Jan. 21, 1964 B. R. LEWIS ETAL 3,118,645

SUPPORT MEANS FOR SPRAY TYPE CONTAINERS

Filed Nov. 24, 1961

FIG. 1

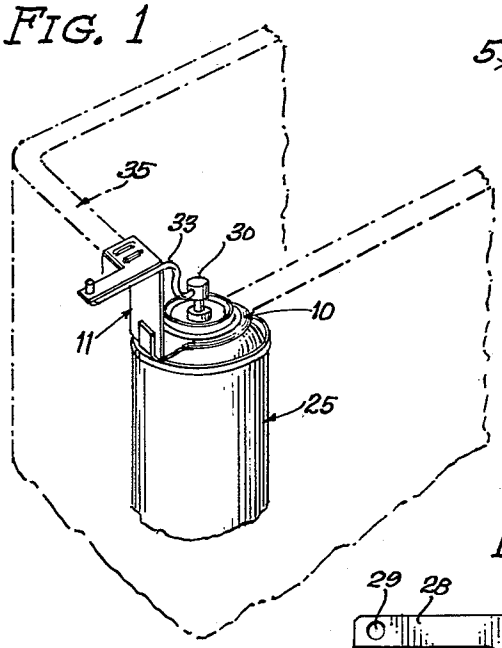


FIG. 2

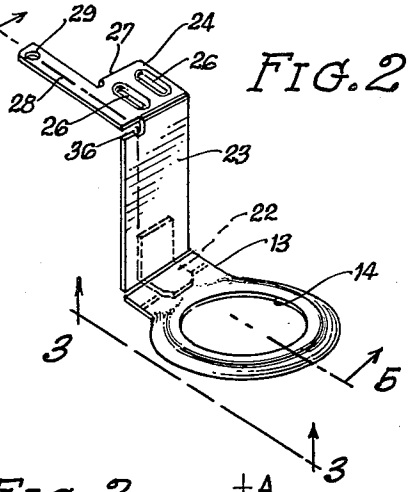


FIG. 3

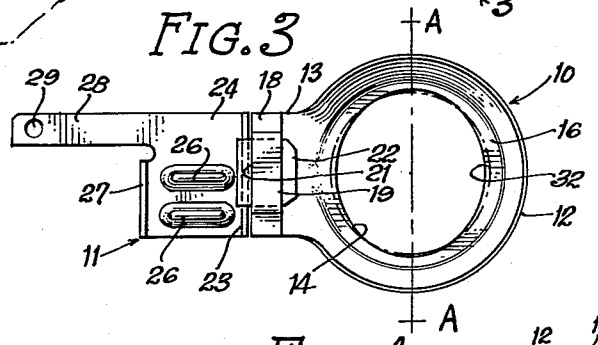


FIG. 5

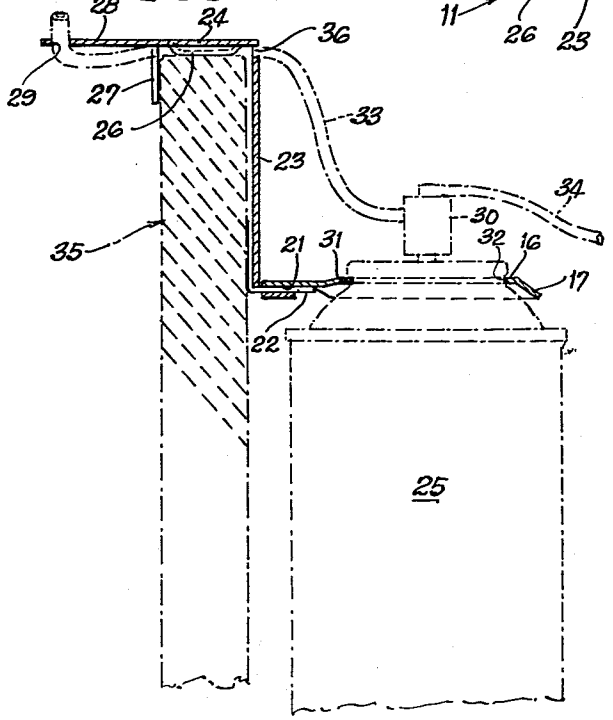
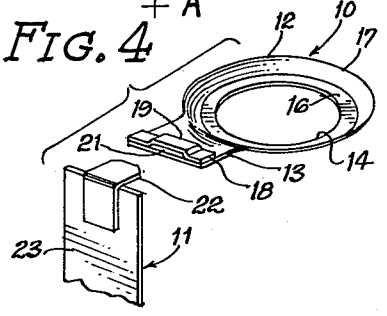


FIG. 4



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SUPPORT MEANS FOR SPRAY TYPE CONTAINERS

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This invention relates generally to improvements in support means for containers and more particularly to support means for spray type containers.

One of the objects of this invention is the provision of novel support means which is readily attachable to a spray type container for supporting the same.

Another object of this invention is the provision of a support means of the foregoing type which is simple in construction, economical to manufacture, easy to install, and efficient in operation.

Other and further objects and advantages of this invention will become apparent from the following description when the same is considered in connection with the accompanying drawing in which:

FIG. 1 is a perspective view of a support means in accordance with our invention and showing the same applied to a conventional spray type container, the container being supported within the water tank of a toilet, indicated by broken lines.

FIG. 2 is a perspective view of our invention.

FIG. 3 is a bottom plan view, on an enlarged scale, looking in the direction of the arrows 3—3 of FIG. 2.

FIG. 4 is a fragmentary perspective view of our invention showing the same in upside down position and with the components in separated relation.

FIG. 5 is a cross-sectional view taken substantially on line 5—5 of FIG. 2 and showing the support means of our invention attached to a spray container and supported on a vertical wall, the wall and container being indicated in broken lines.

In co-pending application S.N. 116,020 filed June 9, 1961, now Patent No. 3,093,835, there is disclosed a room deodorizer comprising an aerosol spray type container and support means for supporting the same within the water tank of a conventional toilet. Our invention is related to a novel support means for supporting such a container in relation to a vertical wall of the tank and in other applications.

Referring to the drawings, the support means of our invention comprises two separable sections 10 and 11, each formed of suitable material which, for example, may be sheet metal or plastic. The collar section 10 includes a substantially circular portion 12 integral with a lateral extension 13. The circular portion has an opening 14 therein which is slightly elliptical, the major axis of the opening being indicated by the line A—A. The circular portion 12 in cross section is formed substantially as illustrated in FIG. 5, there being a flat horizontal portion 16 constituting the marginal area surrounding the opening 14 and a downwardly and outwardly inclined portion 17 integral with the horizontal portion. The lateral extension 13 is provided on the underside thereof with a strap 18 which is welded thereto, the strap having an intermediate offset portion 19 to afford in cooperation with the lateral extension 13 a socket 21 for receiving the tongue 22 of section 11 hereinafter to be described.

The bracket section 11, as was hereinbefore explained, may be formed of sheet metal or other suitable material and includes a vertical body portion 23 to the lower end of which may be welded or formed integrally therewith a tongue 22 having a reduced width and of a size to be snugly received within the socket 21. Integrally formed

with the vertical portion 23 is a horizontal portion 24 shaped substantially as illustrated, there being a pair of embossments 26 stamped into the underside of the portion 24 for a purpose as will be hereinafter explained. The horizontal portion 24 terminates in a downwardly directed flange 27. Integral with the horizontal portion 24 is an arm extension 28, the end portion of which is provided with an aperture 29.

The collar section 10 is intended to be applied to the dome portion of a conventional aerosol spray type container 25 and to engage therewith in a more or less permanent relationship. It is known that the dome portion of the conventional spray container affords an annular shoulder as at 31, as seen clearly in FIG. 5, to retain the collar section 10 after the same has been applied to the container.

In order to assemble the collar member and container the collar member 10 is placed over the dome portion of the spray container with the marginal edge portion 32 opposite the lateral extension 13 engaging under the shoulder 31 of the container. By pressing down upon the lateral extension, the collar section 10 is temporarily stretched or deformed by the container dome which acts in the manner of a die to deform the opening 14 to a substantially circular configuration so that the collar section may pass over the dome of the container after which it is caused to resume its normal elliptical condition whereby it becomes locked to the container and more or less a permanent part thereof. It will be understood that the collar section 10 after installation is swivally connected to the container.

The sections 10 and 11 are assembled in the relationship illustrated in FIGS. 2 and 3 wherein the tongue 22 is received within the socket 21 of collar section 10, the two sections being thus retained in frictional engagement. The entire assembly including the container may be supported on the upper edge of a wall, as for example, the water tank 35 of a flush toilet as illustrated in FIGS. 1 and 5.

FIGS. 1 and 5 illustrate the use of our invention in an application similar to that disclosed in my Patent No. 3,093,835, hereinabove referred to, in which the cap 30 fitted on the valve stem of the container is connected with a flexible tube 33 and an arm 34 actuated by the ball lift assembly of the flush tank actuates the valve of the container. The flexible tube 33 is passed through a slot 36 at the juncture of the vertical and horizontal portions of section 11 and the end of the tube is received in the aperture 29. It will be apparent that the embossments 26 provide clearance for preventing the collapse of the tubing at the point where the tubing passes over the upper edge of the wall. It will be understood that when the cover of the tank is in position, the arm 28 will be deformed downwardly to accommodate the cover.

It will also be understood that our invention is not limited to the specific form of section 11 which, of course, may take other forms depending upon the application of use. Essentially our invention resides in the provision of a collar section of the type herein described connected to any one of a variety of means for supporting a spray container in depending relation to the collar section. The collar section, of course, may be separable from the supporting means or may be integrally formed therewith.

It will be further understood that the collar section also may be formed as from wire stock or other suitable material and constructed to be applied to the dome portion of the container.

It is also within the purview of our invention to provide a collar section which may be assembled on the container at the time of fabrication of the same so that the collar section becomes a permanent part of the container when it leaves the manufacturer. Under such conditions

the collar section preferably would have a circular opening not ovalized, as in the case of the embodiment hereinabove described.

Various changes coming within the spirit of our invention may suggest themselves to those skilled in the art; hence, we do not wish to be limited to the specific embodiments shown and described or uses mentioned, but intend the same to be merely exemplary, the scope of our invention being limited only by the appended claims.

We claim:

1. Means for supporting a conventional spray type container, having a dome portion provided with an annular shoulder comprising

(*a*) a collar formed of stamped sheet metal and having a slightly ovalized opening,

(*b*) the dimension across the minor axis of said opening being less than the maximum diameter of said shoulder and the dimension across the major axis of said opening being greater than the maximum diameter of said shoulder,

(*c*) the marginal area surrounding said opening being substantially flat and

(*d*) there being a downwardly and outwardly inclined portion integral with said marginal area,

(*e*) the opening in said collar being intended for association with a spray-type container whereby such container can be inserted through said opening from a given direction,

(*f*) said collar being deformable when pressed against the dome portion to pass over said shoulder and to engage against the underside of said shoulder to secure said container.

2. The invention as defined in claim 1, wherein the collar is provided with bracket means for supporting the same.

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