Aug. 27, 1963 A. S. BAKER 3,101,869

COLLAPSIBLE TUBE HOLDER

Filed May 24, 1961

FIG. 1.

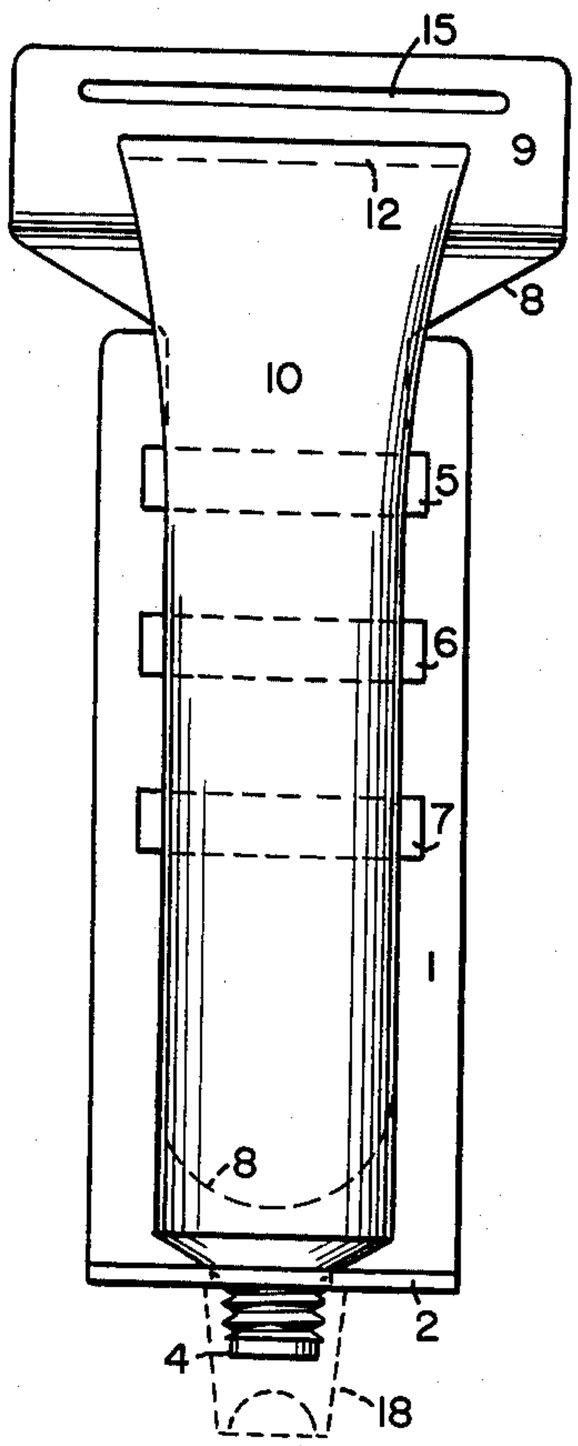



FIG. 2.

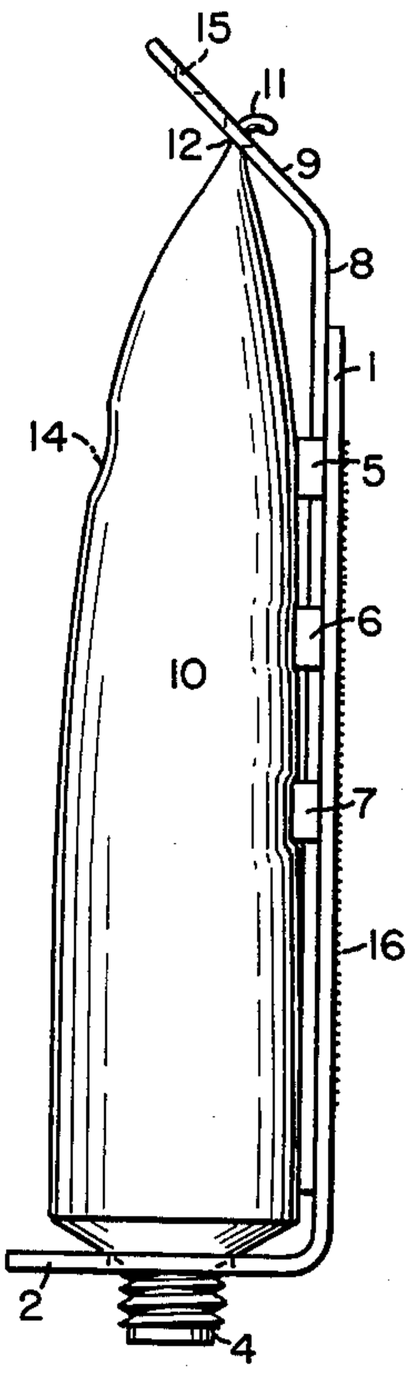
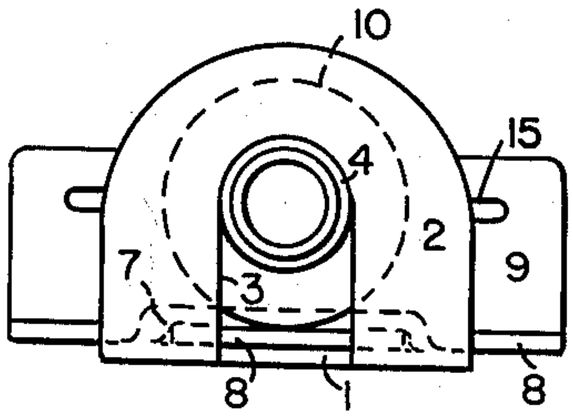



FIG. 3.




*INVENTOR.*
**ALBERT S. BAKER**

BY Harry R. Lubcke
**AGENT**

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# COLLAPSIBLE TUBE HOLDER

Albert S. Baker, 422 S. Oak St., Inglewood 1, Calif.

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My invention relates to a dispenser for pastes and the like contained in collapsible tubes.

The collapsible tube, usually formed of easily deformable metal, that is employed to package various viscous materials, such as tooth paste, hair grooming preparations, shaving cream and the like, is well known. However, this convenient package often becomes messy in use and misplaced or punctured by storage in drawers or similar places in a bathroom.

I have been able to overcome these difficulties by providing an inexpensive, yet sturdy, telescoping dispenser which adjusts to small or to large tubes and which is attachable without tools to any surface having the same contour as the rear of my device. This allows the paste to always be available at a given place, such as the inside of the door of a medicine chest, upon the wall adjacent to the medicine chest, or elsewhere as may be convenient. The fixed positioning, furthermore, allows dispensing the paste by merely pressing upon any freely available part of the surface of the collapsible tube with one or more fingers of one hand, rather than to handle the whole tube in the hands as heretofore. This simple "touch" mode of dispensing is possible because I retain the collapsible tube against the dispenser assembly instead of freely supporting it therein. Thus, the reactive force to the dispensing "touch" pressure is supplied by the dispenser assembly and the whole is kinematically compatible.

Briefly, my device is comprised of a planar support in a preferred embodiment having plural aligned transverse sections spaced from the plane of the support and also having an end at right angles to the said plane into which the outlet orifice of the collapsible tube fits. The rear surface of the planar support is provided with a strongly adhesive pressure-sensitive material for causing the support of my device to adhere to a selected supporting surface, such as a wall.

Slidably disposed within the aligned transverse sections of the support is an elongated tongue having an enlarged angled top. The top is provided with one or more slits running in the transverse direction thereof and suited to hold the flatted end of the tube. After inserting the flatted end in the slot the end is bent over as convenient. The slots dispose the flat dimension of the collapsible tube parallel to the wall, so that the corner thereof is not a bothersome projection and so that the appearance of the whole assembly is enhanced.

An object of my invention is to provide an adjustable holder to form a dispensing device for a collapsible tube.

Another object is to provide a holder-dispenser that can be attached to any planar surface without employing screws or similar fastenings.

Another object is to provide a holder for a collapsible tube so that the contents thereof can be dispensed by the pressure exerted by one finger.

Another object is to provide an all-plastic holder for forming a collapsible tube dispenser.

Another object is to provide a simple, durable and inexpensive tube dispensing holder.

Other objects will become apparent upon reading the following detailed specification and upon examining the accompanying drawings, in which are set forth by way of illustration and example certain embodiments of my invention.

FIG. 1 shows a front elevation of my assembled device, with a collapsible tube in place,



FIG. 2 shows a side elevation of the same, and

FIG. 3 shows an end elevation of the same looking upward from the bottom of FIG. 1.

In the figures, numeral **1** indicates the planar support, which is the major part of my device. This is preferably injection molded of high impact styrene, which gives a strong and an attractive part. A lower end **2** extends outwardly at right angles to the main part of support **1** and is provided with a U-shaped aperture **3**. This aperture is proportioned and spaced so as to hold the collapsible tube firmly in place in coaction with other parts of the device when outlet orifice **4** of the collapsible tube is inserted into the aperture.

A plurality of aligned transverse sections **5**, **6** and **7** are provided in the upper part of support **1** in order that tongue **8** may be slidably joined to support **1**. In addition to the elongated portion of tongue **8** there is a surmounting angled portion **9**. This extends forwardly in alignment with the oppositely disposed end **2** of support **1**. This arrangement allows collapsible tube **10** to be held in my dispenser-holder. The flatted end **11** of the collapsible tube is passed through a slot **12** in the lower area of angled portion **9** of the tongue and is preferably bent over slightly as shown in FIG. 2 so as to most completely secure the tube within the dispenser. In the process of the user inserting the collapsible tube the correct vertical position of tongue **8** within the aligned sections is automatically arranged. The dimensions determining the spacing of slot **12** and aperture **3** with respect to support **1** are such as to position collapsible tube **10** against the vertical portion of support **1**, particularly at the lower end of the tube, and against transverse sections **5**, **6** and **7** at the upper end of the tube. This configuration provides a secure mounting of the tube in the dispenser-holder. It provides a structure in which pressure upon the front of tube **10** at any point such as **14** is resisted and the contents of the tube is dispensed through outlet **4**. The configuration also results in a neat appearance.

A second and longer slot is also provided in angled portion **9** of the tongue to accommodate large-sized collapsible tubes. Slot **15** is forward of slot **12** so that the same compact structure is obtained with the large-sized tube as was previously described. The adjustability of tongue **8** within the transverse sections **5**, **6** and **7** accommodates tubes of different lengths. Collapsible tube **10** may deform slightly around the transverse section, as at **7**. Such deformation takes place automatically upon the user installing the tube in the holder. It adds to the rigidity of the composite structure.

Over the greater part of the rear surface of support **1** a pressure-sensitive adhesive **16** is applied. This may be of the generic type of which "Scotch tape" is an example. The adhesive is protected by a piece of peelable paper during manufacture that is removed just prior to installation. More specifically, "Polyken Industrial Tape" manufactured by the Kendall Company, Chicago, Ill., is suitable. This is a double-faced adhesive having a cloth base. A peelable plastic liner is also provided to be removed by the user just prior to installation of the device. It will be recognized that the adhesive allows very easy installation upon a number of desired surfaces where the use of prior known screws would be difficult or impossible. One such surface is the rear of a metal medicine chest door which carries a mirror on the front.

While the transverse sections **5**, **6** and **7** have been shown fully raised from the planar surface of support **1** it will be understood that these sections may be raised only partially therefrom and a shallow groove cast into the planar surface just wide enough to accommodate the elongated portion of tongue **8**.

It will also be understood that although a flat configuration of support **1** and tongue **8** have been shown, these elements may be curved in part around tube **10** or curved away from the tube, so that the dispenser can be attached to a coved surface or to a cylindrical surface, respectively. New injection molds are required, of course, for either of these alternates.

By employing high impact styrene my device is strong, light-weight and easily manufactured. No metal parts are required; thus, corrosion, expense and possible injury to the user, as occasioned by accidentally striking the device, are avoided. Various colors can be combined with the styrene molding material and so various color schemes of the surroundings accommodated.

It is not necessary that the holder be positioned to provide a vertically downward discharge of the contents of the collapsible tube, although this is usual. The holder can be mounted for horizontal discharge of the contents, or it can be mounted at any angle dictated by the circumstances of the surroundings or the needs of the user.

The usual threaded cap, shown dotted at **18** in FIG. 1, may be replaced upon collapsible tube **10** after each use of the dispenser if this is desired. However, I have found that this is not required with the great majority of pastes, etc., that are packaged in collapsible tubes.

It will also be understood that various kinds of viscous materials may be packaged in the collapsible tube employed with my holder, such as medicines, paints, pastes, etc., and that my holder may be employed in factories or elsewhere where such materials are needed. My holder may also be employed with collapsible tubes of plastic, since the friction between the support **1** and the tongue **8** holds these parts together once the tube has been installed and it is not required that the flat **11** be bent over.

Still other modifications may be made in the arrangement, size, proportions and shape of my holder-dispenser without departing from the scope of this invention.

Having thus fully described my invention and the manner in which it is to be practiced, I claim:

1. Adjustable means to support a collapsible tube of a size within a given range of sizes comprising

a support having at least one section spaced from said support and an end, said end constituted to support one end of said collapsible tube, said section and said end on one side of said support,

an adhesive upon the opposite side of said support for attaching said support to another object;

a slidable part substantially coplanarly engaging said section and having an end inclined away from said support,

the inclined end of said part having a slot to accept the other end of said collapsible tube and to position it in contact with said support to allow the contents of said collapsible tube to be dispensed upon the application of pressure upon said collapsible tube.



2. The adjustable means of claim 1 in which said support is exclusively a single molded piece of high impact styrene

and said slidable part is also exclusively a single molded piece of high impact styrene.

3. An adjustable holder for a collapsible tube adapted to hold a collapsible tube having a size within a range of sizes comprising

a support having plural aligned strap-like sections spaced from said support and a transversely disposed end apertured to hold the orifice end of said collapsible tube, said sections and said end located on one side of said support,

adhesive means upon the opposite side of said support to attach said support to another surface;

an elongated movable element simultaneously slidably engaging plural said aligned sections and having an angled end extending away from said support,

said angled end having a slot to retain the flat end of said collapsible tube, to dispose said collapsible tube in contact with said support for causing the contents of said collapsible tube to be dispensed upon the application of pressure upon the surface of said collapsible tube.

4. A collapsible tube holder-dispenser adjustable as to the size of said tube comprising

a planar support having plural aligned transverse sections spaced from the plane of said support and having a projecting end apertured to accept the outlet end of said collapsible tube, said sections and said end projecting from one side of said support,

a pressure-sensitive adhesive upon the opposite side of said support to attach said support to another planar surface;

a planar tongue having an elongated portion slidably engaging said aligned sections and an angled portion standing away from the plane of said support,

said angled portion having plural slots parallel to the plane of said support to receive the flatted end of said collapsible tube to retain said tube in contact with said support for dispensing the contents of said tube through said outlet upon the application of pressure localized upon an exposed surface of said tube.

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