This invention relates generally to dispensing devices, and has reference more particularly to devices for dispensing toilet preparations, such as tooth paste, shaving cream, soaps, and toilet creams of various kinds which are usually put up in paste form and contained in collapsible tubes. While in some aspects of my invention it will be seen that it is particularly related to the handling of collapsible tubes, it will be apparent that in some respects the novel features disclosed may be employed in other relations as well.

In the common use of such tubes, the paste or cream is discharged by removing the cap and squeezing the tube progressively from its closed end to its discharge end, the emptied portion of the tube being frequently rolled upon itself. However the tube may be manipulated to get at the contents, the present manual method is crude, unsanitary and unsatisfactory for a number of reasons. In the first place, the tube is sometimes first compressed adjacent the outlet end instead of adjacent the base or closed end, and as a general thing, there is no place provided to support the tubes when not in use so that they are generally laid upon the shelf and quite often the drooling out of the contents causes the tube itself and all of the adjacent articles with which it comes in contact to become smeared by the contents, and hence, a very unsanitary and filthy condition ensues. In addition, it is frequently difficult to find the particular toilet preparation desired when no special place is provided in which it may be kept.

One object of my invention, therefore, is to provide a holder or support for collapsible tubes, such that the use of such tubes may be made more convenient and the tube may be emptied of its contents in a more methodical and cleanly manner.

Another object of the invention is to provide a holder or support for collapsible tubes, which may support the tubes in the proper position for obtaining the contained paste when such is desired, and when the tubes are not in use the holder and tube may be moved to an out of the way or stored position in which the tubes will be maintained in an upright position so that the contents will not tend to leak or drool therefrom.

A still further object of my invention is to provide a tube holder of the character described, in which the collapsible tube may be readily inserted and secured, and which will be provided with means to collapse the tube in the proper manner to express the contents therefrom.

Still another object of the invention is to provide a tube holder of the character described, which shall be movably mounted upon a support, the support in turn being mounted in a cabinet or upon the wall, if desired.

To these and other ends, the invention consists in the novel features and combination of parts to be hereinafter described and claimed.

In the accompanying drawings:

Fig. 1 is a front elevational view of a bathroom cabinet provided with a collapsible tube holder embodying my improvements;

Fig. 2 is a front elevational view of one of the tube holders employed;

Fig. 3 is a side view of the tube holder shown in Fig. 2;

Fig. 4 is a sectional view on line 4—4 of Fig. 2;

Fig. 5 is a top plan view of the tube holder and its supporting rod;

Fig. 6 is a view similar to Fig. 5 but showing a slightly modified form of tube holder, and,

Fig. 7 is a sectional view on line 7—7 of Fig. 2.

In Fig. 1 of the drawings, I have shown in a conventional way, a cabinet 10 which may be of any desired construction, such as are usually called medicine cabinets and are almost invariably found upon the walls of bathrooms and the like. The cabinet is provided with a swinging door 11.

While other forms of mounting my improved tube support or holder may be employed, I have shown as a convenient and simple device for this purpose, a rod 12 which may extend from side to side of the cabinet and may be secured therein by being provided at its ends with extension members 13 and 14, having threaded shanks 15 and 16, which screw into the ends of the rod. The extension members are provided with the pointed ends 17 and 18 and may be polygonal in shape so that a wrench or a pair of pliers may readily be applied to them to secure the rod in place. It will be understood that when the rod is placed in the proper position in the cabinet and the extension members rotated in the proper direction, the sharpened ends 17 and 18 will be caused to embed themselves in the side walls of the cabinet so as to firmly support the rod therein. In this manner, the
rod may be mounted in place without the use of any particular tools for the purpose or without any appreciable amount of labor, and particularly without the services of a skilled mechanic.

The tube holder which I have shown as a preferred embodiment of my invention, comprises a back or body plate 20, provided with side flanges 21 and 22, the flanges being in turn provided with the slots 23 and 24. As shown in the drawings, the flanges are formed integrally with the back plate but adjacent the upper end of the holder the plate is separated from the flanges by means of the slots 25 and 26, and as shown in Fig. 4, is inclined or bent forwardly at 27 so as to be offset from the rear edges 28 of the flanges.

As shown in Figs. 3 and 4, the plate is provided with a tab or ear 29, which forms one of a pair of clamping members to secure the tube in position. The other clamping member is in the form of a plate 30 which may be provided with a U-shaped end 31, embracing the edge of the tab 29, and a thumb screw 32 is provided with a threaded stem 33 passing through the outer clamping member 30 and having a threaded connection with the tab 29. A spring 34 is placed between the two clamping members, so as to hold them apart when the thumb screw is backed off, in order that the closed end of the tube may be readily inserted within the clamp.

The plate 30 as shown, is so shaped as to follow the outline of the back-plate 27, and for this purpose is provided with an inclined or bent end 35 to lie substantially parallel with the part 27 of the plate, for as shown in Fig. 4 of the drawings, the tab 29 is disposed at an angle to that part of the plate. The end 31 of the clamping member 30, which embraces the edge of the tab 29, will serve to hold the member 30 in place when the thumb screw 32 is loosened and prevent it from swinging to a position in which it would not function.

The slots 23 and 24 are likewise inclined at their upper ends, as shown at 36 and 37, so as to lie substantially parallel with the back-plate 27, and a roller 38 is provided with trunnions 39 which operate freely in these slots. Adjacent the upper end, the slots are provided with recesses or notches 40 and 41 so that when the roller is moved to the upper end of the slot and the thumb screw loosened, the part 35 of the clamping member by contacting with the body of the roller will force the trunnions into these recesses and cause the roller to be retained at the upper end of the slots while an empty tube is being removed from the holder and a full tube inserted. The roller may be knurled as shown at 42, so that it may be more readily manipulated.

The clamping plate 30 is also guided by pins 43 and 44 secured to the back-plate, these pins also serving as stops or abutments to contact with the closed end of the collapsible tube and limit its insertion between the jaws of the clamp.

The holder is provided with a pair of rearwardly extending wings 48 and 49, which as shown in Figs. 1 to 5 and 7 of the drawings, may be formed integrally with the part 29 and turned rearwardly at substantially right angles thereto. These wings are provided with openings 50 and 51, through which the rod 12 is passed so that the holders may not only slide longitudinally of the rod, but may also rotate about it as an axis so as to be moved from the full line to the dotted line position, shown in Fig. 1, and vice versa.

In Fig. 6 of the drawings, instead of forming these wings integrally with the back-plate, a separate U-shaped member consisting of the web or base piece 52 and wings 53 and 54, is secured to the part 29 by means of the rivet 55. This method of manufacture has the advantage of permitting the holder to swing laterally about the rivet 55 so that it may be moved to a position more convenient for the user.

Preferably, the rod 12 is secured within the cabinet closely adjacent the front edge thereof and slightly spaced from one of the shelves or the bottom of the cabinet. The holder may then be swung down in the position shown in full lines at Fig. 1, so that the rear edges 28 of the flanges will engage the cabinet and the holder will be firmly supported in position. When the paste has been obtained from the tube, the holder may then be swung upwardly about the rod 12, and as shown in dotted lines in Fig. 1, assumes a position within the cabinet, and the door may then be closed. The holder, in this position is supported by the part 31 engaging the upper surface of the shelf so that the tube will be maintained in a substantially vertical position and prevent it from falling.

When it is desired to insert a tube within the holder, the roller is moved upwardly to the upper end of the slots 36 and 37 and the thumb screw 32 loosened. The part 35 of the upper clamping plate is moved outwardly, due to the spring 34 and forces the roller trunnions into the recesses 40 and 41, so that the roller is maintained in its upper position. The closed end of the tube may then be inserted beneath the member 35. The closed ends of tubes of this character are usually flattened so as to present an inclined surface relatively to the tube body. It will be seen, therefore, that the inclined end 27 of the rear plate 20 will cause this plate to conform substantially to the shape of a full tube, and the insertion of the tube between the clamping jaws will, therefore, be greatly expedited as the closed end of the tube will follow the surface of the plate directly into the space beneath the part 35 of the clamping plate 30. The shape of the rear plate 20
also causes the full tube to lie flatly against the surface of the plate throughout substantially its entire length, and for this reason the tube will be supported more firmly in place than if suspended away from the supporting plate.

A slight pressure of the thumb or fingers upon the knurled part of the roller will serve to express the paste from the tube, and the amount so expressed may be quite readily regulated so that the proper amount will be obtained.

Although the clamp is in such a position that the flattened closed end of the tube will be readily received therein when the body of the tube lies against the back-plate, the rear edges 28 of the side flanges will contact with the wall or with the shelf above which the tube holder is supported, so that the latter may be maintained firmly in its position.

While I have shown and described some preferred embodiments of my invention, it will be understood that it is not to be limited to all the details shown but is capable of modification and variation within the spirit of the invention and within the scope of the appended claims.

What I claim is:

1. A tube holder or the like comprising a back-plate provided with side flanges, said plate being inclined forwardly adjacent its upper end to conform to the shape of the tube, and a clamping member securable to the plate adjacent the upper end thereof, and means to urge said clamping member toward said plate to clamp a tube therebetween.

2. A collapsible tube holder comprising a rear plate, a clamping member movably mounted upon said plate adjacent the upper end thereof to form in conjunction therewith a clamp to hold a tube or the like, and means urging said clamping member toward the plate.

3. A collapsible tube holder comprising a rear plate, a clamping member mounted upon said plate adjacent the upper end thereof to form in conjunction therewith a clamp to hold a tube or the like, and means urging said clamping member in a direction away from the plate, and means to hold said clamping member against the plate in opposition to said first named means.

4. A collapsible tube holder, comprising a support, means for clamping a tube thereon, side flanges on said support having slots therein, and a roller mounted in said slots, and means including a part of said clamping means for retaining the roller at one end of the slots.

5. A collapsible tube holder, comprising a support, means for clamping a tube thereon, side flanges on said support having slots therein, and a roller mounted in said slots, and means for retaining the roller at one end of the slots.