

[54] **DISPERSANT CONTAINER AND DISPENSER**

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[51] Int. Cl. **B05b 17/00**

[58] Field of Search.....239/37, 41, 42, 43, 239/44, 47, 57, 309

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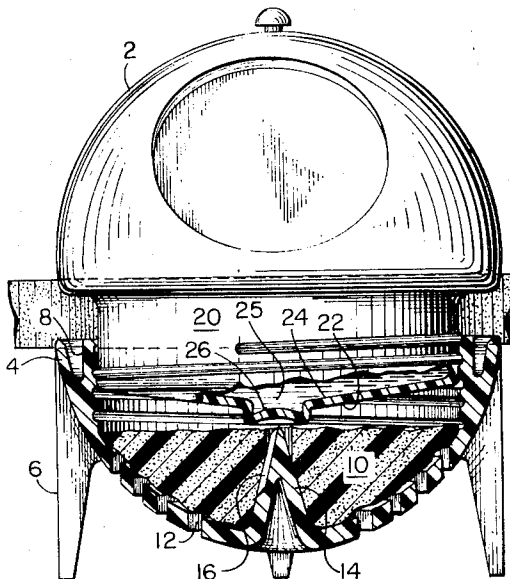
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[57] **ABSTRACT**

Container for dispersant material comprising first and second members adapted to be movably connected together, the first member having wick means disposed therein in communication with a surrounding atmosphere, the second member having therein a sealed reservoir containing fluid dispersant material, the first member further including means for opening the reservoir, whereby upon relative movement of the first and second members toward each other the reservoir opening means operates to open the reservoir, permitting flow of the dispersant material therefrom onto the wick means.

4 Claims, 5 Drawing Figures



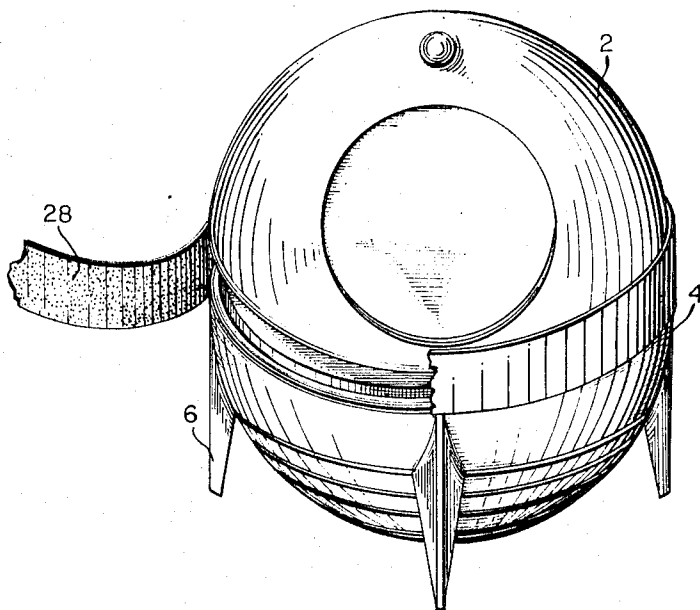


Fig. 1

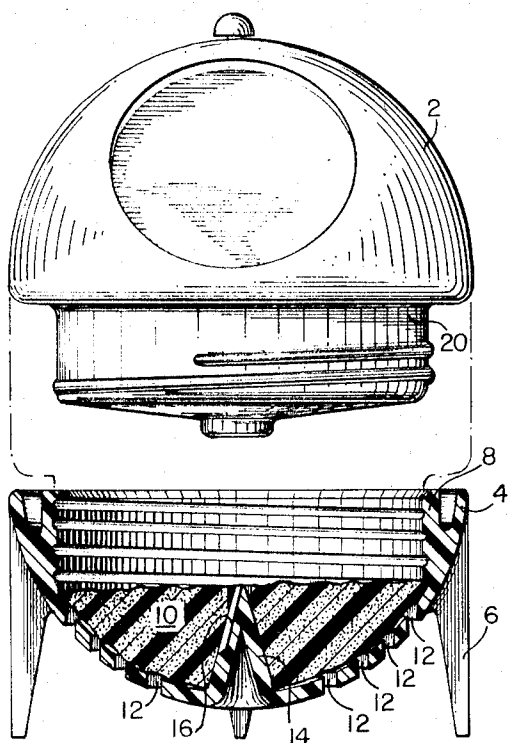
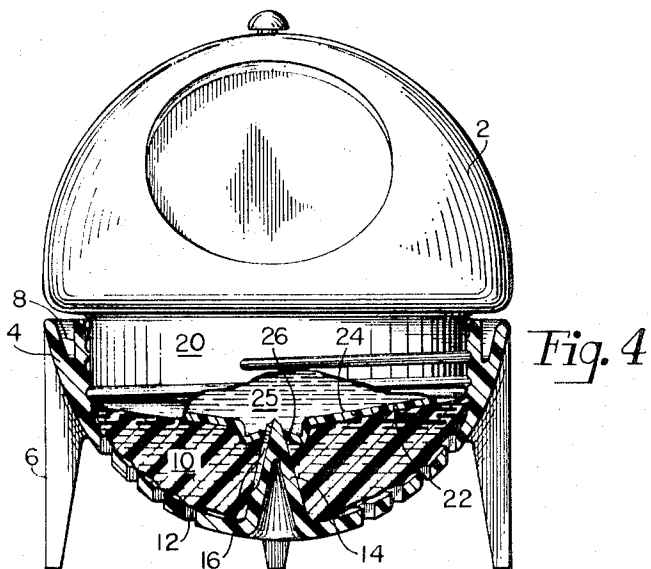
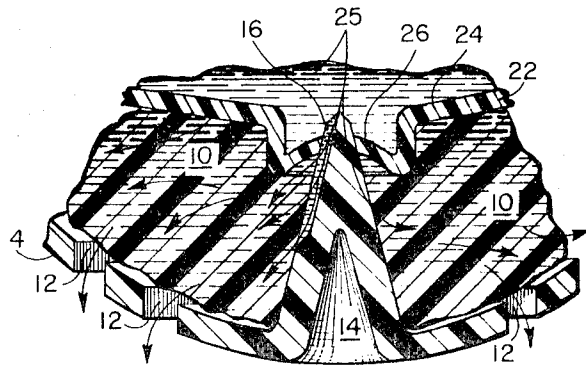
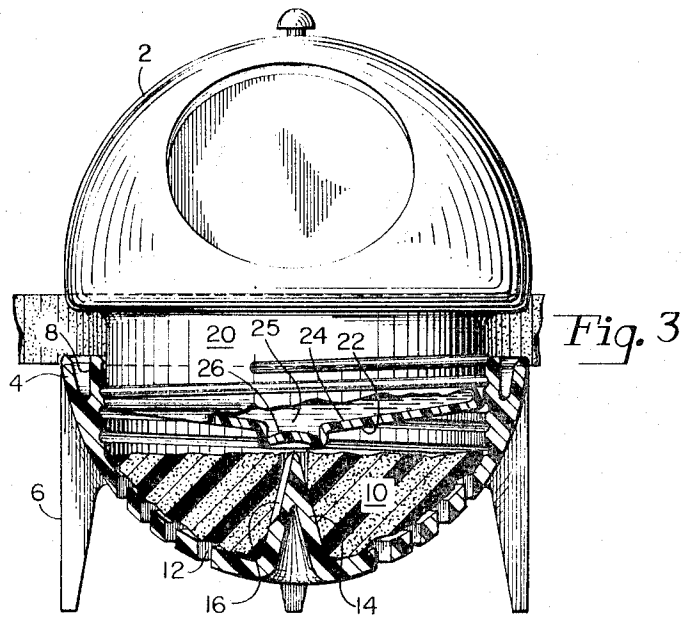


Fig. 2

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DISPERSANT CONTAINER AND DISPENSER**BACKGROUND OF THE INVENTION****1. Field of the Invention**

This invention relates to containers and dispensers and is directed more particularly to a container for a dispersant, which container is easily converted into a dispenser of the wick type.

2. Description of the Prior Art

Dispensers of the wick type are often used to release dispersants in gaseous or vaporous form into a room or other area, usually to establish a pleasant odor or a medically advantageous environment, or to control or eliminate insects, or the like.

Generally, such a dispenser reaches the consumer with a major portion of a wick means submerged in the dispersant material and a smaller portion of the wick means extending from a reservoir in which the dispersant is confined. The protruding portion of the wick is usually covered with a cap to prevent undue loss of dispersant through evaporation. When the cap is removed, dispersant enters the surrounding atmosphere in gaseous form. Thus, whenever the dispenser is in operation the wick means is exposed and by its nature not particularly attractive.

To overcome the unattractiveness of such devices, the wick may be covered by a grid or screen, in which case two caps are required, one comprising the grid and a second to cover the grid to inhibit evaporation.

Aside from appearance problems, whenever the wick means is subject to saturation by the dispersant material, there is almost invariably loss of dispersant by evaporation, creating limitations as to the shelf life of the dispensers.

SUMMARY OF THE INVENTION

It is, therefore, an object of the invention to provide a dispenser of the wick type in which the wick and dispersant are kept separately until it is desired to use the dispenser, thus eliminating entirely shelf loss of contents.

A further object of the invention is to conceal the wick means by an attractive perforated cover which, because of the dryness of the wick means, need not itself be covered, but which upon activation of the dispenser serves to facilitate passage of dispersant vapors from the wick means into the surrounding atmosphere.

With the above and other objects in view, as will hereinafter appear, a feature of the present invention is the provision of a container for dispersant material comprising first and second members, the first member having wick means therein as well as aperture means for permitting flow of vapors from the wick means to the surrounding atmosphere, the second member having a sealed reservoir containing fluid dispersant material, the first member further having means engageable with the reservoir and operable upon engagement to open the reservoir to permit the dispersant therein to flow therefrom onto the wick means, the first and second members being adapted to be movably connected together, so that upon relative movement of the members toward each other the reservoir opening means engages the reservoir and operates to open the reservoir.

The above and other features of the invention, including various novel details of construction and combinations of parts, will now be more particularly described with reference to the accompanying drawings and pointed out in the claims. It will be understood that the particular device embodying the invention is shown by way of illustration only and not as a limitation of the invention. The principles and features of this invention may be employed in various and numerous embodiments without departing from the scope of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

Reference is made to the accompanying drawings in which is shown an illustrative embodiment of the invention from which its novel features and advantages will be apparent.

FIG. 1 is a perspective view of one form of dispersant container and dispenser illustrative of an embodiment of the invention;

FIG. 2 is a side elevational view showing the two components of the container just prior to attachment to each other, and showing one of the components in centerline section;

FIG. 3 is similar to FIG. 2 but shows the two components attached to each other;

FIG. 4 is similar to FIG. 3 but shows the components in operative position; and

FIG. 5 is an enlarged sectional view of a portion of the container.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 2, it will be seen that the container includes a top member 2 and a bottom member 4. The bottom member 4 is generally cup-shaped and has support means, such as legs 6, for supporting the container on a surface. The bottom member includes a cylindrical wall 8 which is threaded to receive the top member 2. Disposed in the bottom member 4 is a wick material 10 which is in communication with the surrounding atmosphere by way of apertures 12 in the bottom member 4. The bottom member 4 also includes a generally conical portion 14 provided with a groove 16, the conical portion 14 and groove 16 serving as an opening and conduit means, as will be fully described below.

The top member 2 includes a cylindrical projection 20, which is threaded for engagement with the threaded cylindrical wall 8 of the bottom member 4. Referring to FIG. 3, it will be seen that the top member 2 is adapted for threaded connection to the bottom member 4. The top member 2 includes an internal bottom wall 22 which completely seals a chamber 24 in the top member, the chamber 24 containing a dispersant product 25, as for example, a room freshener, a medicament for inhaling, an insecticide, or the like. The bottom wall 22 of the top member 2 includes a portion 26 disposed proximate to the pointed end of the conical portion 14.

The bottom member 4 may be formed of plastic in a molding operation with the wall 8, the legs 6, conical portion 14 and apertures 12 all molded as an integral unit. The top member may be formed by molding all but the wall 24, filling the top member 2 with the

dispersant 25 and then molding the wall 22, thereby producing an inviolate chamber 24 containing dispersant 25.

In assembly, the top member 2 and bottom member 4 are threadedly connected, as shown in FIG. 3. A tape member 28, or the like (FIG. 1), may be used to inhibit further rotation of the members 2, 4 relative to each other, or at least indicate when such tampering has taken place.

In operation, the tape 28 is removed, as shown in FIG. 1, and the top member 2 is screwed further into the bottom member 4. The portion 26 of the wall 22 engages the pointed end of the conical portion 14. Further rotation of the top member causes the conical portion 14 to pierce the wall portion 26, permitting the dispersant 25 to flow along the groove 16 and to be absorbed by the wick material 10, as shown in FIG. 4, and particularly in FIG. 5. The dispersant 25 absorbed by the wick material 10 evaporates and passes through the apertures 12 into the surrounding atmosphere in vaporous or gaseous form.

The wick material 10 may be any porous material compatible with the dispersant in the chamber 24. A plastic or rubber sponge-like material may be used, or a fibrous material, or other material suitable for the purpose.

It is to be understood that the present invention is by no means limited to the particular construction herein disclosed and/or shown in the drawings, but also comprises any modifications or equivalents within the scope of the disclosure.

Having thus described my invention what I claim as new and desired to secure by Letters Patent of the

United States is:

1. Container for dispersant material, said container comprising a molded plastic first member, said first member providing a generally cup-shaped chamber, wick means disposed in said chamber, said first member having aperture means for placing said wick means in communication with a surrounding atmosphere, a molded plastic second member adapted for threaded connection to said first member, said second member including as an integrally molded portion thereof a sealed reservoir for containing fluid dispersant material, and a conical portion molded integral with said first member and disposed for alignment with said second member, whereby upon progressive advancement of said threaded connection, said conical portion ruptures said reservoir permitting said dispersant to flow from said reservoir into said wick material to be dissipated to said atmosphere by way of said apertures.

2. The invention according to claim 1 in which said container includes as an integrally molded portion thereof support means for maintaining the remainder of said container removed from a surface on which said container rests.

3. The invention according to claim 1 including removable tape means attached to respective proximate edges of said first and second members when said members are threadedly connected, for inhibiting advancement of said threaded connection.

4. The invention according to claim 1 in which said conical portion is provided with a groove adapted to place the interior of said reservoir in communication with said wick means.

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