

Aug. 20, 1963

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3,100,908

CONTAINER COVER WITH A ROLLER APPLICATOR

Filed April 3, 1961

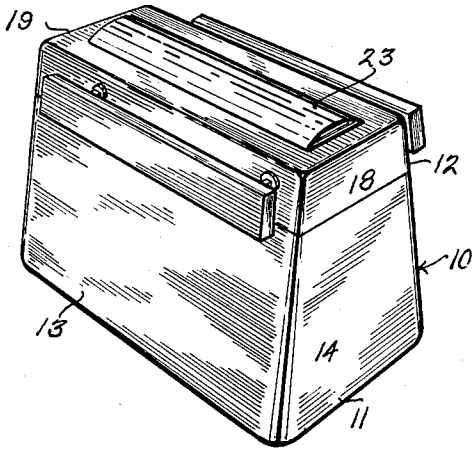


FIG. 1

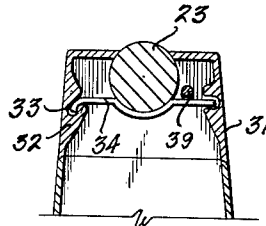


FIG. 6

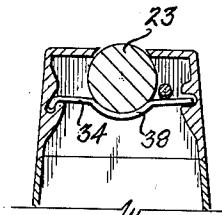


FIG. 7

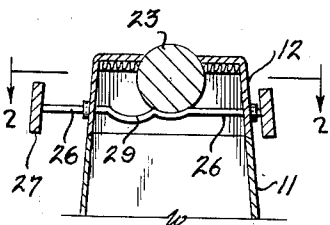


FIG. 3

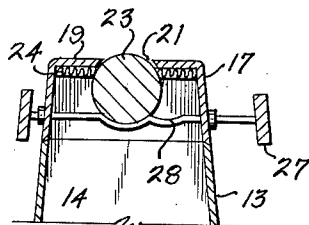


FIG. 4

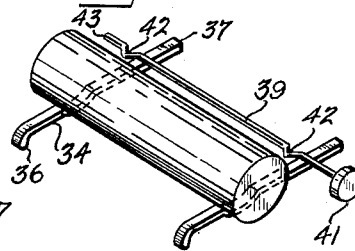


FIG. 8

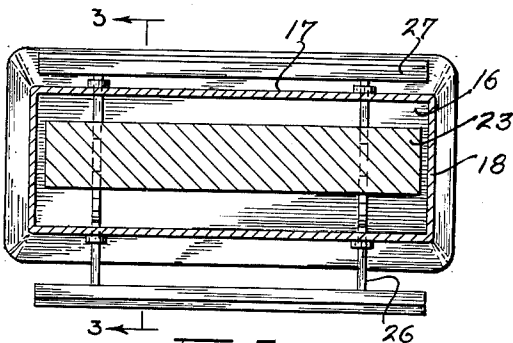


FIG. 2

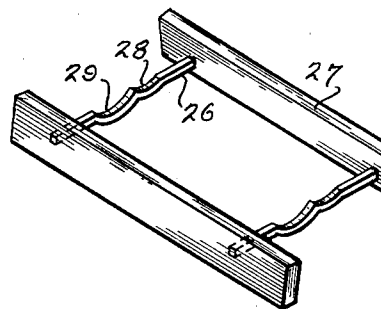


FIG. 5

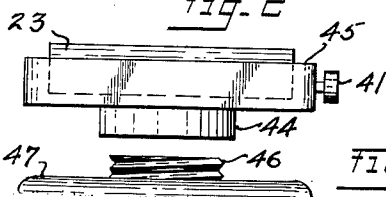


FIG. 9

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CONTAINER COVER WITH A ROLLER APPLICATOR

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Filed Apr. 3, 1961, Ser. No. 100,360

2 Claims. (Cl. 15-574)

This invention relates to improvements in containers for liquid or near liquid substances, such as those filled with lotions, deodorants, etc. More particularly, the invention is directed to containers provided with means for applying the contents thereof to a given surface in desirable spread and quantity. Specifically, the invention discloses a container having a combined content applicator and stopper.

Heretofore containers for liquid or near liquid substances have been available and, in some instances, included an applicator that would spray or otherwise apply the container contents to a given surface in a generally satisfactory manner. These containers have been produced in various forms, such as collapsible tubes, pliant squeeze bottles or rigid bottles with a pliant applicator. If any or all of these containers have not proven entirely satisfactory, it would appear that besides having a substance applicator they each required a cap, cover or plug to prevent flow or seepage on other than desired occasions. In other words, the contents of these containers could leak, dribble, or flow around the applicator at undesirable times and circumstances. Thus some form of a cap or cover has always been a necessary adjunct to containers of this type. Such caps or covers, as is common with collapsible tooth paste tubes, frequently become lost or misplaced and, in some instances, the cap or cover, when required to be snapped or screwed into place, fails to seal the container contents against inadvertent dispensing, particularly when the container is of the plastic squeeze type.

The present invention has been developed primarily for the purpose of providing a container with a combination applicator and manually controlled sealer, thereby eliminating the necessity of a separate cap or cover to prevent undesired dispensing or leakage, and this, therefore, is considered to be one of its objects.

It is also an object of the invention to provide a combination applicator and stopper or sealer wherein the applicator is capable of uniformly dispensing the contents of the container from a rather large surface, thus reducing the time and effort required for any given use.

Another and important object of the invention resides in the fact that by combining an applicator with a container closure, a user is enabled to operate the applicator in a manner to permit selective quantity application of the container contents. In fact, a person may, during use, increase or decrease the contents flow to any desired extent.

Other objects and advantages of the invention will be more fully understood and appreciated from a consideration of the following specification, taken in conjunction with the accompanying drawing; and in which

FIG. 1 is a perspective view of a dispensing container in which one form of the invention is embodied;

FIG. 2 is a horizontal sectional view of the container shown in FIG. 1, being taken substantially as indicated by the line 2—2 of FIG. 3;

FIG. 3 is a fragmentary transverse vertical sectional view, taken substantially on the line 3—3 of FIG. 2 and shows the applicator in a position to serve as a sealer for the container contents;

FIG. 4 is a view similar to FIG. 3 and shows the applicator in position of use;

FIG. 5 is a perspective view showing the applicator cradle and operator bars;

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FIG. 6 is a fragmentary transverse vertical sectional view of a modified form of the applicator mount and control, the applicator being shown in container sealing position;

FIG. 7 is a view similar to FIG. 6 and shows the applicator in position of use;

FIG. 8 is a perspective view showing the modified applicator mount and control rod; and

FIG. 9 illustrates the manner in which the present invention, in either of the forms shown, may be applied to a conventional container.

Referring more particularly to the drawing, the reference numeral 10 is employed to generally designate one form of a container in which the invention may be embodied. This container may be of any of a variety of shapes and, in the present instance, is shown to be slightly tapered from base to top. For purposes of assembly and possible convenience in filling, the container may be considered as consisting of a body portion 11 and a top or cover portion 12. The body portion consists of side walls 13, end walls 14, and a base or bottom wall 16. Although having no direct bearing on the invention, the upper edges of the side and end walls of the body portion may be notched or beveled to engage correspondingly shaped bottom edges of the cover 12. Such an arrangement not only enables assembling the applicator with the cover, but may also be found to be a convenient means of filling the container with the desired substance, in a liquid or near liquid form. It will be understood, of course, that the body of the container, since it constitutes no part of the present invention, may be of any convenient size and shape and may be designed to create an eye appeal to the purchasing public.

The cover 12, which in the course of assembly is mounted on and sealed in place on the body 11, comprises side walls 17, end walls 18, and a top 19. The top 19 has an elongated rectangular opening 21 which is defined by edges that are curved to conform to the contour of the dispensing roller 23. The end walls of the opening 21 contact the roller ends but without sufficient pressure to prevent the roller from rotating on its cradle as hereinafter described. The under surface of the top 19 is fitted with felt or other comparable material 24 and, of course, has an opening proportioned to accommodate the roller 23 but at the same time serves, in cooperation with the walls of the opening 21, to prevent egress of fluid or other substance from the container.

Reference is now particularly had to FIGS. 2 to 5, inclusive, wherein structure for mounting the roller 23 is shown. It is proposed to provide a pair of rods 25 that are of a somewhat springy nature. These rods are located near the ends of the top 19 and extend through and beyond the side walls 17. Corresponding ends of the rods 26 mount operator bars 27. By pushing one or the other of these bars, the rods are caused to move transversely of the top. That portion of each of the rods 26 located within the top is formed to provide shallow seats 28 and adjacent deeper seats 29. When the rods are in the position shown in FIG. 3, the shallow seats 28 serve as a cradle for the roller 23 and cause the roller to project into the opening 21 to an extent to plug this opening and prevent leakage of the container contents through the opening. When the rods are moved to the position shown in FIG. 4, the lower seats 29 are centrally positioned to cradle the roller 23. In other words, the roller will drop slightly away from its sealing engagement with the walls of the opening 21 and permit rotation of the roller when applied to a given surface and in this manner transmit to such a surface the substance in the container.

Attention is now directed to a modification of the invention; namely, another means of supporting the combined applicator and sealer and the provision of means

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of adjustment from one position to another. FIGS. 6 to 9, inclusive, show the top 31 of a container to include inner reinforcing portions 32 that are provided with recesses 33 for receiving the ends of spring bars 34. As may be noted, one end 36 of each bar is more or less anchored in the recess 33 on one side of the container top, whereas the other end 37 of each bar is straight and is capable of slight movement into and out of the straight wall recess on this side of the top. Centrally, each of the bars 34 is provided with a downwardly curved area 38 which cradles the roller 23. As shown in FIG. 8, an operating rod 39 rests on top of the unhooked or free ends of the bars 34. This rod projects through one end wall of the container top and is fitted with a knob 41. The rod 39, adjacent each of the bars 34, is provided with offset angular portions 42.

When the end 43 of the rod 39 is mounted in one end of the container top, and that portion of the rod adjacent the knob 41 projects through the other end of the container top, it will be appreciated that lengthwise movement of this rod will cause the portions 42 to depress the bars 34, thus allowing the roller 23 to assume the position shown in FIG. 7. In other words, since bars 34 are spring-like, they will normally hold the roller 23 in fluid sealing contact with the walls of the roller opening. However, when the bars are depressed by lengthwise movement of the control rod 39, the roller becomes freely rotatable, and when applied to and rotated against a given surface, will spread the container contents on such a surface.

Referring to FIG. 9, the modified form of the invention, through the use of an internally threaded neck 44 on a top 45, may be applied to the externally threaded neck 46 of a conventional container 47. It is, of course, contemplated that the form of the invention shown in FIG. 3 may be produced in a compact unit, such as illustrated in FIG. 9, and applied to the threaded neck of a conventional plastic or other container.

It is pointed out that through the use of applicant's device—namely, a combined roller applicator and stopper—it is possible to eliminate a conventional sealer cap, provide greater applicator surface, and by means of fewer parts. It will be recognized that since the supports for the roller are spring-like, when the roller has been relieved of its sealing engagement with the walls of the rectangular opening, a greater or lesser amount of pressure against the roller, when applied to a surface, will enable dispensing a greater or lesser quantity of the container contents. For example, if a relatively thin solution, such as after-shave lotion, is to be applied, the roller, when released from its sealing position, may be only slightly depressed and rotated to facilitate spreading an effective quantity of such lotion. However, if the container is filled with some other substance, such as a cream lotion, it may be more suitable that a heavier film of the substance be applied to a given surface. Thus the roller would be pressed with greater

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vigor or force against a surface and would properly rotate as an applicator to dispense a thicker film. In other words, the user of a device embodying the present invention may at all times control the extent of application of the substance in the container to a given surface.

Although applicant has shown and described only two modifications of a combined roller dispenser and sealer for containers, it will be apparent that variations of the means for controlling positioning of the roller may be varied and are considered to be a part of the present invention to the extent that they may be encompassed by the annexed claims.

Having thus set forth my invention, what I claim as new and for which I desire protection by Letters Patent is:

1. A receptacle cover having a combined dispenser and sealer for a flowable substance, said cover consisting of a generally rectangular walled member having a top integral therewith and a dispensing opening in said top, a roller in said cover, the diameter of said roller being greater than the width of said opening, a pair of parallel rods extending transversely of and through opposite sides of said cover, operator bars joined to the ends of said rods, said bars being operable to simultaneously move said rods, means forming part of said rods cradling said roller, said means including roller contact areas by which to selectively permit rotation of said roller or engagement with the walls of said opening.

2. A cover for a receptacle adapted to contain a dispensable fluid, said cover including integral side and top walls, the top wall having an elongated opening therein of prescribed dimensions, a roller in said cover projecting into said opening from the cover interior, said roller being proportioned to be movable into fluid sealing engagement with the interior surfaces of the walls of said opening, a member extending transversely beneath said roller and supporting it in said opening, said member being resilient, the ends of said member being supported by opposite sides of said cover in a manner to permit slight median distortion, at least one depressed area in said member between said ends serving to cradle said roller in position of alignment with said opening, and means accessible from the exterior of said cover manually operable to selectively actuate said member to effect engagement or withdrawal of said roller with respect to the interior surfaces of the walls of said opening.

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