

April 18, 1961

F. M. GANZ, JR., ET AL
HANGING DEVICE AND CONTAINER

2,980,277

Filed Oct. 14, 1957

FIG. 1

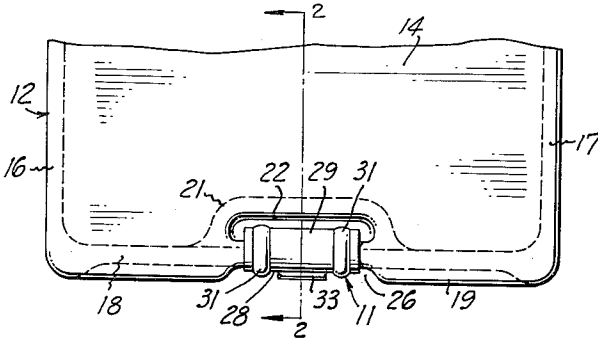


FIG. 2

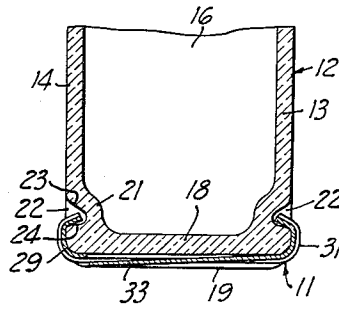
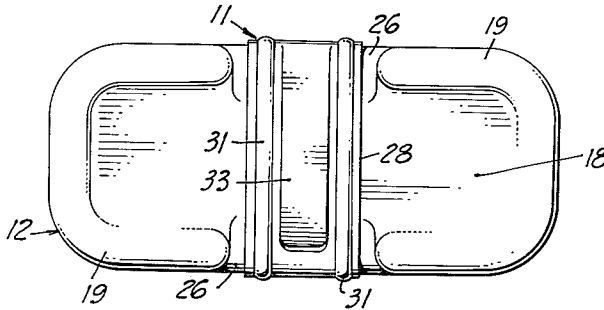
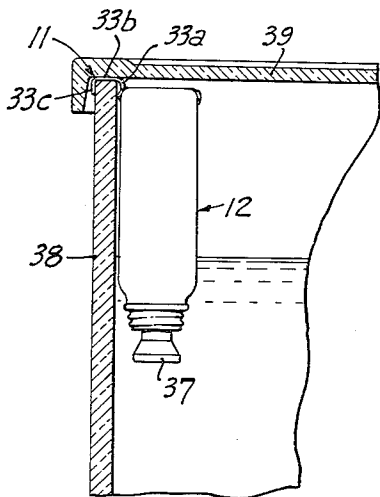
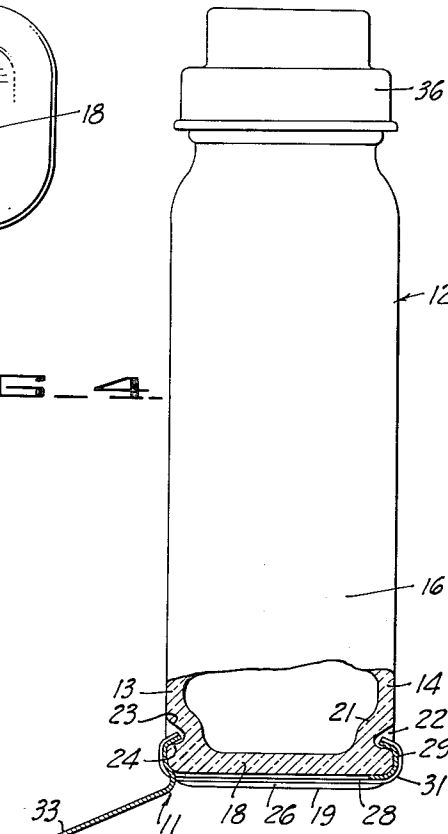


FIG. 3

FIG. 4

FIG. 5



INVENTORS
Frederick M. Ganz, Jr.
Don E. Otermat
BY
Flehm and Swain
ATTORNEYS

1

2,980,277

HANGING DEVICE AND CONTAINER

Frederick M. Ganz, Jr., San Francisco, and Don E. Otermat, Redwood City, Calif., assignors to Tidy Chemical Company, Sunnyvale, Calif., a corporation of California

Filed Oct. 14, 1957, Ser. No. 690,038

1 Claim. (Cl. 215—100)

This invention relates to a hanging device and container.

Heretofore it has been difficult to suspend certain types of containers so that they will be supported in a predetermined position. For example, in dispensing into a flush tank a toilet bowl detergent and room freshener packaged in a bottle, it is desirable to provide means for suspending the bottle in the flush tank. There is a demand for such a hanging device or means. Such a device should be easy to use and relatively inexpensive so that the bottle and the hanging means can be destroyed or thrown away when the liquid therein has been exhausted.

In general, it is an object of the present invention to provide a hanging device and container which can be readily suspended from a support.

Another object of the invention is to provide a hanging device of the above character which is economical to manufacture and which can be readily applied to the container.

Another object of the invention is to provide a hanging device of the above character which can be easily utilized.

Another object of the invention is to provide a container of the above character which is economical to manufacture.

Another object of the invention is to provide a hanging device of the above character which will not become detached from the container.

Additional objects and features of the invention will appear from the following description in which the preferred embodiment has been set forth in detail in conjunction with the accompanying drawing.

Referring to the drawing:

Figure 1 is a partial front elevational view of a container with a hanging device mounted thereon and incorporating our invention.

Figure 2 is a partial cross-sectional view taken along the line 2—2 of Figure 1.

Figure 3 is a bottom plan view of the container shown in Figures 1 and 2.

Figure 4 is a side elevational view of the container showing the tongue-like member of the hanging device bent out ready for use.

Figure 5 is a partial cross-sectional view showing the container and hanging device mounted in a flush tank.

The hanging device 11 and the container 12 incorporating our invention is illustrated in Figures 1, 2 and 3 of the drawing. The container 12 can be of any desired shape and can be formed of any suitable material. For example, as shown in the drawing the container is formed of glass and is provided with side walls 13 and 14, end walls 16 and 17 and a bottom wall 18. The bottom wall 18 is slightly concave as shown to provide a ridge 19 adjacent the outer margin of the bottom wall.

A thickened portion 21 is provided adjacent the bottom wall and equidistant from the ends of the bottom wall. As shown in the drawing, the thickened portions 21 are

2

integral with the side walls 13 and 14 and the bottom wall 18. A longitudinal groove 22 parallel to the bottom wall is formed in each of the side walls adjacent the lower end thereof and near the bottom wall 18. The grooves 22 as shown have their upper surfaces 23 tapered inwardly and downwardly and their lower surfaces 24 extending inwardly substantially parallel to the bottom wall. Recesses 26 are provided in the ridges 19 adjacent the grooves 22 to accommodate the hanging device 11.

The hanging device 11 is in the form of a planar elongate member 28 formed of a suitable corrosion-resisting material such as aluminum. The planar member is provided with end portions 29 which have been crimped into the grooves 22 as shown in the drawing to firmly clamp the member 28 to the bottle. When the end portions 29 are clamped in place, the member 28 is resting on the bottom wall 18 in the recesses 26 and is maintained under tension. To strengthen the member, a pair of spaced parallel grooves 31 have been pressed into or formed in the member 28 adjacent the side edges of the member 28. The grooves 31 serve to inhibit bending of the member 28 and in particular serve to prevent the end portions 29 from bending and becoming detached from the grooves 22.

A tongue-like member 33 has been cut out from the portion of the planar elongate member 28 which lies between the parallel grooves 31. The tongue-like member has been cut out in such a manner that the base of the tongue-like member terminates at a point which is adjacent one of the end portions for a purpose hereinafter described. The free end of the tongue-like member is rounded as shown. The tongue-like member 33 is normally in a position which is substantially coincident with the plane of the planar elongate member 28. Thus, when the hanging device is not in use, the tongue-like member is in an out-of-the-way position.

Use of our hanging device and container can now be briefly described in conjunction with Figures 4 and 5 of the drawing. Let be assumed that the container is of the type as shown in Figure 4 in which the container is closed with a cap 36. Let it also be assumed that the container includes a suitable dispensing mechanism such as that described in copending application Serial No. 632,910, filed January 7, 1957. At described therein, the dispensing mechanism includes a float cap 37 which is shown in Figure 5. Such a container together with the dispensing mechanism can be utilized for dispensing a liquid toilet bowl detergent and room freshener carried within the bottle or container. Thus it is apparent that the liquids can be shipped in the bottle and that the hanging devices can be secured to the bottle before shipment. It is also readily apparent that the hanging devices 11 are of such a type that the containers can be readily shipped after the hanging devices have been attached to the bottles or containers. The tongue-like members 33 lie in the same plane as the planar elongate members 28 and for that reason do not protrude from the container.

When it is desired to utilize one of the bottles, the cap 36 is removed. The tongue-like member 33 is then grasped and bent outwardly away from the planar elongate member 28 into a position similar to that shown in Figure 4. The tongue-like member 33 can then be bent over any suitable support to suspend the container or bottle from the support. For example, as shown when the container contains a toilet bowl detergent and room freshener, the hanger can be bent over a wall 38 of a flush tank as shown. Since the hanging device is formed of a relatively pliable material, such as aluminum, the tongue-like member can be readily bent to conform to the shape of the support. After the hanging device and container are in place, the cover 39 for the flush

3

tank may be placed on the flush tank. It will be noted that the cover 39 firmly grasps the tongue-like member to hold it firmly in place. Since the tongue-like member is flat, the container will be held in a vertical position which facilitates the proper operation of the dispensing mechanism.

It also will be noted that since the base of the tongue-like member terminates near one side wall of the container, the container is held very close to the wall 38 to which the tongue-like member 33 is secured. This construction of the tongue-like member also serves to make it possible to secure the container near the top edge of the wall. The base portion 33a of the tongue-like member extends upwardly in a substantially vertical direction from the container and for that reason substantially all of the weight of the container is placed upon the portion 33b of the tongue-like member and very little force is applied to the portion 33c. This prevents bending of the tongue-like member and therefore prevents the container from moving downwardly.

After the fluid is dispensed from the container as described in copending application, Serial No. 632,910, filed January 7, 1957, the container and the hanging device may be removed from the flush tank merely by removing the cover 39 and lifting the container and hanging device from the wall of the flush tank.

Although the material utilized for the hanging device is relatively easy to bend, the grooves 31 provided in the member 28 serve to prevent the end portions from becoming readily detached from the grooves 22.

It is apparent from the foregoing that our hanging device and container can be used in many different applications. The hanging device is particularly advantageous

4

in that it can be readily secured to the container and can be readily secured to the support from which the container is to be suspended.

We claim:

- 5 In combination, a container and a hanging device for suspending the container from a support, the container having side walls and a bottom wall; an outwardly facing recess in each of opposed side walls adjacent said bottom wall, said hanging device comprising a generally flat elongated strip of ductile metal having substantially straight side edges and extending across said bottom wall with its end portions bent upwardly and inwardly into said recesses to lock said device to said container, a generally U-shaped slit in the longitudinal central portion
- 15 of said strip with its bight portion adjacent one edge of said bottom wall and its spaced leg portions terminating substantially at the opposite edge of said bottom wall and defining an integral bendable tab adapted to be bent to extend laterally of said container whereby it
- 20 may be bent over the upper edge of a support to suspend said container along a side of said support, and reinforcing ribs extending along said strip from end to end thereof between said U-shaped slit and each of said side edges and serving to stiffen said strip to securely retain
- 25 said end portions in said recesses.

References Cited in the file of this patent

UNITED STATES PATENTS

30	1,813,837	Boland	July 7, 1931
	2,304,547	Cutter	Dec. 8, 1942
	2,362,523	Armstrong	Nov. 14, 1944
	2,635,604	Fredrickson	Apr. 21, 1953