Oct. 7, 1930. P. H. D. WINSOR 1,777,906

DISPENSING DEVICE

Filed June 22, 1929 2 Sheets-Sheet 1

Fig. 1.

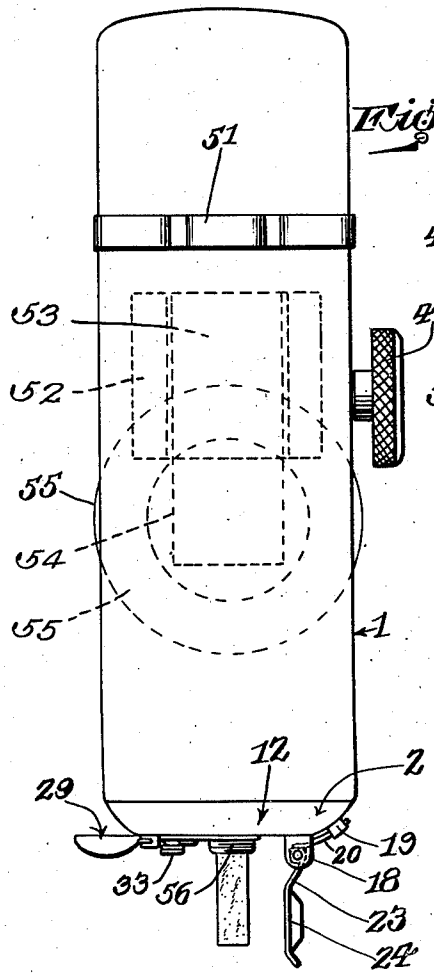


Fig. 2.

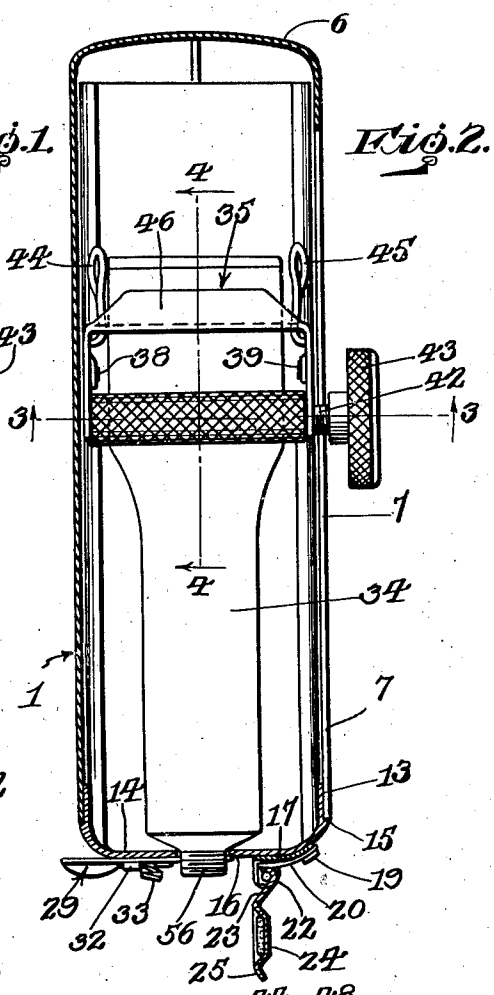


Fig. 3.

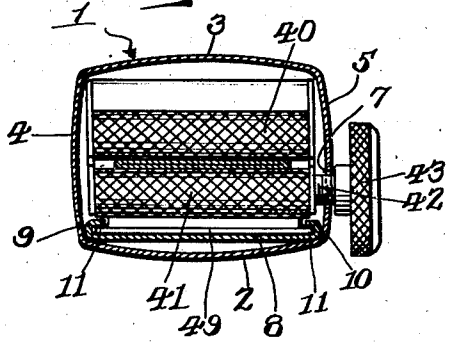
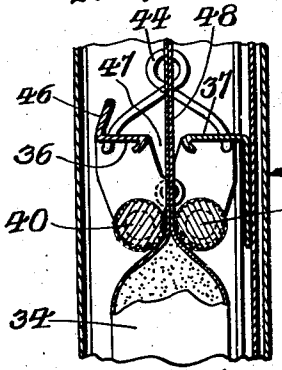


Fig. 4.



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DISPENSING DEVICE

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Fig. 5.

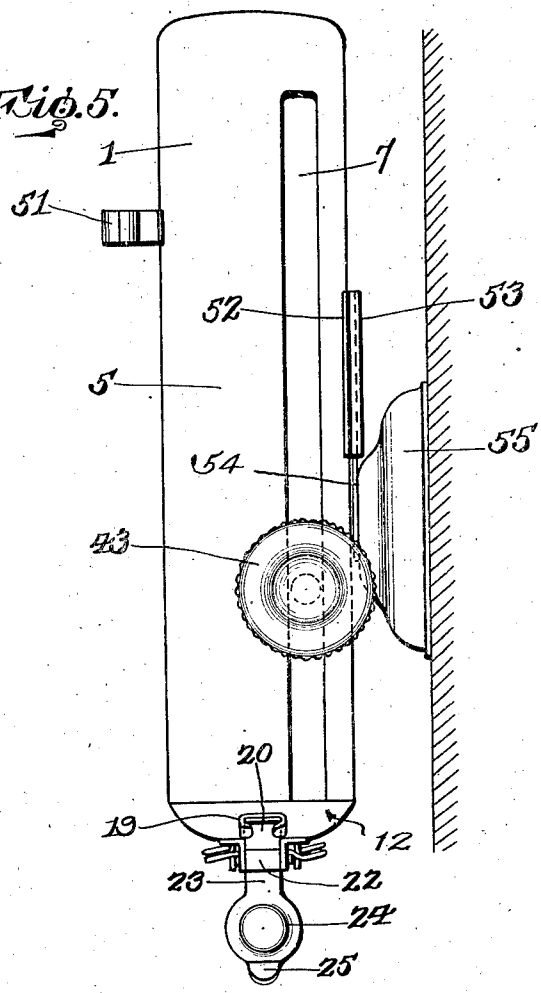


Fig. 7.

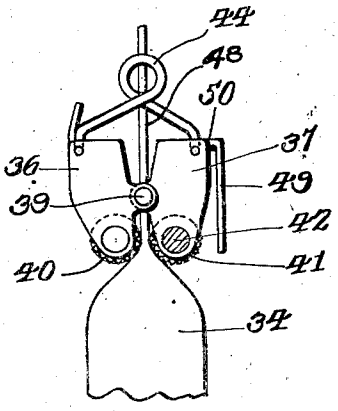


Fig. 8.

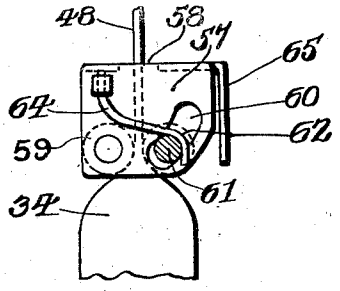


Fig. 6.

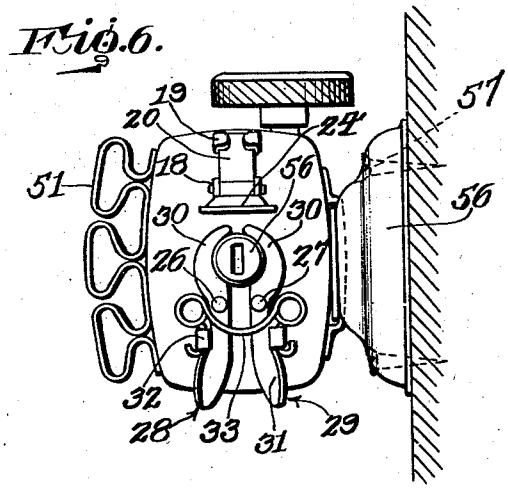
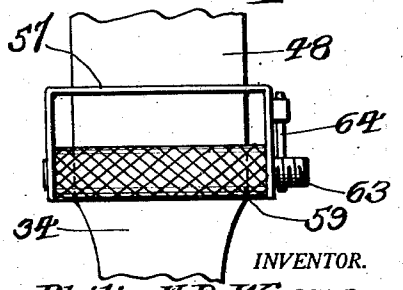


Fig. 9.



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UNITED STATES PATENT OFFICE

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DISPENSING DEVICE

Application filed June 22, 1929. Serial No. 372,894.

This invention relates to a dispensing device designed primarily for dispensing from a collapsible container tooth paste, shaving cream, etc., but it is to be understood that a dispensing device, in accordance with this invention may be employed for any purposes for which it is found applicable, and the invention has for its object to provide, in a manner as hereinafter set forth, a device for dispensing the contents of a collapsible container in an economical, convenient and sanitary manner.

A further object of the invention is to provide, in a manner as hereinafter set forth, a device for the purpose referred to including shiftable means for closing the outlet end of a collapsible container within the device thereby overcoming the necessity of the employment of a closure cap for such outlet end, or in other words, overcoming the necessity of screwing a closure cap on and removing it from such outlet end for closing and opening it respectively.

A further object of the invention is to provide, in a manner as hereinafter set forth, a device for the purpose referred to including means for detachably securing the device fixedly to a support.

A further object of the invention is to provide, in a manner as hereinafter set forth, a device for the purpose referred to including means for removably supporting a plurality of tooth brushes.

A further object of the invention is to provide, in a manner as hereinafter set forth, a device for the purpose referred to including adjustable clamping means for engagement with the neck of a collapsible container for the purpose of anchoring the latter within the device thereby preventing the shifting of the container lengthwise with respect to the device when the body of the container is acted on to collapse it.

Further objects of the invention are to provide, in a manner as hereinafter set forth, a dispensing device for the purpose referred to which is simple in its construction and arrangement, strong, durable, compact, thoroughly efficient in its use, conveniently operated, readily assembled, and comparatively inexpensive to manufacture.

With the foregoing and other objects in view the invention consists of the novel construction, combination and arrangement of parts as hereinafter more specifically described, and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which fall within the scope of the claims hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:

Figure 1 is a front elevation of a dispensing device in accordance with this invention illustrating the same in open position for the discharge of the contents of a collapsible container.

Figure 2 is a sectional front elevation.

Figure 3 is a section on line 3—3 Figure 2.

Figure 4 is a section on line 4—4 Figure 2.

Figure 5 is a side elevation of the device illustrating the same anchored to a support.

Figure 6 is a view looking towards the discharge end of the device.

Figure 7 is a side elevation of the collapsing element for the collapsible container.

Figure 8 is a side elevation of a modified form of collapsing element for a collapsible container.

Figure 9 is a top plan view of the form shown in Figure 8.

A dispensing device in accordance with this invention comprises a rectangular housing which is open at one end and is referred to generally at 1. The housing 1 includes a rear wall 2, a front wall 3, a pair of side walls 4, 5 and an end wall 6. The side wall 5 is formed with a lengthwise disposed slot 7

which extends from the free end thereof and terminates at a point removed from the end wall 6. The slot 7 is disposed between the longitudinal median of the side wall 5 and the rear wall 2.

Removably mounted in the housing 1 and seated against the rear wall 2 of the latter is a track member 8 of channel shaped cross section. The sides of the member 8 which are indicated at 9, 10 overhang the forward face of the body of member 8, as well as being spaced from such face thereby providing the grooves 11, which are co-extensive with the length of member 8.

Formed integral with the outer end of the track member 8 and disposed at right angles with respect thereto is a closure for the open end of the housing 1. The closure is generally indicated at 12 and comprises a rabbeted rim 13 and a front 14. The rabbeted rim 13 provides a shoulder 15. The rim 13 snugly engages the inner face of the housing, at the open end of the latter and the edge of the housing at its open end abuts against the shoulder 15. The rim 13 is integral with the outer faces of the sides 9, 10 of track member 8. The front 14 is extended with respect to the open end of the housing 1 and is formed centrally with an opening 16.

Secured to the outer face of the front 14, adjacent the opening 16, is a plate 17 provided with a pair of outwardly directed, apertured, spaced ears 18 at one end thereof. The plate 17 is further formed with a pair of oppositely disposed, angle-shaped lugs 19 at the other end thereof. Anchored to the plate 17 by the lugs 19 and extending between the ears 18 is a flat spring 20 which bears against a barrel 22 formed on the free end of a shank 23 which carries a closure cap 24. The spring 20 acts to maintain the cap 24 in closing position for a purpose to be presently referred to. The cap 24 includes a finger piece 25 to facilitate the shifting thereof from closing position.

Projecting outwardly from the front 14 and arranged adjacent the opening 16 is a pair of spaced pivots 26, 27 having mounted thereon a pair of oppositely disposed clamping members 28, 29. The pivots 26, 27 are disposed intermediate the ends of the clamping members 28, 29. Each clamping member includes a semi-circular jaw 30 and a shank 31. Each shank is formed with a lug 32. A controlling spring for the jaws 28, 29 is indicated at 33 and the ends thereof are anchored to the lugs 32. The inner edges of the jaws 30 of the clamping members are disposed centrally of the front 14 at the opening 16 and the purpose of such arrangement will be presently referred to.

Slidably mounted upon the track member 8 is a collapsing element for a collapsible receptacle 34 which is arranged in the housing 1. The collapsing element is indicated generally at 35 and includes a pair of yoke-shaped members 36, 37. The yokes 36, 37 oppose each other and are pivotally connected together as at 38, 39. The yokes extend towards the open end of housing 1 and yoke 36 has pivotally mounted in its forward end a knurled collapsing roller 40. The yoke 37 has pivotally mounted in the forward end thereof a knurled collapsing roller 41, which opposes roller 40. One of the pivots or journals of roller 41 is extended, as at 42, through the slot 7 and carries on its outer end a finger piece 43 employed for the purpose of rotating roller 41.

Connected to yokes 36 and 37 is a pair of rearwardly extending controlling springs 44, 45 acting to permanently maintain the rollers 40, 41 in abutting position. Yoke 36 has a rearwardly extending finger piece 46 to provide for shifting yoke 36 on its pivot to move roller 40 away from roller 41. Yokes 36, 37 are spaced away from each other at the rear thereof to provide a clearance indicated at 47. The collapsible receptacle 34 has its rear end positioned between the rollers 40, 41 for the purpose of collapsing the receptacle in a manner as shown in Figure 4. The collapsed portion of the receptacle, and which is indicated at 48 passes rearwardly between the rollers 40, 41 and through the clearance 47. The container 34 is collapsed when the rollers 40, 41 are revolved as the collapsing element moves towards the front 14.

The yoke 37, at the rear thereof, is provided with an angle-shaped extension formed of two legs 49, 50. The leg 49 is of greater width than the leg 50. The leg 49 is positioned in the grooves 11 and the leg 50 arranged between the free edges of the walls 9, 10 of the track member.

The springs 44, 45 permanently maintain the collapsing rollers against the receptacle 34 when the latter is positioned in the collapsing element 35. See Figure 7. The leg 49 slidably connects the collapsing element 35 to the track member. The finger piece or grip 43 is not only employed for rotating roller 41 but also enables the operator to shift the collapsing element towards the front 14.

The front 3 of the housing has secured transversely thereof a looped bracket 51 for detachably connecting therewith a plurality of tooth brushes. The rear wall 2 of the housing 1 has secured thereto a plate 52, having its intermediate portion 53 offset from the wall 2 to provide a socket for the reception of a coupling arm 54 carried by a suction cup 55 or a support 56 which is secured in position by holdfast devices 57 to a wall.

The container 34 comprises a neck 56 which is extended through the opening 16. The container 34 is in the form of a collapsible tube and its neck 56 is threaded for the reception of a closure cap, screwed upon said neck. After the container 34 is mounted

within the housing and with the neck of the container 56 extended through the opening 16, the neck is closed by the cap 24 and is also clamped by the members 28, 29 under such conditions the outlet end of the container 34 is closed and the container is prevented from being longitudinally shifted within the housing 1.

The modified form of collapsing element as shown in Figures 8 and 9 comprises a yoke-shaped support 57 having the rear thereof formed with a slot 58 to provide a clearance for the collapsed part 48 of the collapsible container 34. Mounted in the support 57 for rotation is a knurled roller 59. Each side of the support 57 is provided with an arcuate slot 60 in which is slidably mounted the pivots or journals 61 of a knurled roller 62. One of the pivots 61 is extended as at 63 and is adapted to have connected thereto the finger piece or grip not shown, similar to the finger piece 43. One side of the support 57 carries a controlling spring 64 which bears against the extended portion 63 of a pintle or journal and functions to shift the knurled roller 62 towards the roller 59. The collapsed portion 48 of the receptacle 34 extends between the rollers 59 and 62. The support 57 has extended therefrom a coupling piece 65 for slidably connecting the collapsing element to the track member 8 in the same manner as the collapsing element 35 is slidably connected to said track member.

The container 34 is connected to the elements 12 and 35 or element 12 and the modified form of collapsing element when the track member 8 is removed from the housing. After the container 34 is collapsed the desired extent, the track member 8 with the element 12 is removed from the housing and the collapsed container removed and a non-collapsed container connected in position.

It is thought the many advantages of a dispensing device, for the purpose referred to, can be readily understood, and although the preferred embodiment of the invention is as illustrated and described, yet it is to be understood that changes in the details of construction can be had which fall within the scope of the invention as claimed.

What I claim is:

1. A dispensing device comprising a housing open at one end, a removable track member for positioning in the housing, a removable closure for said open end, said closure secured to and bodily movable with said track member and having an opening for the passage of the neck of a collapsible container, and a collapsing element for said container slidably connected to said track member.

2. A dispensing device comprising a housing open at one end, a track member positioned within the housing, a removable closure for said open end, said closure having an aperture for the passage of the neck of a collapsible container positioned within the housing, and a collapsing element for said container slidably connected to said track member, said element supporting the container at the inner end thereof.

3. A dispensing device comprising a housing open at one end, a track member positioned within the housing, a removable closure for said open end, said closure having an aperture for the passage of the neck of a collapsible container positioned within the housing, a collapsing element for said container slidably connected to said track member, said element supporting the container at the inner end thereof, and a spring controlled closure cap carried by said closure for closing the neck of the container.

4. A dispensing device comprising a housing open at one end, a track member positioned within the housing, a removable closure for said open end, said closure having an aperture for the passage of the neck of a collapsible container positioned within the housing, a collapsing element for said container slidably connected to said track member, said element supporting the container at the inner end thereof, a spring controlled closure cap carried by said closure for closing the neck of the container, and clamping means carried by said closure for connecting the neck of the container therewith.

5. A dispensing device comprising a housing open at one end, a track member positioned within the housing, a removable closure for said open end, said closure having an aperture for the passage of the neck of a collapsible container positioned within the housing, a collapsing element for said container slidably connected to said track member, said element supporting the container at the inner end thereof, said housing provided with a slot, and operating means for said collapsing element projecting outwardly through said slot.

6. A dispensing device comprising a housing open at one end, a track member positioned within the housing, a removable closure for said open end, said closure having an aperture for the passage of the neck of a collapsible container positioned within the housing, a collapsing element for said container slidably connected to said track member, said element supporting the container at the inner end thereof, a spring controlled closure cap carried by said closure for closing the neck of the container, said housing provided with a slot, and operating means for said collapsing element projecting outwardly through said slot.

7. A dispensing device comprising a housing open at one end, a track member positioned within the housing, a removable closure for said open end, said closure having an aperture for the passage of the neck of a collapsible container positioned within the hous-

ing, a collapsing element for said container slidably connected to said track member, said element supporting the container at the inner end thereof, a spring controlled closure cap carried by said closure for closing the neck of the container, clamping means carried by said closure for connecting the neck of the container therewith, said housing provided with a slot, and operating means for said collapsing element projecting outwardly through said slot.

In testimony whereof, I affix my signature hereto.

PHILIP H. D. WINSOR.