

Nov. 5, 1929.

C. R. CRARY

1,734,564

CLOSURE

Filed May 2, 1927

Fig. 1.

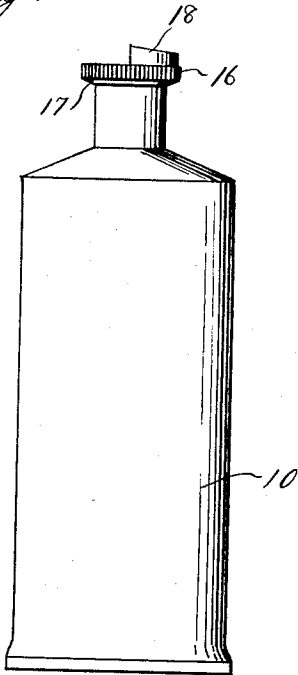
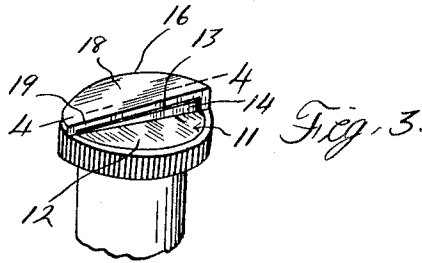
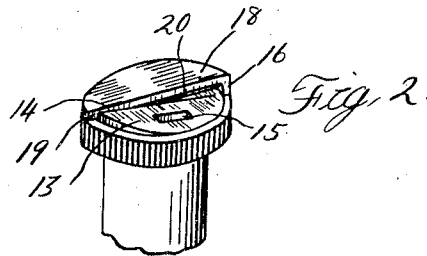


Fig. 4.

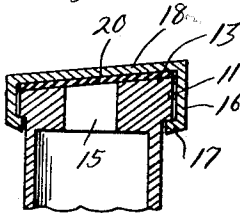


Fig. 5.

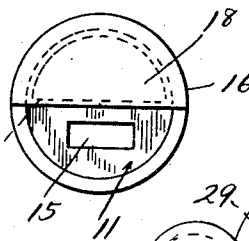


Fig. 8.

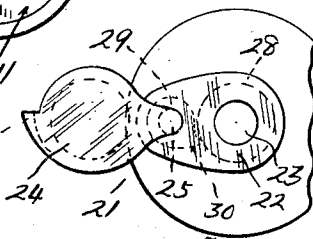


Fig. 6.

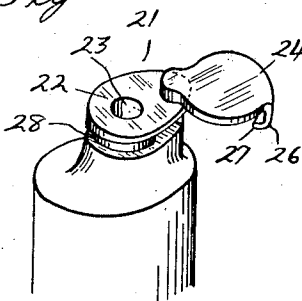
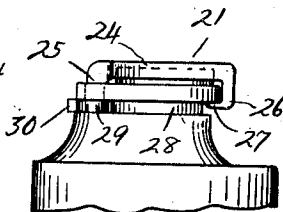


Fig. 7.



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CLOSURE

Application filed May 2, 1927. Serial No. 188,366.

The invention relates to closures and more particularly to improvements in the type of closures used in connection with collapsible containers and the like.

5 While the invention finds particular utility in connection with collapsible containers, and while the illustrative embodiment of the invention herein shown and described is adapted for use with such a container, nevertheless as this description proceeds it will become immediately apparent to those skilled in this art that in special instances the invention may be used in whole or in part with various other forms of containers.

15 In the type of collapsible containers now more or less universally employed when it is desired to extract the contents thereof a serious inconvenience has been experienced by the necessity of completely removing the closure which under ordinary circumstances, thread-

20 edly engages the container. With such an arrangement several disadvantages have been commonly experienced among which are, first, considerable time being required to remove

25 the closure; second, the cork seal usually employed for maintaining the contents of the container in proper condition may easily become lost; and third, the cap or closure, due to the fact that it is detachable from the container, may also become mislaid rendering the contents of the container unfit for use. These disadvantages as pointed above are more than compensated for in the present invention by the novel construction of the closure

30 which in addition to being permanently attached to the container may be readily opened by merely a slight rotation of the same.

The invention has also as one of its objects to simplify, render more efficient and improve generally constructions of this general character. Other objects, advantages and features of construction will be made more apparent as this description proceeds, especially when considered in connection with the accompanying drawings, wherein

45 Figure 1 is a side elevation of the container and closure;

Figure 2 is a perspective view of a container provided with a closure in open positions;

Figure 3 is a view similar to Figure 1 showing the closure in closed positions;

Figure 4 is a fragmentary vertical longitudinal sectional view taken on the line 4—4 of Figure 3;

Figure 5 is a top plan view showing the closure in open position;

Figure 6 is a perspective view of a modified form of construction;

Figure 7 is a side elevation of the modified construction showing the closure in closed position;

Figure 8 is a top plan view of the structure shown in Figure 6.

Referring now to the drawings, wherein like characters of reference designate corresponding parts throughout the several views the numeral 10 indicates a collapsible container having a permanent top 11 formed with a substantially flat wiping surface 12 and an inclined projected surface 13 forming the shoulder 14 and provided with a rectangular opening 15 for establishing communication with the interior of the container.

For opening or closing the aperture 15 I provide the closure 16 that is rotatably and permanently attached to the collapsible container 10 by binding the peripheral edges 17 of the closure around the top portion 11 of the container. As shown in Figure 2 of the drawings the closure is provided with a top portion 18 inclined in a plane coincident with the plane of the projected surface 13 and forming the shoulder 19. With such an arrangement when it is desired to open the container the closure 16 is merely rotated about the top portion 11 until the shoulder 19 formed by the inclined top portion 18 of the closure, engages the shoulder 14 formed by the inclined projected surface 13 of the container. In this position the aperture 15 is uncovered and the contents of the container may be readily extracted. In a like manner when it is desired to close the container the closure 16 is rotated in an opposite direction and inasmuch as both the projected surface 13 on the container and the bottom surface of the top portion 18 of the closure are inclined and normally lie in substantially the same plane, a wedging action takes place between

these two parts which not only prevents excessive rotation of the closure but also seals the aperture 15.

In order to insure a proper sealing of the container I provide a cork seal 20 corresponding in shape to the projected portion 13 and rigidly secured to the bottom surface of the closure. Thus when the container is not in use the contents thereof is efficiently preserved from the surrounding atmosphere.

In Figures 7 and 8 a slightly modified form of construction is shown wherein the container is formed with a top portion 21 having a substantially inclined top surface 22 formed with an aperture 23 communicating with the interior of the container. For closing the aperture 23 I provide a closure member 24 having a downwardly extending projection 25 pivoted to the top portion at one side of the aperture 23. The closure is further provided with a second downwardly extending projection 26 positioned diametrically opposite the projection aforesaid and having an inwardly extending cam portion 27 engageable in a circumferential recess 28 formed in the top portion 21. With such an arrangement it will be readily apparent that when the closure is in closed position excessive turning of the same is prevented by means of the inclined top surface of the container and by reason of the fact that the cam portion 27 frictionally engages the top wall of the recess 28. For preventing excessive turning of the closure in the opposite direction the projection 25 is formed with an enlarged portion 29 having a cam surface 30 engageable with a side wall of the recess.

While the invention has been shown and described in connection with a closure for use with a collapsible container, it will be apparent that the invention is broader than this in its scope and may be employed with equal facility upon various other forms of container. Therefore reservation is made to make such changes in the details of construction as may come within the purview of the accompanying claims.

What I claim as my invention is:

1. The combination of a container having a top portion formed with a substantially semi-circular projected apertured surface, and a closure rotatably mounted upon said container having a substantially semi-circular top surface normally engageable with the projected surface aforesaid, said projected and top surfaces being correspondingly inclined to the axis of rotation when in registration.

2. The combination of a container having a substantially flat wiping surface and an inclined surface projecting upwardly from and arranged adjacent to said surface and having an aperture therein, and a closure having a top portion corresponding in shape to said projected surface and inclined to a corre-

sponding degree for subjecting the top surface of the closure to a sealing pressure upon the projected surface of the container in one rotative position of the closure and operable in another rotative position of the latter to expose said aperture.

3. The combination of a container comprising a top surface having a flat portion arranged at substantially right angles to the longitudinal axis of the container constituting a wiping portion, and having an apertured portion projecting above the flat portion and inclined to said axis, and a closure member rotatably mounted upon said container having a top portion cooperating with the inclined portion to subject the closure to a sealing pressure upon said container, said closure also having a cut away portion operable in one rotative position of the closure to expose said wiping portion and in another position of the closure to expose the aperture in the inclined portion aforesaid of the container.

4. The combination of a container having a top portion formed with a substantially horizontally disposed surface and with an inclined apertured surface projecting upwardly from said horizontally disposed surface and inclined with respect thereto, and a closure member rotatably mounted upon said container having a segmental top portion corresponding in shape to said projected surface and cooperating therewith in one rotative position of the closure to form a tight seal for the aperture and expose said horizontal surface.

In testimony whereof I affix my signature.
CECIL R. CRARY.

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