Aug. 13, 1957 V. L. BURK 2,802,600

COLLAPSIBLE TUBE HOLDING AND DISPENSING MEANS

Filed July 3, 1956

Fig. 1

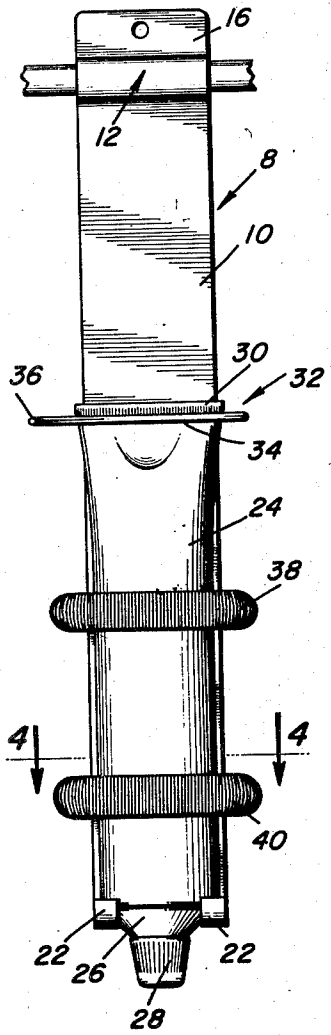


Fig. 5

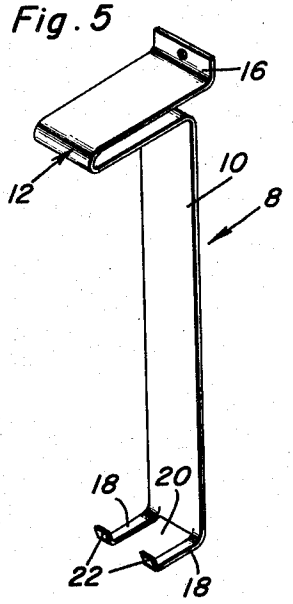


Fig. 2

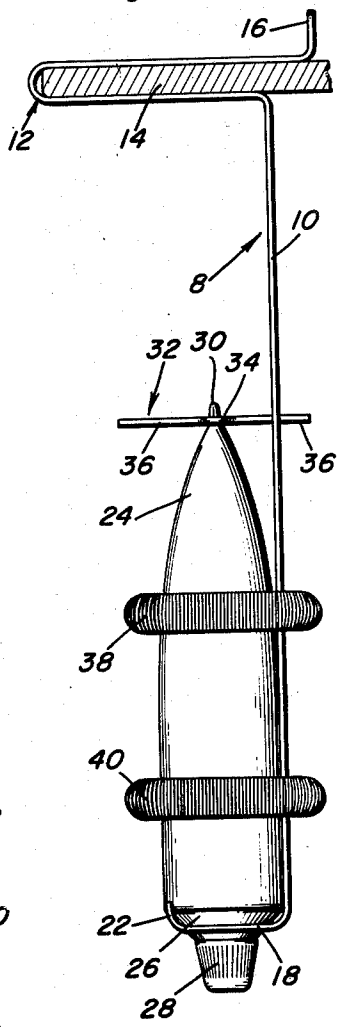


Fig. 3

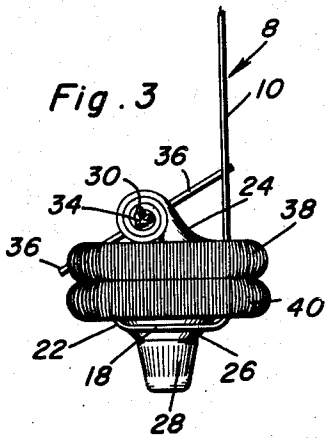


Fig. 4

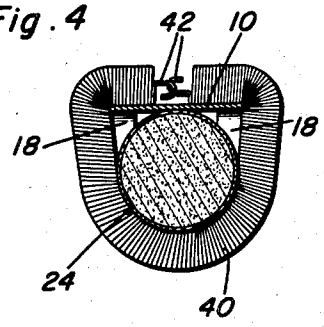
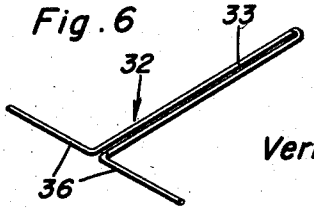


Fig. 6



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COLLAPSIBLE TUBE HOLDING AND DISPENSING MEANS

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5 Claims. (Cl. 222—100)

This invention relates to a novel holding and dispensing device which is expressly constructed in a manner to satisfactorily support and hold a paste-filled collapsible tube, a tube of toothpaste, for example, in a manner which allows the paste to be expressed and dispensed for use in a now generally well known way.

As the preceding general statement of the subject matter of the invention clearly implies, collapsible tube holders and dispensing devices are old. In fact, the art to which the invention relates is well developed and numerous adaptations and holders have been devised and offered for use. It follows, therefore, that it is an object of the instant endeavor to cope with the already recognized problem and, in so doing, to provide members of the public with an improved holder and dispenser which, it is believed, more aptly and satisfactorily meets the manufacturing requirements and economies of manufacturers and the conveniences and needs of users.

Briefly summarized, the invention in its preferred embodiment is characterized by a conventional-type collapsible tube of toothpaste or the like having the usual capped discharge end and clip-closed opposite end, a tube basing, backing and holding member having means at one end for attachment to a relatively stationary support and means at the other end holding and accessibly exposing the capped end in a dispensing position, at least one readily applicable and removable member embracing said tube and holding member and shiftably slidable thereon, and a winding key carried by the clip-closed end, said key serving to progressively coil the last-named end portion of the tube as the tube is coiled and the contents is expressed and embodying a handle which, when it is manually turned in the usual way contacts said embracing member and causes the latter to slide step-by-step along the tube and holding member, whereby the tube is gradually emptied while, at the same time, is properly held and supported in its intended dispensing position.

More specifically, novelty is predicated on the structural means above described and especially on the use of upper and lower coil springs which are strapped around and slidingly embrace the tube and also the strap member and the combination therewith of a T-shaped winding key having a stem portion which is constructed to detachably connect the key with the usual clip on the upper end of the tube, and a handle portion which turns in a path which is clear of the adjacent marginal edge of the strap member, a path of rotation which is predetermined so that the handle of the T-shaped winding key not only coils the tube and expresses the contents, but intermittently swings around, strikes against and produces a camming result which forcibly slides the cooperating coil spring down along the strap member and tube. This causes the upper spring to gradually abut and ride the lower spring down until, little by little, either one or both of the springs are displaced from the tube and the holding strap member in a manner to squeeze and dispense all of the paste from the tube.

Other objects, features and advantages will become more readily apparent from the following description and the accompanying sheet of illustrative, but not restrictive, drawings.

In the accompanying drawings, wherein like numerals are employed to designate like parts throughout the views:

Fig. 1 is an elevational view of the improved collapsible tube holding and dispensing means readied for use;

Fig. 2 is an elevational view looking at the illustration in Fig. 1 in a direction from right to left;

Fig. 3 is a fragmentary view illustrating the final stage of operation wherein the lower or lowermost coil spring is about to be displaced while the upper spring comes into play until all of the paste is squeezed and dispensed from the tube;

Fig. 4 is a horizontal section on the line 4—4 of Fig. 1;

Fig. 5 is a perspective view of the basing, backing and holding member by itself; and

Fig. 6 is a perspective view of the manually turnable tube coiling key.

As shown in Fig. 5 the spacing, bracing and holding bracket or member is denoted by the numeral **8**, and it comprises a flat-faced elongate relatively rigid strip or strap member **10** having means on the upper end for attachment to a wall, shelf or the like. For example, the upper end is preferably provided with a U-shaped portion **12** which may be engaged over the shelf **14** in the manner shown. There may be a terminal apertured flange, as at **16**, whereby the device may be nailed or screwed to a wall or other support surface (not shown). The lower end of the strap member is bent upon itself and this bent portion or bend is bifurcated to provide a pair of spaced parallel horizontal furcations **18** and an intervening slot **20**. The free end portions of the furcations are bent upwardly as at **22** to better perform the holding function. The collapsible tube is conventional and it is denoted by the numeral **24** and it has the usual conical discharge end portion **26** with a screw-threaded neck (not detailed) for the removable screw cap **28**. It will be obvious that the furcations and slot provide a satisfactory seat for this capped discharge end of the tube. Moreover, the bent terminals **22** assist in embracing and holding the discharge end in place. The adjacent portion of the strap member provides a base and backing member as well as a brace for the tube. This strap member may perhaps be of a width approximately the same, more or less, as the cross-section of the full dispensing tube. The upper end of the tube is closed by the usual metal or equivalent and substantially rigid clip **30**. The key is T-shaped as at **32** and as seen in Fig. 6 it is preferably fashioned from a length of wire which is bent upon itself to provide adjacent limbs **33** providing a grip. These limbs may be spread apart and the grip engaged with the clip **30** in an obvious and generally well known manner. The free ends of the wire are bent as at **36** to form a hndle. This key is proportioned so that the gripping portion is of a length greater than the width of the strap member and this positions the handle means **36** outwardly of the adjacent edge where it swings in a path clear of the stated marginal edge portion.

The means for clamping and satisfactorily retaining the collapsible tube on the strap member may vary in construction and may be said to comprise one or more embracing members. More specifically, however, two such members are provided and each is in the form of a coil spring. The upper coil spring is denoted at **38** and the lower one at **40**. Both springs are constructed so that they will embracingly encircle the tube and also the strap member. The free end portions of the spring are provided with hooks **42** and **44** which are interlocked or detachably connected to each other in the manner shown

in Fig. 4. Thus, these yieldable coil springs not only encircle the parts stated, they are sufficiently elastic that they can slide down one after the other from the normal or original position seen in Figs. 1 and 2. Here, the upper spring surrounds the upper end portion of the collapsible tube and the lower one the intermediate portion. It will be noticed in Fig. 1 that the handle means swings in a path which is such that the outer perimeter or peripheral portion of the coil spring is struck by the rotating handle portion. Thus, this mechanical contact of the handle means with the spring means serves to press and ride the spring down little by little in an obvious manner. In other words, as the tube is coiled and the contents is squeezed the upper spring is slid down from its original position until it comes into engagement or contact with the lower spring **40**. Then both springs ride down as a unit and finally the lower spring is forced down to the point where it drops off in an obvious manner. This leaves the upper spring still in place as can be observed by considering Fig. 3 and it holds the tube until the paste is finally squeezed from the tube and dispensed for use.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. In combination, a conventional-type collapsible tube of toothpaste having the usual capped discharge end and clip-closed opposite end, a tube basing, backing and holding member having means at one end for attachment to a relatively stationary support and means at the other end holding and accessibly exposing the capped end in a dispensing position, at least one readily applicable and removable member embracing said tube and holding member and shiftably slidable thereon, and a winding key carried by the clip-closed end, said key serving to progressively coil the last-named end portion of the tube as the tube is coiled and the contents is expressed and embodying a handle which, when it is manually turned in the usual way contacts said embracing member and causes the latter to slide step-by-step along the tube and holding

member, whereby the tube is gradually emptied while, at the same time, is properly held and supported in its intended dispensing position.

2. The structure defined in claim 1 and wherein said embracing member comprises an elastic tube encircling and clamping element.

3. The structure defined in claim 1 and wherein said embracing and clamping member comprises a coil spring having terminal hooks separably connected to each other at the back side of said holding member.

4. The structure defined in claim 3 and wherein said key is generally T-shaped and said holding member comprises a relatively narrow strap.

5. In combination, a conventional-type collapsible tube containing toothpaste or the like and having the usual screw-capped discharge end and rigid closing-clip at the other end, an elongate relatively narrow basing, backing and holding strap member having means at its upper end for attachment to a fixed support, the lower end having a lateral bend which is bifurcated, the furcations serving to seat and support the discharge end of said tube with the capped portion depending through the slot existing between said furcations, the body portion of said tube being positioned against and braced by the cooperating surface of said strap member, upper and lower coil springs strapped around and slidingly embracing the tube and also said strap member, and a T-shaped winding key having a stem portion detachably connected with said clip, and a handle portion which turns in a path clear of the adjacent marginal edge of the strap member, a path which is predetermined so that as the handle sweeps against the upper coil spring it strikes, cams and forsibly slides the latter down along the strap member and tube, causing said spring to abut the lower spring until little-by-little either one or both springs are displaced from the tube and holding strap member in the manner and for the purposes described.

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