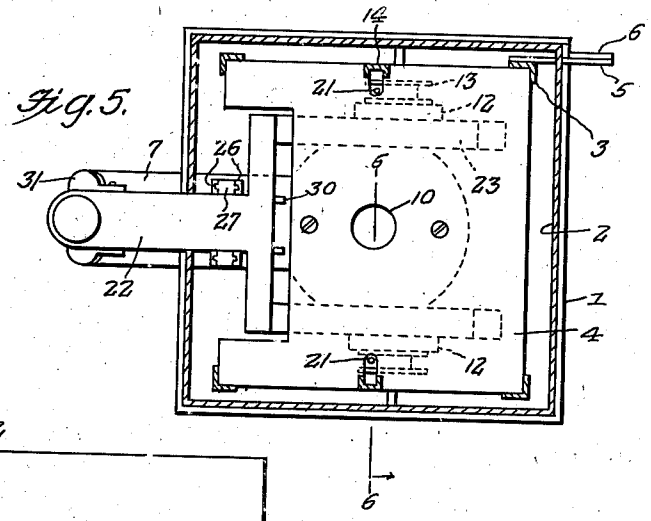
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DISPENSER

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Fig. 5.



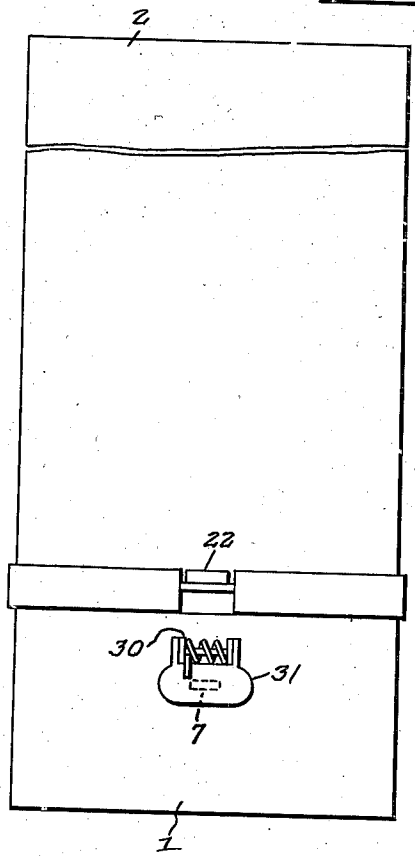


Fig. 1.

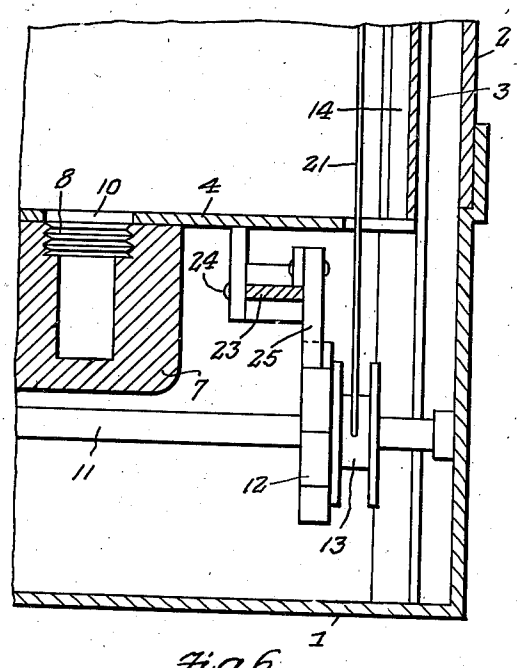


Fig. 6.

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Fig. 2.

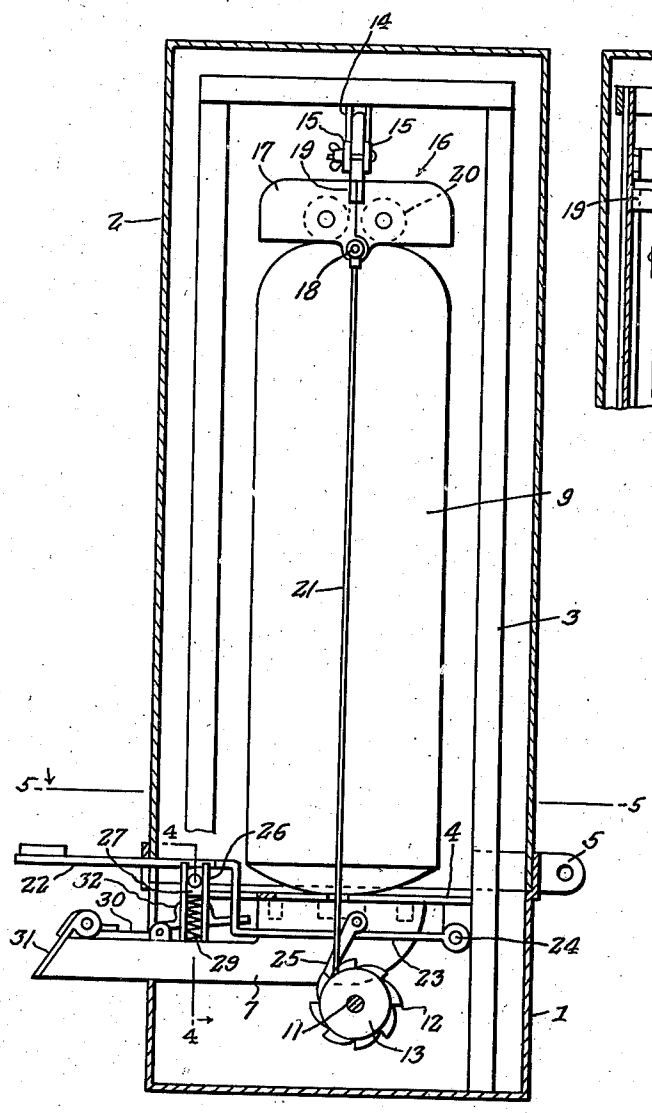


Fig. 3.

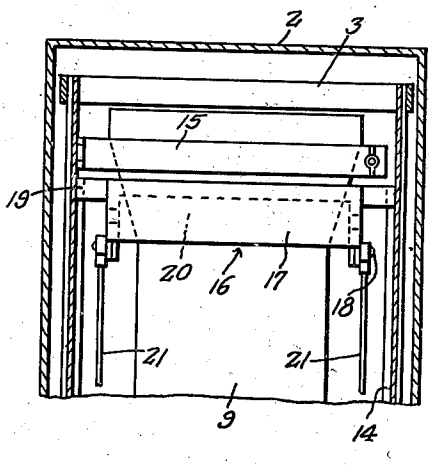
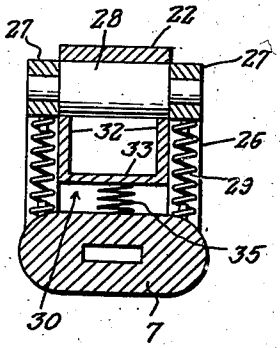


Fig. 4.



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2,057,311

UNITED STATES PATENT OFFICE

2,057,311

DISPENSER

David George Puderbaugh, Altoona, Pa.

Application April 3, 1936, Serial No. 72,651

2 Claims. (Cl. 221—60)

The present invention relates to new and useful improvements in dispensers for toothpaste, shaving cream, liquid soap and other products in collapsible tubes or containers and has for one of its important objects to provide, in a manner as hereinafter set forth, a device of this character embodying a novel construction and arrangement through the medium of which substantially all of the contents of a collapsible tube or container may be ejected in a convenient and sanitary manner.

Another very important object of the invention is to provide a dispenser of the aforementioned character comprising a construction and arrangement which is such that the desired quantity of the contents may be ejected from the collapsible tube or container directly onto a brush, thereby eliminating waste.

Other objects of the invention are to provide a dispenser of the character described which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact, attractive in appearance and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:—

Figure 1 is a view in front elevation of a dispenser constructed in accordance with the present invention.

Figure 2 is a view in vertical section through the invention.

Figure 3 is a vertical sectional view through the upper portion of the device, taken at right angles to Figure 2.

Figure 4 is a vertical sectional view, taken substantially on the line 4—4 of Figure 2.

Figure 5 is a view in horizontal section, taken substantially on the line 5—5 of Figure 2.

Figure 6 is a fragmentary view in vertical transverse section, taken substantially on the line 6—6 of Figure 5.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a metallic casing 1 which includes a removable cover 2. Mounted in the casing 1 and rising therefrom into the cover 2 is a frame 3 in the lower portion of which a platform 4 is provided. Projecting from the frame 3 and the cover 2 are apertured ears 5 and 6, respectively, for the reception of a suitable lock for preventing unauthorized removal of said cover 2 when desired.

Mounted beneath the platform 4 and projecting horizontally through the front wall of the casing 1 is a discharge spout 7 the inner end portion of which is internally threaded, as at 8 (see Figure 6) for receiving the neck of a conventional collapsible tube 9 of toothpaste, shaving cream or other material. The platform 4 has an opening 10 formed therein which accommodates the neck of the collapsible tube 9.

Journaled transversely in the casing 1 is a shaft 11 having mounted thereon ratchet wheels 12. Also mounted on the shaft 11 for rotation with the ratchet wheels 13 are flanged reels or spools 13. On opposite sides of the frame 3 are opposed, substantially channel-shaped guides 14. Hingedly mounted on the upper end portion of one of the guides 14 is a pair of coacting jaws 15 constituting a clamp adapted to secure the closed upper end of the inverted collapsible tube 9 therebetween. Slidably mounted between the guides 14 is an ejector which is designated generally by the reference numeral 16. The ejector 16 includes a pair of complemental housings 17 adapted to receive the collapsible tube 9 therebetween, said housings being pivotally connected together, as at 18. Projecting from the inner portions of the housings 17 are arms 19 which travel in the guides 14. Journaled in the housings 17 are coacting squeezing rolls 20. Cables or the like 21 are secured, at one end, to the reels 13 for winding thereon. At their other ends the cables 21 are connected to the ejector 16 at the pivots 18 of the housings 17 for pulling said ejector downwardly on the collapsible tube 9.

The reference numeral 22 designates a lever which is mounted for swinging movement in a vertical plane in the casing 1, said lever including angular arms 23 which extend beneath the platform 4 and which are journaled on suitable bearings 24. As best seen in Figure 2 of the drawings, the lever 22 projects through an opening which is provided therefor in the front of the casing 1. Pivotally mounted on the arms 23 of the lever 22 are pawls 25 which are engaged with the ratchet wheels 12 for actuating said ratchet wheels in a direction to wind the cables 21 on the reels 13.

Rising from the discharge spout 7 are pairs of guides 26 between which bearings 27 are slidably mounted. Journaled in the bearings 27 is a roller 28 (see Figure 4), which is engaged beneath the lever 22. Coil springs 29 yieldingly support the bearings 27 between the guides 26.

The reference numeral 30 designates a lever

which is journaled, at an intermediate point, on the discharge spout 7 for rocking movement. The lever 30 comprises a pair of spaced, parallel members on the outer end portions of which a spring-pressed closure 31 is pivotally mounted for wiping engagement with the beveled outer end on the discharge spout 7. The lever 30 further includes cams 32 which are engaged beneath the roller 28. The lever 30 still further includes a horizontal connecting bar 33 (see Figure 4) beneath which a coil spring 35 is engaged.

It is thought that the operation of the device will be readily apparent from a consideration of the foregoing. The lever 22 is normally supported in raised position, as seen in Figure 2 of the drawings, by the coil springs 29 and the lever 30 carrying the closure 31 is maintained in operative position by the spring 35. When a quantity of the paste, cream or other material in the collapsible tube 9 is desired, it is only necessary to depress the lever 22 against the tension of the springs 29, thereby actuating the ratchet wheels 12 and the reels 13 for winding the cables 21 on the latter, thus pulling the rolls 20 of the ejector 16 downwardly on opposite sides of said tube 9. It will thus be seen that the tube 9 will be squeezed as the rolls 20 pass thereover. The arms 19 in the channeled guides 14 secure the duplicate halves of the ejector 16 in clamped position on the tube 9. When the lever 22 is depressed the lever 30 is rocked in a manner to elevate the closure 31 and expose the outlet end of the discharge spout 7. When pressure is removed from the lever 22 said lever is returned to raised position by the springs 29. The lever 30 is also returned by its spring 35, the spring-pressed closure 31 wiping across the beveled outer end of the discharge spout 7 in a manner to shear or scrape the paste, cream or other material cleanly therefrom.

It is believed that the many advantages of a dispenser constructed in accordance with the present invention will be readily understood, and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:—

1. A dispenser comprising a casing, a discharge spout mounted in said casing and connectible with a collapsible container for receiving the contents thereof, means for holding the upper end of the collapsible container, a pair of opposed guides mounted vertically in the casing, an ejector slidable between the guides, said ejector including a pair of pivotally connected housings adapted to receive the collapsible container therebetween, rolls journaled in said housings and operatively engageable with opposite sides of the collapsible container, arms on the housings slidably engaged in the guides, said arms constituting means for securing the rolls in operative engagement with the collapsible container, and means for actuating the ejector.

2. A dispenser comprising a casing, a discharge spout mounted in said casing and connectible with a collapsible container for receiving the contents thereof, means for holding the upper end of the collapsible container, a pair of opposed guides mounted vertically in the casing, an ejector slidable between the guides, said ejector including a pair of pivotally connected housings adapted to receive the collapsible container therebetween, rolls journaled in said housings and operatively engageable with opposite sides of the collapsible container, arms on the housings slidably engaged in the guides, said arms constituting means for securing the rolls in operative engagement with the collapsible container, and means for actuating the ejector, said means including ratchet wheels rotatably mounted in the casing, reels connected to said ratchet wheels for actuation thereby, cables connected to the reels at one end for winding thereon and at their other ends to the pivotal connections of the housings, a lever pivotally mounted in the casing, and pawls operatively connecting the lever to the ratchet wheels for actuating said ratchet wheels.

DAVID GEORGE PUDERBAUGH.