

Dec. 27, 1932.

A. S. FOGLER
COLLAPSIBLE CONTAINER

1,892,140

Filed Dec. 2, 1929

FIG. 1.

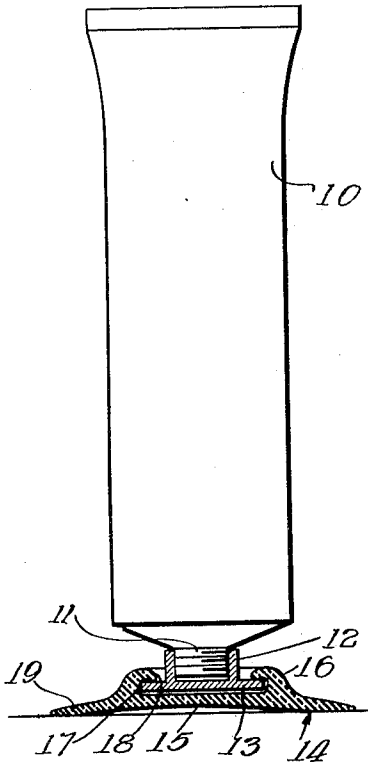


FIG. 3.

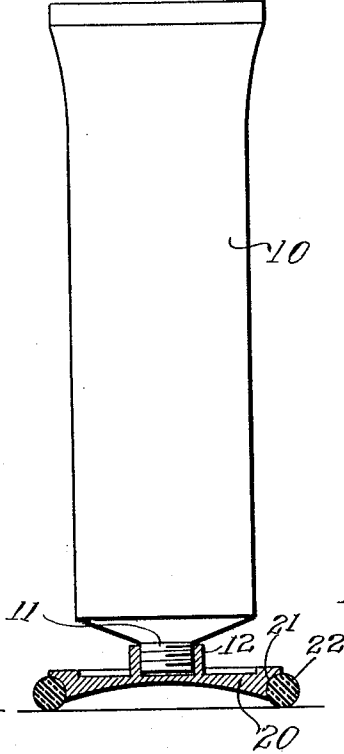


FIG. 5.

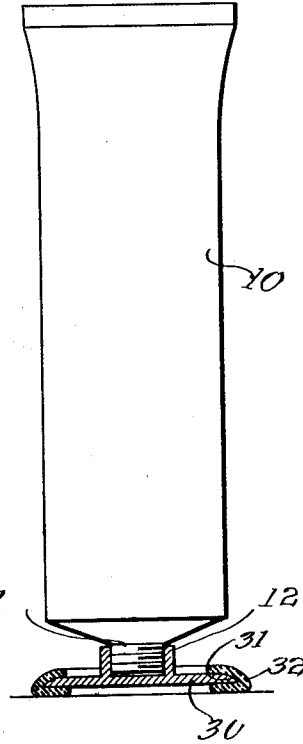


FIG. 4.

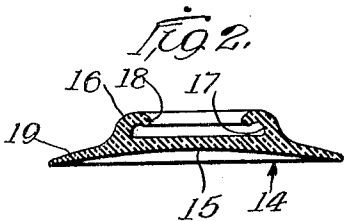


FIG. 6.

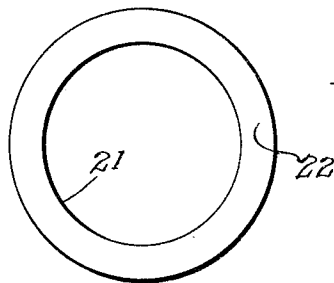
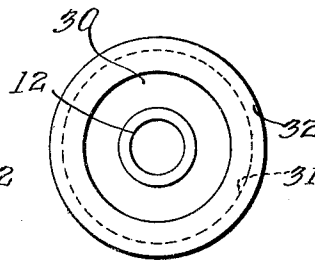
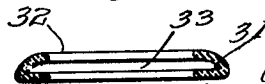


FIG. 7.



Witnesses:
Harry R. L. White
Robt. Cremer

Inventor:
Arthur S. Fogler.
By: Arthur L. Sprinkle,
att.

UNITED STATES PATENT OFFICE

ARTHUR S. FOGLER, OF TERRE HAUTE, INDIANA

COLLAPSIBLE CONTAINER

Application filed December 2, 1929. Serial No. 410,947.

This invention relates to certain improvements in containers and particularly to containers of a character from which the contents may be extruded by deforming or depressing and collapsing the container, such, for example, as the tubes of collapsible metal, now widely used for packaging paste, medicinal creams, shaving creams and the like of soft or plastic substances. These containers, which are usually provided with a discharge nipple, closed by a threaded cap, can not be readily displayed in drug stores and shops except in the flat position. I am aware that attempts have been made to provide metallic extended supporting means at the discharge end of such tubes for supporting the tubes for display purpose, or to be stood upright like bottles upon wash stands, dressing tables and the like for use.

It is the chief object of the present invention to produce an improved collapsible container of the class referred to, provided with means for supporting the container in an upright position, such means being of an improved character by which it is enabled to have the effect of a squeegee by which the collapsible tube may be more or less rigidly attached to the surface of a wash basin, the glass top of a show case, a window glass or other like smooth polished surface by suction to be held there as long as may be desired in such fixed relation to the object or surface to which it is attached.

My improved device lends itself admirably for fixation or attachment by suction to the polished surface of wash basins having smooth polished marble surfaces or the smooth surfaces of vitreous materials, and when the invention is employed on collapsible containers containing toilet materials, such as cold creams, shaving creams and the like, the squeegee action of the device for attachment to polished surfaces is especially desirable for use by travellers on moving vehicles, as in the toilet rooms of sleeping cars and the like.

With these and other objects, as hereinafter pointed out, in view, the invention consists in the novel parts and constructions hereinafter described in connection with the

accompanying drawing forming a part of the specification, the novel features being pointed out in the appended claims.

In the drawing,

Fig. 1 is an elevation view of a collapsible container with the detachable cap and the squeegee device in section.

Fig. 2 is a detail detached sectional view of the rubber supporting and squeegee device.

Fig. 3 is a view similar to Fig. 1 showing a modified form of the cap and squeegee device, both the cap and the device being in section.

Fig. 4 is a bottom plan view of the device of Fig. 3.

Fig. 5 is a view similar to Figs. 1 and 3 showing a further modified form of the cap and squeegee device.

Fig. 6 is a top plan view of the cap and squeegee device shown in Fig. 5, and

Fig. 7 is a detached detail sectional view of the rubber detachable ring forming a part of the squeegee device of Figs. 5 and 6.

Referring now to the structures illustrated showing the forms in which the invention may be conveniently embodied, there is shown in Figs. 1, 3 and 5 a tube of collapsible material designated by reference character 10, this being of a usual and well known commercial form. This tube is provided in the usual manner with a threaded nipple designated by reference character 11 containing the usual discharge opening through which the material of the cap is extruded by pressure in collapsing or depressing the tube body.

In the embodiment of the invention shown in Fig. 1 reference character 12 designates the usual threaded metal cap, the top of which is provided with the usual enlarged disc 13. 14 designates generally a rubber squeegee device in the form of an integral circular disc which will preferably be made of soft vulcanized rubber or other analogous flexible material. This disc is preferably thickened near the central portion thereof and is slightly concave on one side thereof, which is intended to be the side of the device that will be attached to a smooth or polished

surface with a squeegee or suction effect, as indicated at 15. On the opposite side the device is provided with an upwardly projecting circular portion 16, which is preferably undercut at 17 to provide a seat as clearly shown in Figs. 1 and 2 for the expanded peripheral portion of the usual metallic cap 13. The projecting overhanging portion 16 of the rubber device 14 is, like the outline of the device, circular, so that there is a contracted portion indicated at 18 that is much smaller in circumference than the normal circumference of the periphery of the cap. If it were not for the fact that the suction cup 14 is made of flexible material, it would be impossible to insert the head 13 of the metallic cap, but the device being of rubber when the rubber is wet or otherwise contracted, portion 18 may be easily stretched to permit the head 13 of the metal cap to slip into place in the undercut circular socket 17, as illustrated in Fig. 1. The outer peripheral portion of the suction cup 14 is preferably gradually decreased in thickness towards its extreme outer edge as indicated at 19. This construction, together with the fact that the underside of the device 14 is preferably slightly concave makes it easily possible for the container equipped with this device to have a suction or squeegee action when placed upon a smooth or polished surface, especially a surface which is wet. The rubber suction device 14 may be sold separately as an article of commerce and attached to the caps of collapsible containers by a purchaser, or the device may be attached to the caps by the manufacturer of the containers.

In the use of the device the entire container will be placed in an upright position standing upon a horizontal smooth surface like a bottle and if the surface is polished and especially if it be wet, the weight of the container together with slight pressure by the operator will cause the suction cup 14 to attach itself to a smooth surface with the ordinary squeegee effect, since pressure will exhaust the air beneath the device and its attaching surface, and when the pressure is released, the resiliency of the squeegee device will tend to produce a vacuum or a portion of rarefied atmosphere beneath the device so that the container will be securely attached to a smooth surface by atmospheric pressure.

While the flexible containers will ordinarily be stood upright like bottles on smooth surfaces, obviously, the device is also capable of attaching the containers to vertical panes of window glass and other like smooth polished surfaces.

In Figs. 3 and 4 I show modified forms of the device in which 20 designates a special type of metal cap or closure for the collapsible container having a threaded closed cap for the usual threaded nipple. The cap 20 will have an expanded circular portion,

preferably as large or slightly larger than the normal diameter of the collapsible container, and on its outer and under periphery it will be grooved, as indicated at 21 to receive a rubber ring 22, circular in cross section. The rubber ring 22 together with the concave portion of the cap 20 will permit of attaching the device with a squeegee-like action to a polished or smooth surface, especially if wet, in the same manner as described in connection with the device of Figs. 1 and 2.

In Figs. 5 and 6 I show a still further modified form of closure, the metallic portion of which is designated by the reference character 30, the same being of generally circular form, and being preferably somewhat thinned or sharpened at its outer periphery, as indicated at 31. 32 is a circular flexible rubber ring having an inner peripheral groove 33. This ring 32 will be attachable to the disc-like head 30 of the cap and will be held thereupon by reason of the flexibility of the rubber, the insertion being accomplished preferably by first wetting the rubber and then stretching the same to a point that it may be caused to surround the circular head portion 30 of the cap, after which the stretched portions of the rubber will contact in the manner illustrated in Figs. 5 and 6. This modification of the device may also be used with advantage, operating with a squeegee-like effect similar to the device of Figs. 1 and 3, to hold the collapsible container in a fixed position on smooth surfaces.

In order that the invention might be understood the details of the preferred embodiment have been set forth with particularity, but it is not desired to be limited to the precise details, since it will be apparent that the device may be greatly modified, aside from the embodiments shown, without departing from the purpose and spirit of my invention.

I claim:

1. A collapsible container having a threaded nipple provided with a discharge opening, and a base on which the container is supported so as to stand upright with the nipple extending downwardly, said base comprising an upwardly extending threaded cooperating hub portion in which the nipple engages and being provided with an outward peripheral portion of flexible material, the said base being concaved on the underside thereof, whereby to form a supporting portion for the container capable of being attached by suction to smooth surfaces, and further being adapted to serve as a closure for the said discharge opening in the nipple.

2. A collapsible container having a threaded nipple provided with a discharge opening, and a base on which the container is supported so as to stand upright with the nipple extending downwardly, said base comprising an interiorly threaded cooperating hub portion in which the threaded nipple

engages and being provided with an extended peripheral portion of flexible material arranged to provide a concaved portion on the underside thereof whereby to form a resilient base portion for supporting the container said base portion being capable of attachment by suction to smooth surfaces.

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3. A collapsible container having a discharge nipple exteriorly threaded, and a base on which the container is supported so as to stand upright with the nipple extending downwardly, said base comprising an interiorly threaded hub portion in which the threaded nipple engages and being provided with an outward peripheral portion of flexible material whereby to form a base portion for supporting the container capable of being attached by suction to smooth surfaces, the supporting surface of the base portion being concaved whereby to cause the flexible material adjacent the periphery thereof only to engage the supporting surface.

4. A collapsible container having an exteriorly threaded discharge nipple, and a base on which the container is adapted to be supported, said base comprising a metallic disc provided with an interiorly threaded central hub portion projecting above the upper surface thereof adapted to engage and support the nipple and to form a closure for said discharge opening therein, and a resilient squeegee device carried by the periphery of the metallic disc and projecting a substantial distance beyond the outer periphery thereof.

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In testimony whereof I have signed my name to this specification, on this 26th day of November A. D. 1929.

ARTHUR S. FOGLER.

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