in regard to the passage of light that the rays of a lamp in back of body 15 may be transmitted therethrough to provide an illuminated pointer. A coating 20, preferably opaque, may then be applied to rear face 17 and material 19 upon the walls of recesses 16, but only upon the rear face 17, as shown in Fig. 10, if material 19 is to permit light to be transmitted therethrough to provide an illuminated pointer 18. Likewise, a very novel effect can be obtained if material 19 is opaque and background coating 20 is somewhat transparent to permit light to pass therethrough. In either case, pointer 18 will very novelly stand out and readily be seen.

A still further embodiment or extension of the invention is shown in Figs. 11 to 13, inclusive. Body 25 is likewise formed of transparent plastic material having a series of recesses 26 and 27, recesses 26 representing the characters of indicia 3 and 5, and recesses 27 representing the scroll work 4, these recesses being preferably formed in and during the molding of body 25. The article as it appears after the first molding is shown in Fig. 13. It may then be placed in die members 28 and 29 and material 30 injected through passages 31, or in any suitable manner, into all recesses 26 or any number of them to form indicia 3 or indicia 5, or both, in a single or multiple operation whereby indicia 3 and 5 may be of material of the same or different color. That is to say, the word "Motorol" may be of the same or different color as the word "Model" and the number "9-69." Recesses 27 may then be coated with a material 32 of a given color that provides the proper background. In the same manner as shown in Fig. 9, material 32 may be transparent to the extent of permitting the transmission of

light therethrough while indicia material 30 may be opaque. Thus, the background will be illuminated and may be of a color that will contrast with the indicia which will emphasize the relief effect of the indicia and make the latter stand out very effectively. On the other hand, the indicia material 30 may be transparent to the extent of permitting the passage of light while material 32 may be opaque. Thus, the indicia only will be illuminated and, if they are of different colors, a very effective and fascinating display will be produced.

Various other arrangements may be produced without departing from the scope of the invention. Each form shown in the drawings is in itself new and novel, and possesses advantages particularly when used as name plates, dials, medallions, etc. The plastic material of body 1 does not fracture and may be readily molded into the shapes desired. It will be transparent and clear and produce the effects desired.

We claim:

1. An article of the class described, a body of plastic transparent material having inwardly extending recesses of substantial depth having side walls substantially normal to their bases and conforming in size and shape to predetermined indicia or design to be displayed through said transparent body at its front face, a material of a predetermined color and light transmitting capacity upon the walls of said recesses to distinctly characterize said indicia or design, and a second material of a predetermined color for said rear face to provide a background upon which said indicia or design is displayed through said transparent body, said second material being relatively opaque to prevent the passage of light therethrough.

2. An article of the class described, a body of plastic transparent material having inwardly extending recesses of substantial depth having side walls substantially normal to their bases and conforming in size and shape to predetermined indicia and design to be displayed through said transparent body at its front face, a material of a predetermined color upon the walls of said recesses to distinctly characterize said indicia or design, and a second material of a predetermined color for said rear face to provide a background upon which said indicia or design is displayed through said transparent body, one of said materials being opaque relative to the other material, the other said material having a predetermined light transmitting capacity.

3. An article of the character described, comprising, a molded transparent structure formed with a series of inwardly extending recesses of substantial depth having side walls substantially normal to their bases, the surfaces of said recesses being distinctively coated and being visible from a front face thereof to form a series of sharply defined characters having the appearance of being separately preformed and thereafter embedded in said structure.

4. An article of the character described, comprising, a molded transparent structure composed of a synthetic resinous condensation product having the property of setting without becoming fragile, formed with an opaque but light reflecting rear surface and a series of recesses of substantial depth having side walls substantially normal to said rear surface, the surfaces of said recesses being distinctively coated, there being a front face through which said coated surfaces appear to form a series of sharply defined characters having the appearance of being separately preformed and

thereafter embedded in said structure independently of said rear surface.

5. An article of the character described, comprising, a molded transparent structure composed of a synthetic resinous condensation product having the property of setting without becoming fragile, formed with a convex front face, an opaque rear face, and a series of recesses of substantial depth having side walls substantially normal to their bases, the surfaces of said recesses being distinctively coated and being visible from said front face and forming a series of sharply defined characters having the appearance of being preformed and thereafter embedded in said structure, certain of said coated surfaces forming front faces for said characters that lie substantially parallel to said convex front face.

6. An article of the character described, comprising, a molded transparent structure composed of a synthetic resinous condensation product having the property of setting without becoming fragile, formed with a convex front face, a rear face, and a series of recesses of substantial depth having side walls substantially normal to their bases, the surfaces of said recesses being distinctively coated and being visible from said front face and forming a series of sharply defined characters having the appearance of being preformed and thereafter embedded in said structure.

7. An article of the character described, comprising a molded transparent structure formed with a convex front face, a rear face, and a series of recesses of substantial depth having side walls substantially normal to their bases, the surfaces of said recesses being distinctively coated and being visible from said front face and forming a series of sharply defined characters having the appearance of being preformed and thereafter embedded in said structure, certain of said coated surfaces forming front faces for said characters that lie substantially parallel to said convex front face.

8. In the molding of an article of the character described of transparent plastic material composed of a synthetic resinous condensation product to form a transparent structure having sharply defined characters appearing as being preformed and thereafter embedded in relief within said transparent structure, the process of injecting in a single operation the material in a plastic condition into a mold cavity to form said transparent structure with a series of recesses extending substantially perpendicular to a rear face thereof, removing said transparent structure from said mold cavity after the material sets, applying material of a predetermined color only to said recesses, and applying material of another color to said rear face.

9. In the molding of an article of the character described of transparent plastic material composed of a synthetic resinous condensation product to form a transparent structure having sharply defined characters appearing as being preformed and thereafter embedded in relief within said transparent structure, the process of injecting in a single operation the material in a plastic condition into a mold cavity to form said transparent structure with a series of character recesses extending inwardly from a rear face thereof, removing said transparent structure from said mold cavity after the material sets, spraying said recesses with a material of a predetermined color, allowing said material to dry, and thereafter spraying a material of another color upon said rear face.

10. An article of the class described, comprising a body of transparent plastic having a smoothly curved convex front face and having a design formed by recesses in its rear face, and a coating of opaque material applied to the walls of the recesses, the bottoms of said design-forming recesses being located farther from the rear face of the article than is the boundary of said curved convex front face.

11. An article of the class described, comprising a body of transparent plastic having a smoothly curved convex front face and having a design formed by molded recesses in its rear face, and a coating of opaque material applied to the walls of the recesses, the side walls of said recesses meeting the rear face of said body in well defined edges, the said design-forming recesses being disposed substantially entirely in front of the boundary of said convex front face whereby the inter-

faces between the recess walls and the coating thereon are visible only through the smoothly curved front face of the article.

12. In the molding of an article of the class described of transparent plastic material composed of a synthetic resinous condensation product to form a transparent structure having sharply defined characters appearing as being preformed and thereafter embedded in relief within said transparent structure, the process of forming in a mold cavity in a single operation the material in a plastic condition into said transparent structure with a series of recesses extending inwardly from a rear face thereof, removing said transparent structure from said mold cavity after the material sets, and applying material of a predetermined color to the walls of said recesses.

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