Nov. 13, 1928. 1,691,457

W. A. BEHRENS

PASTE TUBE HOLDER

Filed Nov. 19, 1924

Fig. 1.

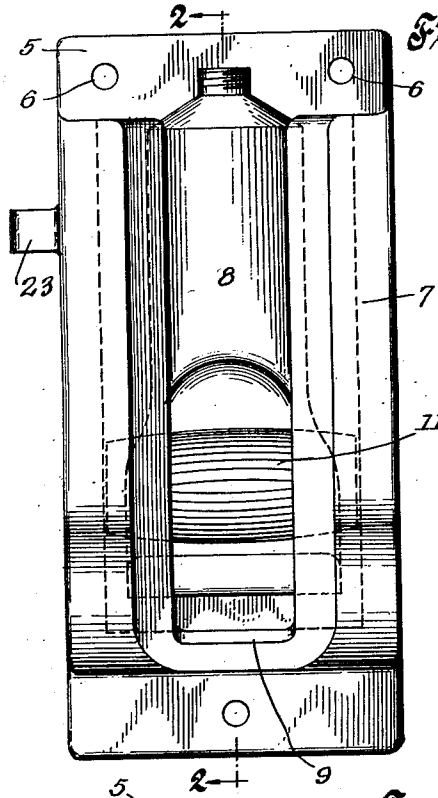


Fig. 2.

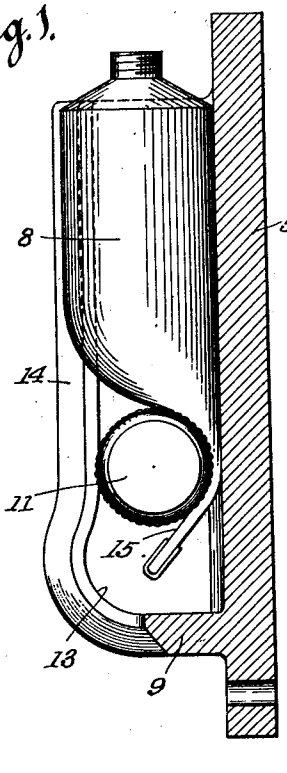


Fig. 3.

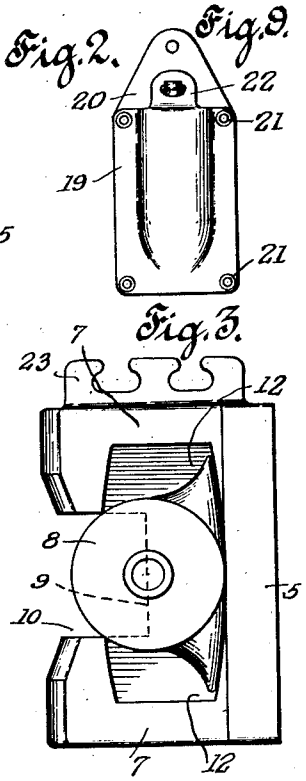


Fig. 4.

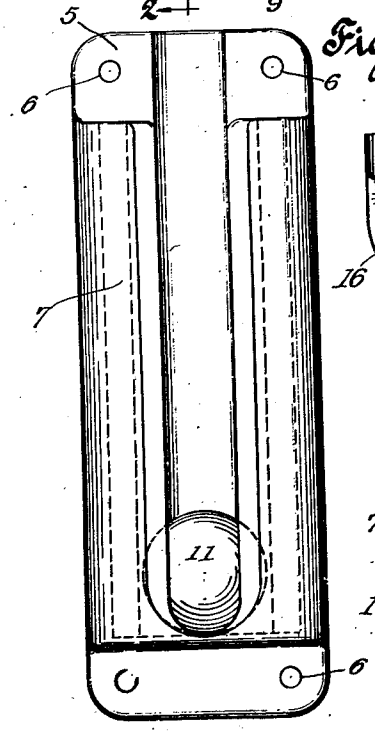


Fig. 5.

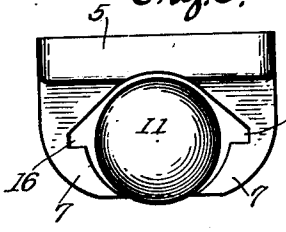


Fig. 6.

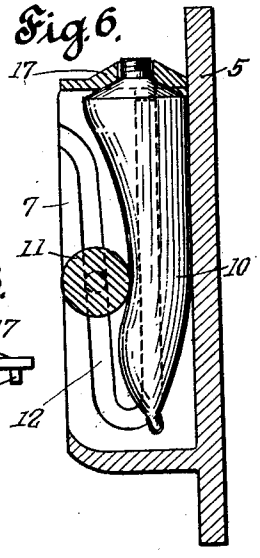


Fig. 8.

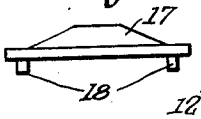
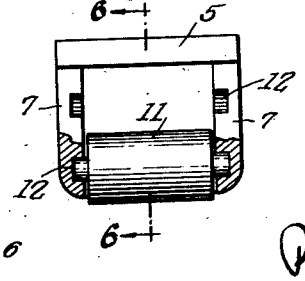


Fig. 7.



INVENTOR

Walter A. Behrens

BY

Philip S. McKean ATTORNEY

Patented Nov. 13, 1928. 1,691,457

UNITED STATES PATENT OFFICE.

WALTER A. BEHRENS, OF HOLLIS, NEW YORK.

PASTE-TUBE HOLDER.

Application filed November 19, 1924. Serial No. 750,796.

The objects of this invention are to provide a holder for dental or other paste tubes which will be of simple, practical construction, ornamental in appearance, which will support the tube in convenient position for use and which can be easily operated to dispense the paste in the quantities desired.

In the drawing accompanying and forming part of this specification several of the preferred embodiments of the invention have been illustrated, but it should be understood that the structure may be modified in various respects without departure from the broad spirit and scope of the invention.

Figure 1 is a front elevation of one of the holders.

Figure 2 is a vertical sectional view as on line 2—2 of Figure 1.

Figure 3 is a plan view with the roller omitted.

Figures 4 and 5 are front and plan views respectively of a modified form of holder.

Figure 6 is a vertical sectional view as on line 6—6 of Figure 7 of another modification.

Figure 7 is a top plan of the device of Figure 6 with the cover removed, and Figure 8 is a detached edge view of the cover.

Figure 9 is a detail of another modification.

The base or back portion 5 of the holder is shown as substantially flat and provided with perforations 6 to receive screws or other fastenings for mounting the holder on a wall or other support. Projecting forwardly from this base are the wings or flanges 7 substantially coextensive with the longitudinal side edges of the base, curved or directed toward each other to form a pocket approximating the cross sectional outline of the paste tube 8, connected at the bottom by a ledge 9 forming a rest or stop for the tube and disconnected above this rest to leave a relatively wide open slot 10.

The tube supported in this way has its entire front portion exposed for manipulation purposes and so may be operated on by finger pressure to expel the contents. Preferably however, a roller element 11 is provided for the purpose, which may be of the elongated barrel shaped form shown in Figures 1 and 2, of spherical form as shown in Figures 4 and 5 or of the plain cylindrical form shown in Figures 6 and 7. The elongated forms have an advantage in that the ends of the same act as axles rolling in the guideways or tracks 12 along the sides of the pockets.

In the first embodiment illustrated, an outward or forward bulge or cavity 13 is provided at the lower end of the pocket to permit the roller to fall to the front and thus provide space for the entry of the lower end of the tube behind the same. This facilitates mounting the tube in the holder and starting the roller up over the same.

The roller is readily turned by pressure of the thumb entered through the wide slot, and, to guide the finger into engagement with the central exposed portion of the roller, the edges of the slot may be beveled or chamfered as indicated at 14. As the roller works upwardly, it is supported in its advanced position by the tendency of the squeezed or flattened portion of the tube to curl outwardly about the roller, as indicated at 15 in Figure 2, but as the lower crimped portion of the tube is of greater width than the slot, this flattened portion of the tube cannot project itself out through the slot. Thus the tube will be retained and properly supported in the holder until the contents are completely expelled and then the tube can be easily withdrawn and a fresh tube dropped in its place.

In the structure shown in Figures 4 and 5, where the roller is in the form of a ball, the pocket is more nearly the cross sectional shape of the tube and has guideways 16 at the sides to receive the straight clip on the bottom of the tube. The back of the pocket is more fully rounded in this case, approximating the more rounded contour of the roller element.

Where a cylindrical roller is employed, as in Figures 6 and 7, the back of the pocket may be substantially flat as such a roller has the effect of pressing the tube to a practically flat condition. In this embodiment the guides or tracks for the axle portions on the ends of the roller are substantially U-shaped so that the tube is flattened progressively, first by traversing the roller in the forward portions of these U grooves, whereby a partial collapse of the tube is effected and then by operating the roller around the bends at the lower ends of the grooves into the inner vertical portions of such grooves, whereby

the partially flattened tube is completely collapsed.

If desired, a cap such as that shown at 17 may be engaged over the upper end of the tube, said cap having a dome portion perforated to fit over and provide a finish about the neck of the tube and having ribs or lugs 18 cooperating with the walls of the pocket to removably hold the cap in place. This cap may fit so closely to the neck of the tube that any excess paste may be easily wiped off by a simple wiping movement across the top of the cap and the device thus be kept in a clean, sanitary condition.

The body of the holder, the roller and the cap may all be made of glazed porcelain, which is attractive and easily kept clean, as well as relatively inexpensive. The parts are simple and durable and the device as a whole is entirely practical and desirable.

The roller may be corrugated or roughened as indicated in Figures 1 and 2 to afford a better grip and to cause the same to "bite" into and take hold of the tube.

If desired, the holder may be made of flexible material or have a flexible front wall to enable manipulation of the tube by direct pressure on the front of the holder. In Figure 9 the holder is shown constructed of sheets of flexible material 19, 20 such as rubber or celluloid, providing a resilient front wall which can be forced inward by the thumb to apply direct pressure to the tube. The two walls are shown secured together by tubular rivets 21 through which supporting fastenings may be passed and the resilient front wall is shown as having a tab or extension 22 turned inward at the upper end of the same and perforated for engagement over the neck of the tube so as to prevent dislodgment of the tube when the pressure is applied.

This construction provides an envelope of relatively inexpensive form which can be readily secured in position on a wall or other support. If desired, the front wall may be made of transparent material so as to show the paste tube therethrough.

If desired, the holder may also be utilized as a tooth brush support by providing the same on one or both sides with a tooth brush rack, as indicated at 23 in Figures 1 and 3.

What is claimed is:

1. A holder of the character disclosed, having a substantially flat base with means for enabling attachment of the same to a wall or other supporting structure and provided with a pocket for a paste tube closed at the bottom to form a rest and stationary support for the lower closed end of the tube and open at the top to expose the neck of the tube, said pocket being open up the front of the same to expose substantially the entire front of the supported tube for manipulation purposes.

2. A holder of the character disclosed, having a substantially flat base with means for enabling attachment of the same to a wall or other supporting structure and provided with a pocket for a paste tube closed at the bottom to form a rest for the lower closed end of the tube and open at the top to expose the neck of the tube, said pocket being open up the front of the same to expose substantially the entire front of the supported tube for manipulation purposes and a roller confined in said pocket in engagement with the contained tube and having a considerable portion of its circumference exposed through the slot for direct actuation by the finger.

3. A paste tube holder having a pocket open at the top to receive the closed end of the paste tube, said pocket being closed at the bottom to position and support the lower closed end of the tube dropped therein and open at the front to permit manipulation of the tube supported in this upright position, said holder having means for enabling attachment of the same to a wall or other supporting structure and holding means movable with respect to the body of the holder, said holding means being perforated and engageable over the neck of the tube at the top of the holder after the tube has been dropped into position therein to prevent dislodgment of the tube from the holder when the same is manipulated at the open front of the holder.

In witness whereof, I have hereunto set my hand this 28th day of October, 1924.

WALTER A. BEHRENS.