MOUNTING FOR REFLECTOR BUTTONS
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INVENTOR
This invention relates to mountings for reflector buttons of the type employed in advertising, warning signals and the like and it has for its principal object to provide an improved means by which reflector buttons may be mounted to defeat attempts at theft or accidental displacement from the plates on which they are mounted.

Another and equally important object of the invention is to provide a mounting which prevents ingress of moisture which would otherwise accumulate on the mirrored surface of the button, thereby dulling the required brilliance of the reflected light rays.

The invention further aims to provide a mounting having the salient features recited and yet of such nature that it may be securely pressed about the button without danger of chipping or otherwise damaging the button and will leave exposed the maximum of reflecting area for impinging light rays.

With the foregoing objects as paramount, the invention has further and lesser objects in view, together with certain salient features of construction, which will become apparent as the description proceeds, taken in connection with the accompanying drawing, wherein:

Figure 1 is a vertical section through the button, its mounting, retaining plate and dies, showing the invention, and Figure 2 is a side elevation of the button and mounting, the latter partly in section.

Hereinafter, reflector buttons of the type shown and described herein were held in their retaining plates by screws and nuts and other types of means which did not prevent their ready removal, without damage to the button, in unguarded places. This lack of provision against unauthorized removal encouraged pilfering and the sign or warning signal became useless as such and unsightly as well as expensive as to upkeep. The invention affords a means to minimize theft of buttons by making them more difficult to remove from their plates without damage.

Continuing with a more detailed description of the drawing, 1 designates the conventional plate or other surface which is perforated to receive the mounting for the buttons, which in the present case is identified by the reference character 2. This mounting is comprised of a soft metal cup a, of paraboloidal or semi-spherical shape, the inner concave surface b of which is mirrored to afford a reflecting surface. About the upper edge of the cup is formed a flange c, having straight side walls before being upset to define annular shoulders, to be described presently, which bear against the plate on either side thereof to retain the mounting. At the point where the flange c joins the cup, a shoulder d is formed and this shoulder conforms with a shoulder e moulded in the glass of the button 3 and provides a seat for the button to determine the distance the button will recede in the cup 2.

A pair of female dies are employed for upsetting the flange c. The faces of these dies are almost identical, the upper die 4 being designed to cause the upper edge of the flange c to form an annular ring f about the perimeter of the button 3 and simultaneously causing the metal to spread intermediate the upper and lower ends of the flange to define an annular shoulder g, bearing against the top surface of the plate 1.

The dies are brought together simultaneously so that the companion die 5 will similarly shape the metal of the flange c on the opposite side of the plate 1, providing an annular shoulder h against the plate, thereby securely locking the button mounting against movement in the plate in any manner.

To insure the above operation, each die is provided with an annular oblique shoulder a', with an abrupt drop b', terminating in a concave annular recess c'. The oblique shoulder a' in the case of the die 4, bears first against the upper edge of the flange c while the corresponding shoulder of the die 5 bears against the annular shoulder e at the lower rim of the flange. The abrupt drop b' of each die merely retains the walls of the flange c against spreading as pressure is brought to bear thereon, while the annular rings g and h are being formed by the concave annular recesses c' of each die.

The die 5 is provided with an ejector in the form of a shoe 6, bearing on which is a spring 7, the latter being provided with a guide stem 8. These features, however, are conventional and may be substituted by any other suitable means for the purpose.

Manifestly, the construction as shown and described is capable of some modification and such modification as may be construed within the scope and meaning of the appended claims is also considered to be within the spirit and intent of the invention.

What is claimed is:

1. A light reflecting device and mounting including in combination with an apertured mounting plate, a shell of malleable material comprised of an annular button receiving flange disposed in the aperture of said plate and a
concavo-convex reflector cup integral with said flange, the upper portion of the latter being inset with respect to said flange, an annular, downwardly sloping seat for said button provided on said inset and a pair of relatively spaced, annular shoulders integral with and equidistant from the top and bottom of said flange and overlying the edges of said aperture on either side of said plate to thereby retain the shell in said plate, said flange further having its upper edges turned inwardly to retain said button in said mounting.

2. A light reflecting device and mounting including in combination with an apertured mounting plate, an integrally formed shell of malleable material comprised of an annular flange portion conforming to the aperture in said plate and a concavo-convex reflector cup integral therewith, the latter being of lesser diameter than said flange portion, an annular and downwardly sloping seat for a reflector button, provided at the juncture between said flange portion and cup, an upwardly and inwardly sloping ring at the upper end of said flange embracing the upper peripheral edge of said reflector button and a pair of outwardly extending, upset annular shoulders integral with said flange portion and disposed intermediate the top and bottom thereof and overlying the edges of said aperture on opposite sides of said plate to hold said mounting against displacement in said plate.

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