

Nov. 25, 1969

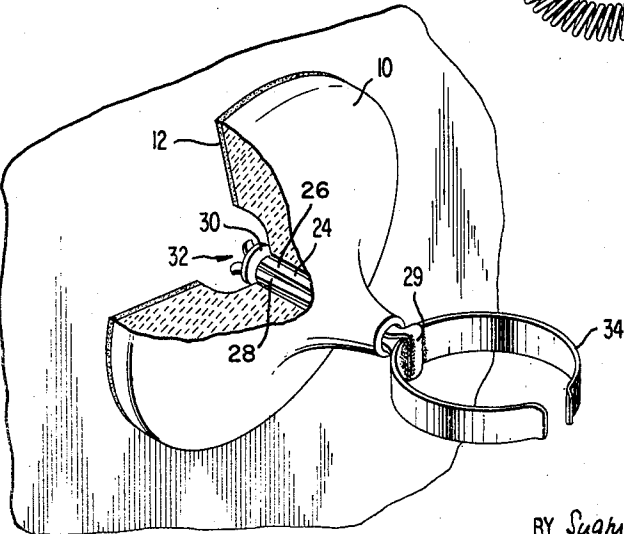
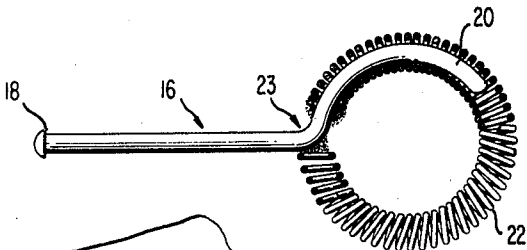
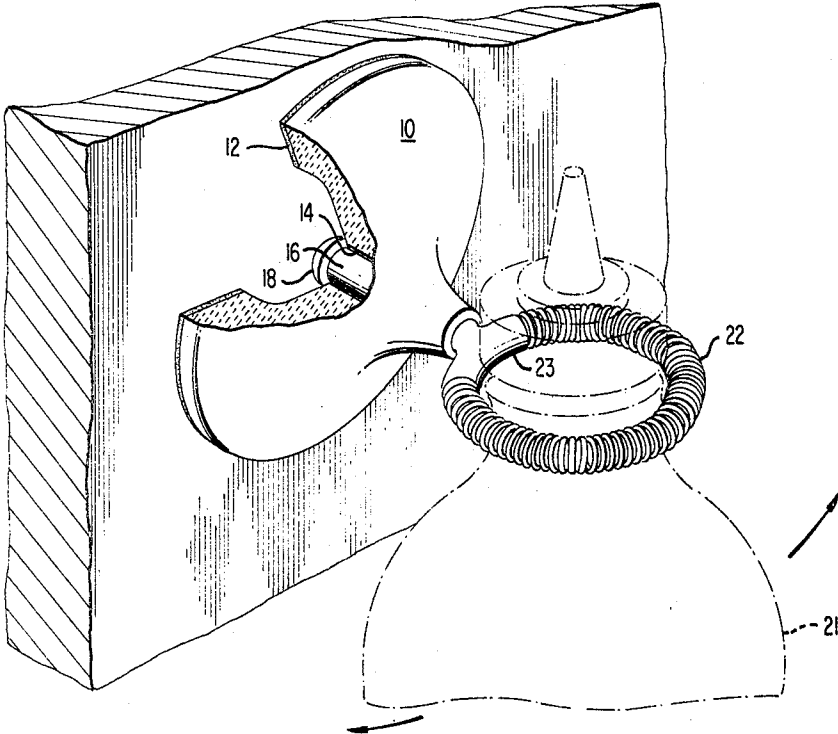
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3,480,244

WALL MOUNTED BRACKET FOR HOLDING CONTAINERS

Filed Feb. 13, 1969

2 Sheets-Sheet 1



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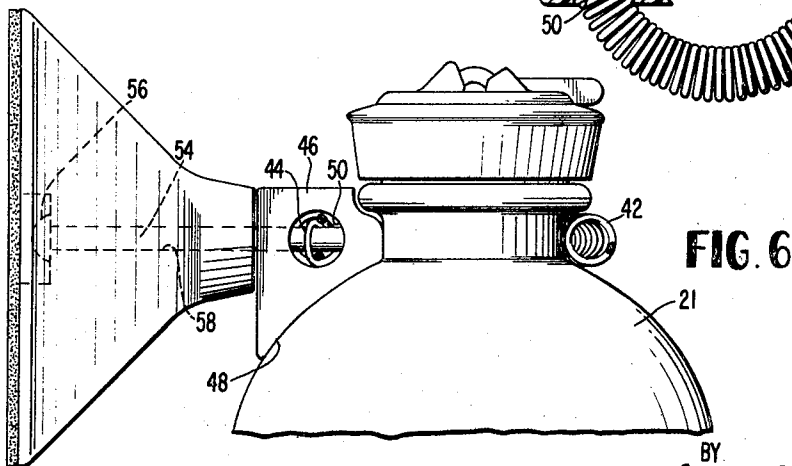
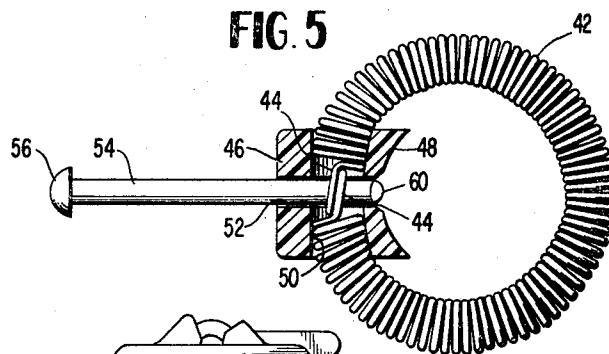
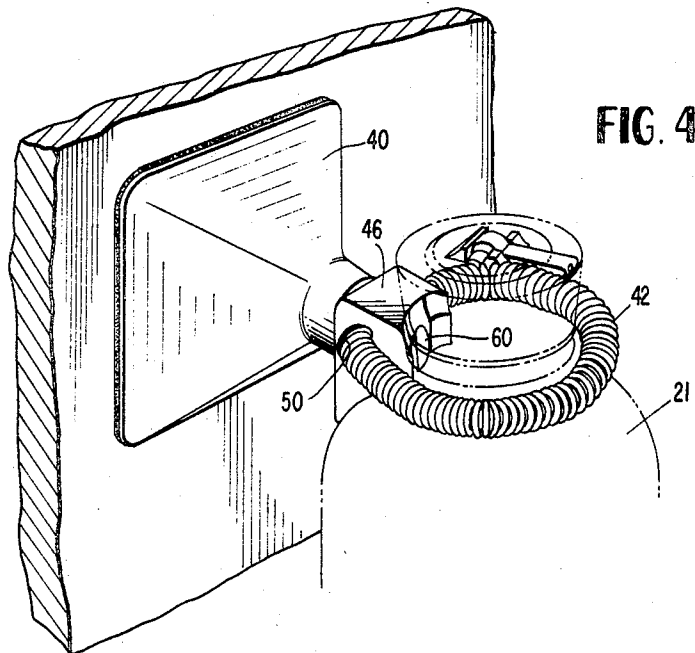
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WALL MOUNTED BRACKET FOR HOLDING CONTAINERS

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2 Sheets-Sheet 2



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3,480,244

WALL MOUNTED BRACKET FOR HOLDING CONTAINERS

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Continuation-in-part of application Ser. No. 707,175,
Feb. 12, 1968. This application Feb. 13, 1969, Ser.
No. 800,828

Int. Cl. A47g 29/00

U.S. Cl. 248—312

6 Claims

ABSTRACT OF THE DISCLOSURE

A bracket for holding dispensing containers including a mounting plate for attachment to a vertical surface, a shaft extending from and rotatable in the plate, and an expandable, self-adjusting spring-type clamp attached to the shaft for holding the necks of containers of varying diameters so that the container may be tilted to dispense its contents and will automatically return to its upright position when released.

CROSS-REFERENCE TO RELATED APPLICATION

This application is a continuation-in-part of prior application, Ser. No. 707,175, now abandoned, filed on Feb. 12, 1968.

BACKGROUND OF THE INVENTION

Field of the invention

This invention relates to a wall-mounted bracket for mounting dispensing containers on a vertical surface and for permitting the container to be tilted to dispense its contents.

Description of the prior art

Various types of brackets for holding containers are known. Some of these brackets permit the containers to be tilted for dispensing purposes. However, the known brackets are complex and expensive to manufacture. Further, they do not permit easy manipulation of the container so that it may be tilted with little effort and will return to its upright position when released.

SUMMARY OF THE INVENTION

The bracket of the present invention includes a mounting plate for attachment to a vertical surface. A shaft is rotatably mounted in the plate and extends normal to the surface of the plate. The shaft has an expandable, self-adjusting spring-type clamp at one end for engaging the neck of a dispensing bottle or container. The user may easily tilt the container about the axis of the rotatable shaft with one hand while dispensing the contents thereof. Upon being released, the container will automatically right itself without further manipulation by the user. This is important since many containers of this type are used for dispensing soap in factories and homes. Once the soap is dispensed into the user's hands, no further contact with the container is required, thus eliminating the possibility of spilling, dropping or handling the container with wet or soap-covered hands. By forming the clamp of an expandable, self-adjusting spring, the use of various sizes of bottles is permitted with a single bracket.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGURE 1 is a view of the bracket of the present invention partially in section;

FIGURE 2 is a view of the rotatable shaft and spring clip of the bracket shown in FIGURE 1;

FIGURE 3 is a view of a modification of the bracket shown in FIGURE 1, also partially in section;

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FIGURE 4 is a perspective view of a further modification of the bracket;

FIGURE 5 is an enlarged plan view of the modified bracket of FIGURE 4;

FIGURE 6 is an enlarged side view of the bracket of FIGURE 4.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIGURE 1, the bracket of the present invention includes a mounting plate 10, the rear surface of the plate being flat so that it may be attached to a wall. It will be understood by those skilled in the art that the rear surface can be formed in any shape corresponding to the surface upon which the bracket is to be mounted. A bore 14 is formed in the plate perpendicular to rear surface. Preferably, the rear surface is coated with an adhesive material 12 for bonding the bracket to a wall, but any other means of attachment may be used.

A shaft 16 (more easily seen in FIG. 2) is rotatably mounted in bore 14. One end of the shaft is flattened as at 18 to hold the shaft in the mounting plate. The other end of the shaft is formed in a curved extension 20, the radius of the curve of the extension being approximately that of the necks of containers to be mounted on the bracket. The purpose of this curve will be discussed later.

A clamp for engaging the neck of the container, indicated by numeral 21, is attached to the end of shaft 16 which extends from mounting plate 10. In the embodiment shown in FIGS. 1 and 2, the clamp is formed of a coil spring 22 whose ends are brought together at the point 23 on shaft 16 where curve 20 begins and are soldered to the shaft and each other. One end of coil spring 22 is slipped over curved portion 20 of shaft 16 so that the weight of the container will not pull the spring out of a plane perpendicular to rear surface of mounting plate 10. Coil spring 22 will expand so that the threads, flange or lip on the container can be slipped through the loop formed by the spring. Also, the expansion of the spring permits the use of containers having various neck sizes.

To dispense the contents of the container, it is rotated about the axis of shaft 16 to an inclined position, so that the contents are discharged by gravity. Since the shaft rotates easily, the weight of the container will automatically cause it to be righted when released. Therefore, handling of the container is greatly reduced, and the possibility of spilling or dropping is eliminated.

In the modification shown in FIG. 3, mounting plate 10 is identical to that shown in FIG. 1. Shaft 24 extends through the mounting plate and is formed of a pair of rods 26 and 28 having flattened, mating surfaces and a flattened loop 29 at one end. The construction is similar to that of the well known cotter key. The end of rods 26 and 28 nearest rear surface of the mounting plate pass through a washer 30 and are spaced apart as at 32. The opposite end of rods 26 and 28 extend out of the mounting plate and are joined together in a flattened loop 29 to grasp an arcuate strip 34 of spring metal. Strip 34 is formed in a partial circle having a radius slightly smaller than that of the neck of the container. Strip 34 is attached to loop 29 by soldering.

In the modification shown in FIGURES 4 through 6, the mounting plate 40 is similar in size and function to the mounting plate 10 of the previous modification, with the form of the plate 40 illustrating another example of the mounting plate. A spring 42 surrounds the neck of the bottle 21, and is similar to the spring 22 used in the first modification. The spring 42 has a loop 44 formed on each end thereof to provide a convenient means for forming the spring into a loop. A chock 46 has an inner surface 48 that conforms to the top of the bottle 21 in

the area of the neck thereof. The chock 46 has a radially fully extending hole 50 therethrough whose diameter is slightly larger than the diameter of the spring 42. A second hole 52 is provided longitudinally through the chock with the axis of the hole 52 intersecting the axis of the hole 50 in a perpendicular relation thereto. A shaft 54, with a head 56 thereon, is provided to assemble the elements of the brackets and to pivotally mount the bottle and chock to the mounting plate. In assembling this modification of the invention, the shaft 54 is inserted from the back of the mounting plate 40 in an opening 58 extending generally perpendicularly therethrough. The head 56 of the shaft will abut against the back of the plate with the shaft portion extending therefrom. The spring 42 is then formed into a loop with the ends thereof inserted into the hole 50 through the chock so that the loops 44 on the ends of the spring are in alignment with each other and with the hole 52 through the chock. The chock and the spring are then inserted into the shaft 56 so that the shaft will extend through the hole 52, and then across the axis of the hole 50 and through the loops 44 on the spring 42 and out through the inner surface 48 of the chock. The end of the shaft 54 is then bent at a right angle to the remainder of the shaft to form a locking tab 60. With the modifications thus assembled, the operation thereof is identical to the previous modifications.

While the invention has been particularly shown and described with reference to preferred embodiments thereof, it will be understood by those skilled in the art that various changes in form and details may be made therein without departing from the spirit and scope of the invention. For instance, the expansible spring means have been disclosed as being rigidly attached to a shaft which is rotatable in the mounting plate. However, it should be understood that the expansible spring means may be rotatably mounted on a shaft which is rigidly attached to the mounting plate.

What is claimed is:

1. A device for holding containers comprising:
 - (a) a mounting plate having a rear surface means for attaching the plate to a vertical surface;
 - (b) an expansible self-adjusting spring-type clamp pivotally mounted on said plate for rotation about an axis perpendicular to said rear surface;
 - (c) a shaft mounted in said plate substantially perpendicular to said rear surface and having one end extending beyond the plate on the side opposite to the rear surface, said clamp being attached to said one

end of the shaft and wherein said shaft is mounted in said plate for rotation about an axis perpendicular to said rear surface and said clamp is rigidly attached to said one end; and

- (d) wherein said clamp comprises a coil spring formed in a loop, means on the one end of the shaft to attach each end of said spring thereto and maintain the spring substantially in a plane passing through the axis of the shaft.

2. A device for holding containers as defined in claim 1 wherein said shaft is formed with a rigid curved extension at one end, at least part of said coil spring being formed around said extension whereby said spring is held in a plane perpendicular to the rear surface.

3. A device for holding containers as defined in claim 1 wherein said shaft is formed with a rigid curved extension at one end, at least part of said coil spring being formed around said extension whereby said spring is held in a plane perpendicular to said rear surface.

4. A device for holding containers as defined in claim 1 wherein said means comprises a chock and a coil spring formed in a loop, each end of said spring being attached to said chock with said chock being received on a shaft rotatably mounted in said plate.

5. A device for holding containers as defined in claim 4 wherein the coil on the ends of said coil springs are bent 90 degrees relative to the next adjacent coil so that said shaft when received through said chock will be received through said end coils.

6. A device for holding containers as defined in claim 4 wherein one surface of said chock is contoured to cooperate with the contour of the container near an open end therein.

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U.S. Cl. X.R.

248—315