Dec. 9, 1930. J. I. RIES 1,784,752

COLLAPSIBLE TUBE HOLDER

Filed July 26, 1928

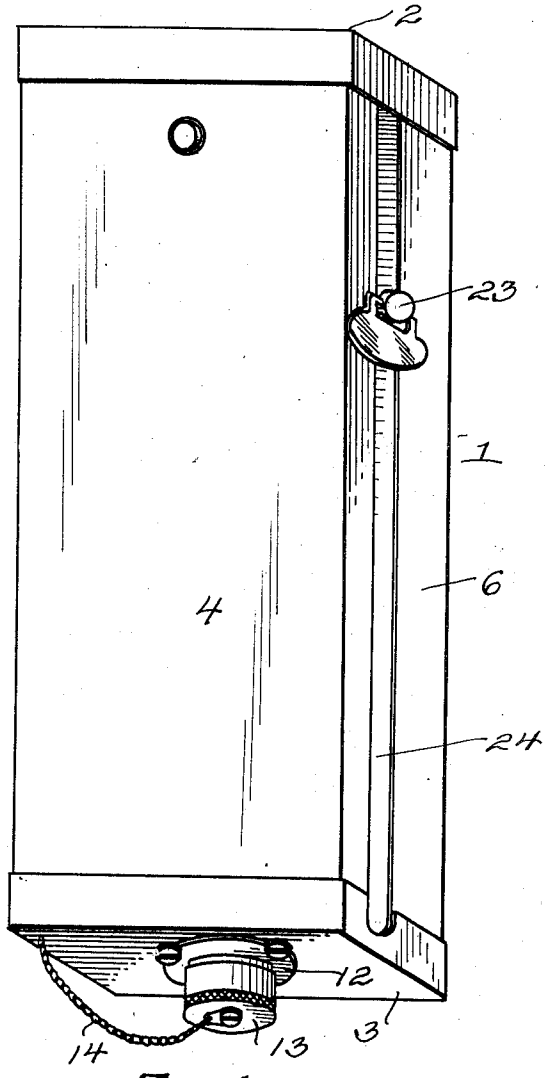


Fig 1

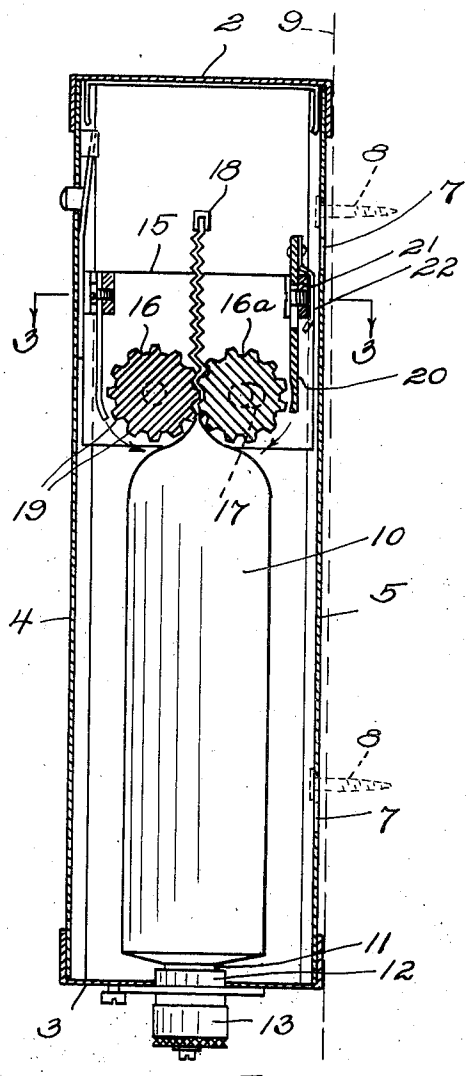


Fig 2

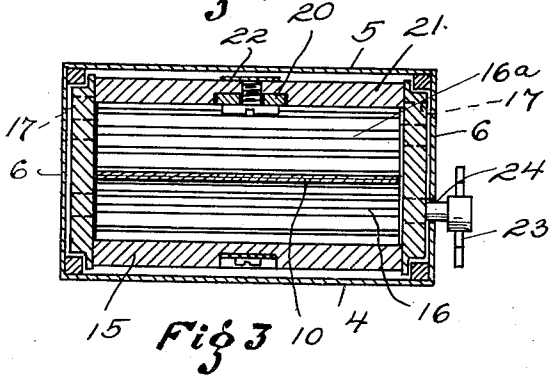


Fig 3

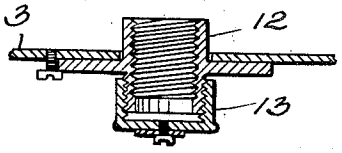


Fig 4

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Patented Dec. 9, 1930 1,784,752

UNITED STATES PATENT OFFICE

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COLLAPSIBLE-TUBE HOLDER

Application filed July 26, 1928. Serial No. 295,434.

This invention relates to improvements in dispensing devices, and more particularly to holders for collapsible tubes. An object of the present invention resides in the provision of a holder especially adapted to receive and permanently retain tubes of tooth paste, shaving cream, cold cream, soap, ointments and other toilet preparations.

While of especial advantage for such products, the holder is also adapted for any product which may be dispensed from a collapsible tube, as for example any kind of paste or grease having the proper consistency and for other similar material.

Another object of the invention is to provide a holder having externally situated means for collapsing the tube to expel the contents in the amount desired.

A further object being to provide a collapsible tube holder with an internal screw threaded portion for receiving the neck of the tube to centrally position the tube within the holder, thus aligning the tube with the ejecting mechanism and prevent binding thereof.

A still further object being to provide a casing or holder for a collapsible tube which will protect the latter from becoming pinched and expel the contents when not needed should the cap not be in place. These advantages make for easy handling and may be carried in traveling packed among other articles without the danger of being squeezed and losing the contents. The holder also acts as a support for the tube enabling the latter to be placed in an upright position upon a shelf or other support, or may be placed in an inverted position upon a supporting wall.

A still further object is to provide a dispensing device which can be manufactured and sold at a reasonably low price, which will be ornamental and attractive in appearance, and which will economize material in that it will insure a complete emptying of the tube, and also provide a substantial receptacle for an article that is otherwise easily damaged.

With these and other objects in view, the invention consists in certain novel features of construction, combination and arrangement of parts, as will be more fully hereinafter described and pointed out in the appended claim.

In the accompanying drawings:

Figure 1 is a perspective view of the holder embodying the present invention,

Figure 2 is a transverse vertical sectional view taken through the holder,

Figure 3 is a horizontal sectional view taken on the line 3—3 of Figure 2,

Figure 4 is a detail vertical sectional view on an enlarged scale taken through the lower portion of the holder.

Referring more particularly to the drawings, the numeral 1 designates the holder in its entirety, and comprises a casing having removable top and bottom walls or covers 2 and 3, closed front and rear walls 4 and 5, and side walls 6 one of which being slotted. The casing is of such size as to readily receive any of the usual sizes of tubes now on the market, and may be of any desired configuration or design. Preferably the casing is made rectangular in shape and has its rear wall formed with keyhole slots 7 for the reception of headed studs 8 projecting from a supporting wall 9. The tube 10 may be inserted in the casing through either one of the removable walls 2 or 3 and has its threaded neck or nozzle end 11 positioned within a similarly threaded collar 12 swiveled within the bottom wall 3 of the casing. By means of this collar the neck portion of the tube may be firmly held against movement relative to the case or holder and facilitates the insertion or removal of the tube. The exterior of the collar 12 is threaded for the reception of a screw cap 13 which closes the lower or open end of the collar 12. A chain or the like 14 may be fastened to the cap and to the casing to prevent its displacement from the holder.

Slidably positioned within the casing is a roller frame 15 in which a pair of corrugated rollers 16 and 16a are journaled for rotation. The bearings for one of the rollers are elongated as at 17 permitting the separation of the rollers a distance sufficient for the insertion of the lower end of the tube 10 and also to allow the stiff metal edge 18 of the tube to be inserted past the rollers and free of the

corrugation thereof. As collapsible tubes are made of comparatively thin soft metal, the rollers may be positioned with their corrugation 19 in such close relation that only the thickness of the collapsed portion of the tube may pass therethrough. The rollers are held in this arrangement by means of a detent 20 slidably positioned for vertical movement within a cross bar 21 of the frame structure 15. The lower end of the detent 20 engages with the outer periphery of the roller 16*a* and is held in its operative or inoperative position by a leaf spring 22 frictionally engaging the cross bar 21.

In order to allow the progressive movement of the rollers to dispense or squeeze the contents out of the tube, the roller 16 is equipped with a key member 23 operating in the slot 24 formed in the side wall 6 of the holder. It will be seen that by virtue of the key the rollers will rotate thus squeezing the contents out through the open end of the collar 12 when the cap 13 is removed therefrom. By utilizing two rollers and positioning the same centrally within the casing and on the tube the contents will be ejected with an even pressure.

In operation this novel collapsible tube holder is simple, rapid and easy to attach to an ordinary collapsible tube. When the cap 13 is removed, the rollers may be moved longitudinally of the casing by turning the key member and in this movement the rollers will compress the tube and eject the contents in such quantity as may be desired. When the tube is empty, the collar 12 can be unscrewed from the neck end of the tube, the top 2 removed and the frame 15 with the tube lifted out. The rollers are then separated by raising the detent 20 and the tube removed. A new tube can then be inserted and positioned within the holder.

From the foregoing description taken in connection with the accompanying drawings, it will be seen that a collapsible tube holder has been constructed which is simple and positive in its operation, thoroughly reliable and one which can be manufactured at a comparatively low cost.

It will be understood that the construction disclosed herein is illustrative but not restrictive and that the same may be modified within the meaning and scope of the following claim.

What is claimed is:

In a device of the character described, a longitudinally slotted casing having a removable top wall and a bottom wall provided with an opening, a threaded member positioned within said opening and arranged for the connection with the threaded neck portion of a collapsible tube, a tube collapsing member comprising a frame slidably mounted within said casing, a pair of intermeshing corrugated rollers journaled for rotation within said frame, an operating member attached to one of said rollers and extending through the slot of the casing, elongated bearings formed in said frame for one of said rollers, a detent carried by said frame and positioned for engagement with the roller having the elongated bearing for holding the rollers in their intermeshing relationship with each other, said detent may also be slid from out of engagement with said rollers permitting the rollers to be separated for the insertion and removal of the collapsible tube, and means carried by said detent and engaging said frame for holding said detent in an active and inactive position with respect to the rollers.

In testimony whereof I affix my signature.

JOHN I. RIES.