ILLUMINATED DOME DISPENSER

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This invention relates to an illuminated dome dispenser. More specifically it relates to a dispenser of the type employed in automobile filling stations which is fitted with a translucent plastic dome, which may be suitably colored and which is internally lighted by means of a number of electric lamps which are so arranged as to provide a relatively uniform lighting of the dome.

It is an object of the invention to provide a translucent dome which is made of plastic material which is reinforced to give added strength and shape retaining ability.

Another object of the invention is to provide a translucent dome of plastic material which includes a material which renders it fireproof.

It is a further object of the invention to provide a translucent dome of thermosetting resin which is reinforced with glass fibers.

Yet another object is to provide means to support electric lamps beneath or inside of said dome so as to light, substantially uniformly, the portions of the dome which are exposed to view.

A further object of the invention is to provide a dome plate for the dispenser which supports the electric lamps in spaced relation and in such relationship with respect to the dome that it will be substantially uniformly lighted.

These and other objects will become apparent from a study of this specification and the drawings which are attached hereto, made a part hereof and in which:

Figure 1 is a front elevation of the upper exterior portion of the dispenser showing the dome in place.

Figure 2 is a front elevation, with parts broken away showing the dome plate, lamp support and lamps in their relative positions.

Figure 3 is a plan view of the structure of Figure 2.

Figure 4 is a sectional view taken substantially on the line 4—4 of Figure 3 showing the means for mounting the dome and trim on the dome plate.

Figure 5 is an end elevation of the dome.

Referring first to Figure 1, the numeral 1 represents the front or dial panel of the housing, 2 the nozzle side panel in which is mounted the nozzle boot 3, and 7 is the reset side panel.

From Figures 2 and 3 it will be seen that the frame of the dispenser comprises four corner angle posts 9 which are fixed in a base (not shown) and the dome plate 11 is attached at its corners to the top ends of the angles by suitable bolts 13.

As seen in Figure 2 the dome plate is formed with two "abutment" portions 15 which are attached to the ends of the posts 9 and a narrower and relatively shallow bridging portion 17 which rises above the portions 15. The bridging portion has a central, substantially square flat area defined by the lines 19. This area has a round central opening 21 surrounded by four holes through which are passed the cap screws 23 which support the junction box 25.

A conduit 27 for electric wires connects the junction box with a switch box 29 from which extends a switch operating shaft 31. Current is supplied to the switch (not shown) in box 29 through wires which are drawn through conduit 33.

A boss 35 formed on the box 25 is bored and tapped to receive a plug 37.

A pair of tapped bosses 39 extend from opposite sides of the box 25 at a slight upward angle and receive a nipple or conduit 41. The other end of each nipple carries a Y-shaped fitting 43 which has two lamp sockets 45 which lie substantially in the same plane but extend outwardly away from the dome plate at about an angle of 140° (including angle A).

The lamps 47 which are mounted in the sockets thus extend upwardly and outwardly from the box 25 to illuminate the dials 49 which are mounted below the lamps and to light the dome which is mounted above the lamps. The wires from the lamp sockets are drawn into the box 25 and out through the boss 35 as are the wires from conduit 27. The proper connections are made, the wires are tucked into the box and the plug 37 is inserted and drawn tight to render the box explosionproof.

As shown particularly in Figures 2 and 4, the holes 51 formed in the flanges 53 of the abutment portions 15 of the dome plate receive bolts 55 for mounting brackets 57 which extend substantially perpendicular to the flanges and at their outer ends are welded to rails 59 which have a top flange 61 which is offset outwardly from a bottom flange 63. The ends of the rails are curved inwardly at 65 to conform to the curvature of the dial panels.

The upper flange 61 is provided with a series of perforations 67 to receive bolts 69 which have their heads confined in a way 71 formed in a trim strip 73 which extends parallel to the rail and has a slot 74 to pass the bolts 69.

A gasket 76 also extends parallel to the trim strip and is perforated to pass the bolts.

The dome which is indicated by the numeral 75 also has a series of perforations 77 which are aligned with those in the rail, to receive the bolts 69.

The bolts 69 pass through the gasket, the holes in the dome, and flange 61 to hold the strip, gasket, dome and rail together.

The upward and outward extension of the lamp sockets, as described above, and the position of the trim strip are so related that the filaments of the lamps 47 which are mounted in the sockets will be positioned near but below the lower edge of the trim strip to prevent direct horizontal exposure of the filaments through the adjacent flange of the dome.

The dome, as is shown in Figure 5, is cut away at 79 to conform with the curvature of the side housings and a U-edging 81 of synthetic rubber or other suitable material is installed on the edge of the dome so as to seal the joint between the dome and the side housing against rain, dust, etc.

The dome is preferably made by forming a mat of glass fibers in the form of fiber glass roving in the general form of the dome and thereafter impregnating the mat with a resin such as the polyester resin known to the trade as "Hexion No. 93." The plastic contains a suitable coloring material and up to 3% by weight of antimony trioxide to render it slow burning.

After the mat is formed it is cured under heat and pressure in suitable dies. The minimum glass content of the dome is preferably 20% by volume to give it the strength required to withstand the impact of hail, a temperature range of plus 225° F. to minus 85° F. and other severe conditions.

After the dome has been formed and cured, the perforations 77 are formed in the two depending flanges 83 which run parallel to the dial panels. The U-edging is mounted on the depending flanges 85 which overlie the upper portions of the end panels.
As will be seen from Figures 1 and 5 the top of the dome is formed along arcs of long radius on the order of 40 to 60 inches, said arcs intersecting at right angles. One group of arcs is disposed parallel to the dial panels and the other group is disposed parallel to the side panels.

Further as will be seen from Figure 3, the dome dial panel flanges 83 and dome side panel flanges 85 follow long radius arcs on the order of about 55 inches, described about a vertical axis. The top and flanges as well as the flanges themselves are connected by arcs of shorter radius, on the order of 1¼ inches.

It will be seen from Figures 2 and 3 that the dome and lamps 47 are so positioned that all four lamps will shed light on the underneath surface of the dome. The side end and top portions of the dome parallel the dial panels are substantially uniformly lighted by the two lamps adjacent thereto.

While a less evenly lighted area appears at the top of the dome and extends toward the flanges 85 this does not detract from the appearance of the dispenser since it is out of the view of the customer being served who usually observes the dispenser from a relatively low level and from a position in front of or in front of and to one side of the dial. From such positions only the well lighted portions of the dome are visible to him.

It is obvious that various changes may be made in the form, structure and arrangement of parts of the specific embodiments of the invention disclosed herein for purposes of illustration, without departing from the spirit of the invention. Accordingly, applicant does not desire to be limited to such specific embodiments but desires protection falling fairly within the scope of the appended claims.

I claim:

1. A liquid dispenser having a frame, and a housing surrounding said frame including a pair of oppositely disposed dial panels and a pair of oppositely disposed side panels positioned between said dial panels, means for removable attaching the dial panels to the frame, a dome having depending dial panel flanges adjacent and extending substantially parallel to the upper ends of said panels, means for connecting each of the dial panel flanges to said frame, comprising brackets attached to said frame and extending outwardly therefrom, a rail fixed to the outer ends of said brackets so as to lie substantially parallel to and closely adjacent the lower, inner portion of the corresponding dial panel flange, a trim strip disposed on the exterior of said dial panel flange, extending generally parallel to the lower portion thereof and extending downwardly beyond the edge thereof into overlapping engagement with the upper end of the corresponding dial panel so as to seal therewith and means for fastening said trim strip, and dome side panel flange to said rail.

2. The structure defined by claim 1 wherein said last mentioned fastening means includes bolts having their heads mounted in said trim strip and their shanks extending through perforations in said dome and rail for fastening the strip and dome to said rail.

3. The structure defined by claim 2 wherein a gasket strip is clamped by said bolts, between said dome dial panel flange and trim strip to seal the joint therewith.

4. In a liquid dispensing apparatus, the combination of a frame including corner posts, a dome plate comprising two abutment portions having the outer corners thereof attached to two corresponding corner posts and a narrower bridge portion merging at its ends with the abutment portions, a junction box mounted centrally on said bridge portion, a conduit extending from each side of said box, laterally of said bridge portion, a pair of lamp sockets mounted on each conduit, the axis of the sockets extending in substantially opposite, substantially horizontal directions with respect to said conduits, electric lamps mounted in said sockets, a translucent dome having depending flanges adapted to encompass said dome plate and lamps and means for mounting said dome on said frame.

5. The structure defined by claim 4 wherein the axes of the lamp sockets form a Y with the axis of the conduit.

6. The structure defined by claim 4 wherein said bridge portion is disposed at a level above that of the abutment portions and the axes of said lamp sockets are disposed in a plane which extends upwardly and outwardly with respect to the horizontal plane which includes the axis of the conduit, to distribute light over a greater area of said dome.

7. The structure defined by claim 5 wherein a dial is mounted vertically and substantially parallel to and in outwardly spaced relation with respect to said bridge portion, the included angle of said Y being such that at least a portion of the filament of each lamp will lie outwardly beyond its associated dial so as to illuminate same.

8. The structure defined by claim 4 wherein said means for mounting the dome includes a trim strip which extends above the lower end of the dome flange and wherein said conduit is disposed at a level below the level of said trim strip, the axes of the lamp sockets on one side being disposed in a plane which extends upwardly and outwardly with respect to a horizontal plane which includes the axis of said conduit to position the filaments of said lamps near but below the upper edge of said trim strip to prevent direct horizontal exposure of said filaments through the flange of said dome.

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