

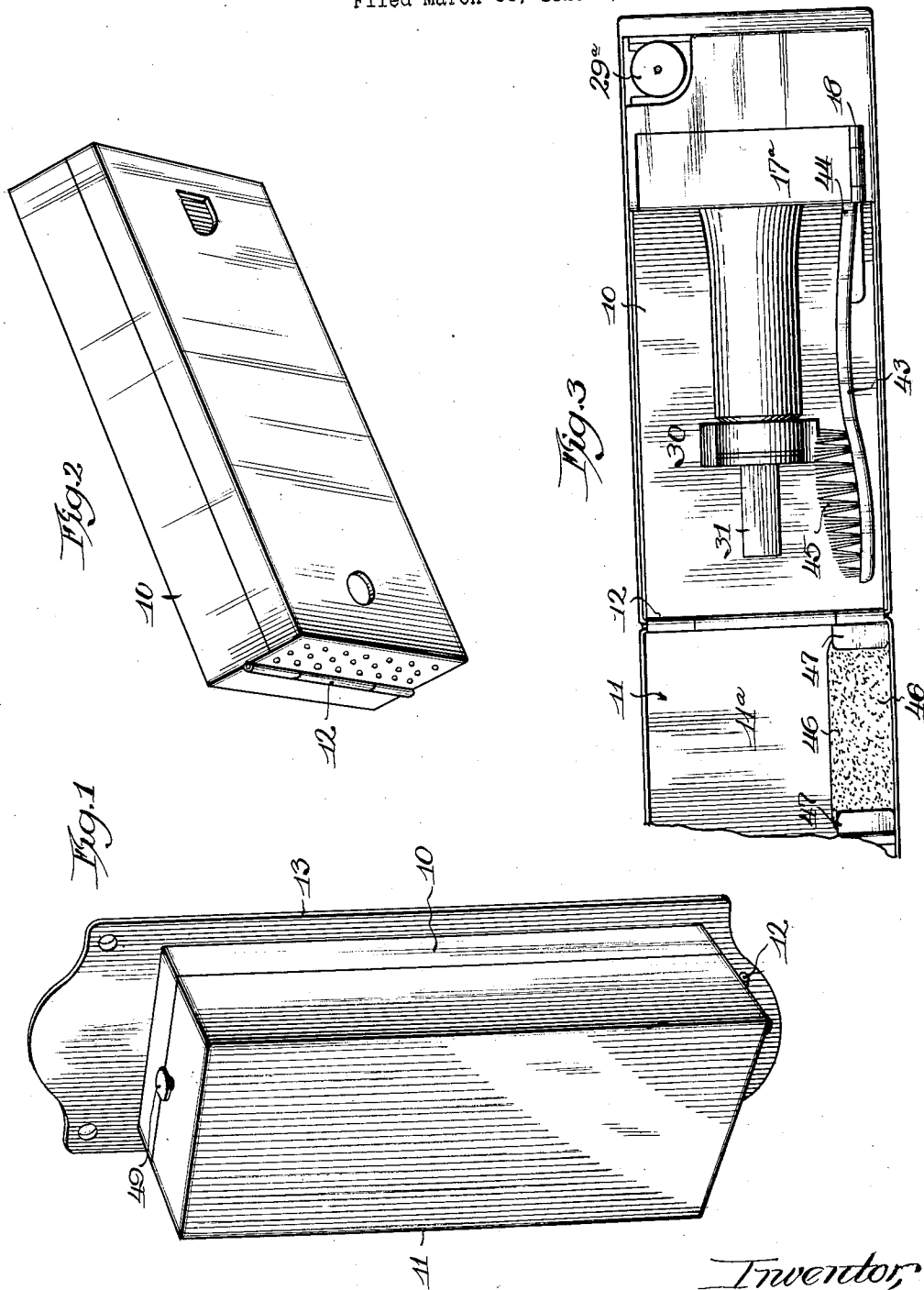
Jan. 11, 1927.

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TOILET PASTE TUBE HOLDER

Filed March 30, 1925

2 Sheets-Sheet 1



Witness:
Chas. K. Koush.

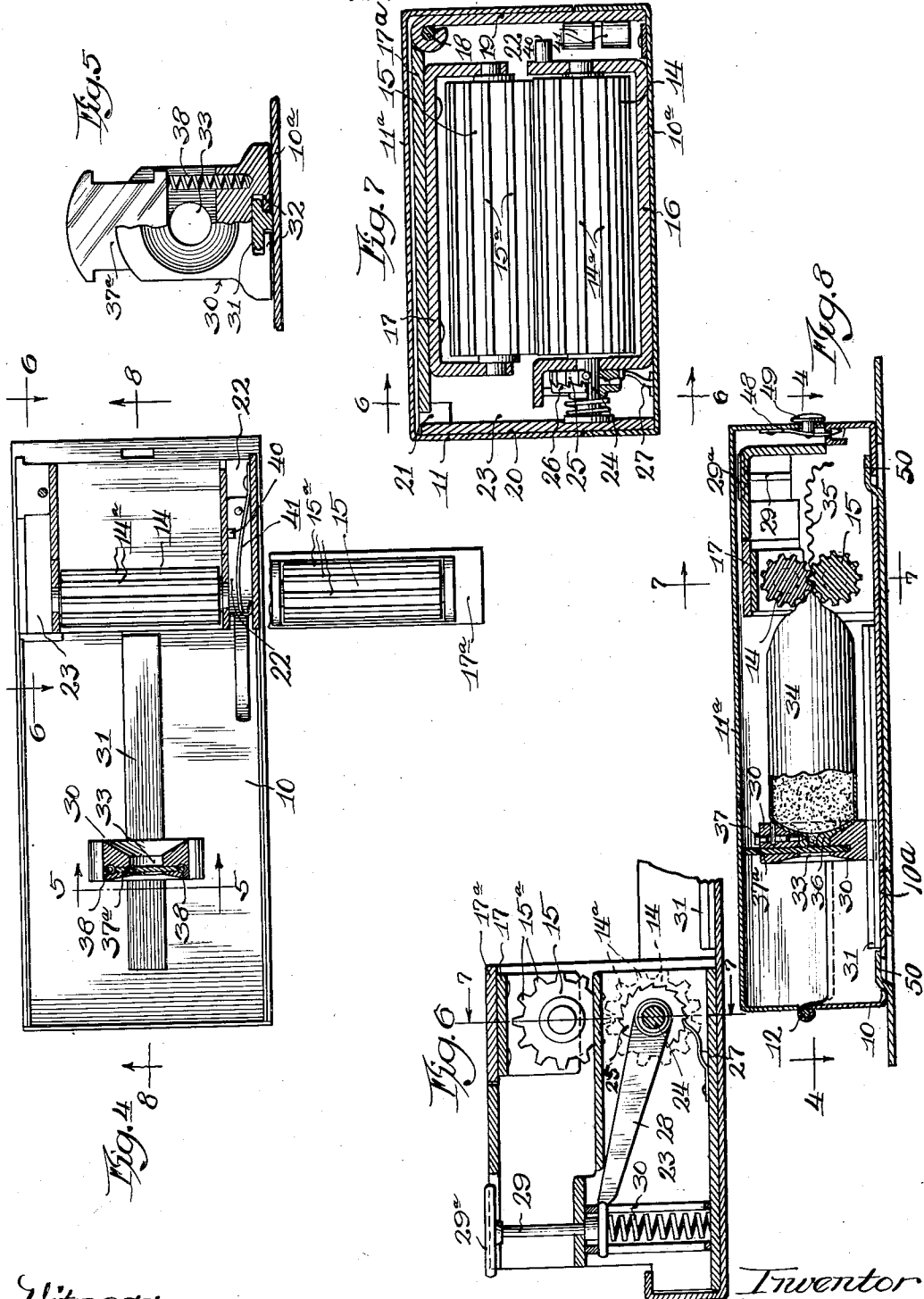
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UNITED STATES PATENT OFFICE.

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TOILET-PASTE-TUBE HOLDER.

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This invention relates to a novel and improved toilet paste tube holder and dispenser and consists of the matters hereinafter described and more particularly pointed out in the appended claims.

Of the many preparations pertaining to the toilet, one of the most difficult to handle and to take care of in a cleanly way, whether in the dressing room or in a traveling toilet case, is the tube or tubes of paste for dental, shaving or other purposes. The present method of handling and carrying such tubes and of dispensing the paste therefrom by hand is not only wasteful of the paste, but has the further objection that the excess paste pressed from the tube and exuded about the cap, is apt to be smeared over the support on which it is kept or carried and upon other toilet articles near it.

The object of the present invention is to provide a novel and improved holder and dispenser for such paste tubes, which is at once sanitary and sightly; which will segregate the tube and protect it from distortion and from unnecessary loss of paste; which includes a feeding device to act upon the tube and to dispense just the desired predetermined amount of paste to be used and no more; and which will also contain and support the brush required in the use of the paste.

The improved device in its preferred form is a unitary enclosed structure capable of attachment to a back or base hung on a wall or door from which it may be detached and conveniently packed in a traveling bag when required.

These and other objects and advantages of the invention will appear more fully as I proceed with my specification.

In the drawings:—

Figure 1 is a perspective view of my improved paste tube holder and dispenser attached to a back or base adapted to be hung upon a wall or door.

Figure 2 is a perspective view of the same as it appears when removed from the back or base.

Figure 3 is a top plan view of the device with the cover opened out to display the

parts on the inside of the body of the receptacle.

Figure 4 is a view of the body of the receptacle showing certain parts broken away and one of the fluted pressure rolls included in the feeding device in the position to which it is brought when the paste tube is to be introduced or removed from the receptacle.

Figure 5 is a view representing on an enlarged scale a partial section through Figure 4 in a plane indicated by the lines 5—5 of Figure 4.

Figure 6 is a view representing a partial section through Figure 4 in a plane indicated by the lines 6—6 of Figure 4.

Figure 7 is a view representing a vertical section through Figure 6 in a plane indicated by the lines 7—7 of Figure 6.

Figure 8 is a view representing a longitudinal, central section through the device, in a plane indicated by the lines 8—8 of Figure 4.

The invention, as illustrated in the drawings, is embodied in a paste tube holder and dispenser designed particularly for a tube of tooth paste and for a tooth brush, and many of the parts shown therein are adapted specifically for that use; but, as will be understood, said parts may be suitably varied and modified, when the device is designed for other toilet pastes, as for example, shaving paste, requiring a different form of brush for application of the paste.

Referring now to that embodiment of the invention illustrated in the drawings:—The holder and dispenser includes a closed receptacle, which is in the form of a deep, narrow elongated box, having a hollow body 10 and a hollow lid or cover 11. The two said parts are elongated open shells connected together at their bottom proximate edges by means of a hinge 12. By this construction, the cover 11 may be swung upon its hinge to disclose the open interior of the body 10 and to hang down below the body, when the device is suspended in a vertical position against a back or base 13, hung upon a wall, as indicated in Figure 1.

Near the top end of the body there are located two co-acting feed rolls 14, 15, one

above the other, with their axes of rotation in a plane extending at right angles to the length of the body. These feed rolls are preferably, and as shown in the drawings, in the form of the familiar fluting rolls, with longitudinally extending teeth 14^a, 15^a, respectively, which are adapted to interengage and press and feed between them a paste tube, when said paste tube has its flat end introduced between them.

For convenience in bringing a paste tube into operative engagement between the two rolls and for removing it after all the paste in the tube has been expressed, one of them, in this case the top feed roll 15, is so mounted that it may be swung away from its position of engagement with the bottom roll 14. Thereupon the flat end of the paste tube may be brought to a position to engage the bottom roll 14, and the top roll 15 may then be brought back into engaging position, in which position it is locked. The rotation of the feed rolls 14, 15 will thereafter act upon and compress the tube.

To the above end, the bottom roll 14 is journaled in a frame 16 fixed to the bottom wall 10^a of the box body 10. The top roll 15 is journaled in a frame 17, fixed to a plate 17^a, which is adapted to swing on the horizontal axis of a hinge 18, extending parallel to the length of the box. 19, 20 indicate short plates fixed to the sides of the box body 10 near its top end and rising above said body to a level above the top roll 15. The hinged plate 17^a is connected at one end to the plate 19 by the hinge 18 and at its other end is detachably connected to the plate 20 by a suitable latch 21, the latch connection being such as to properly lock the top roll 15 in engagement with the bottom roll 14.

The rolls 14, 15 are somewhat shorter than the box body 10 is wide and their bearing frames 16, 17 are spaced inwardly at their ends from the side walls of the box to leave spaces 22, 23. The one roll, in this case the bottom roll 14, has an elongated bearing stud 24 which projects into the space 23 where a ratchet wheel 25 is fixed to said stud (see Figure 7). Said ratchet wheel has teeth on its side with which a spring controlled pawl device 26 engages. The ratchet wheel 25 is locked against back rotation by means of a spring pawl 27 which engages with peripheral teeth on said ratchet wheel (see Figure 6). An arm 28, fixed to or made a part of the pawl device 26, is extended in the space 23 towards the top end of the box. It is there engaged by a plunger 29 suitably supported and guided in the frame in the box for longitudinal reciprocation. A spring 30 normally holds the end of the arm 28 at an elevated position and in engagement with the plunger 29. Manifestly, by pressing the plunger 29

downwardly (by pressing a button 29^a fixed to the top of the plunger 29) the arm 28 is depressed and operates the ratchet device 25 to rotate the roll 14 through a predetermined arc, controlled by the length of movement of the plunger 29. On account of the interengagement of the teeth of the two rolls 14, 15, the rotation of the bottom roll 14 will impart a rotative movement, in the opposite direction, to the roll 15.

Manifestly, with a tube of paste engaged between the fluting teeth of the two rolls 14, 15, the aforesaid rotation will spread out and squeeze together the two opposite walls of the tube, as shown in Figure 8, so as to squeeze all the paste from between them and force it forwardly toward and beyond the mouth of the tube, at the same time drawing the exhausted flattened part of the tube upward beyond the rolls.

As the paste tube is always enclosed as a whole within the box, comprised of the body 10 and cover 11, it is not necessary to replace the usual cap on the paste tube, after the tube has been introduced into the device, and the device may be used without a closure for the tube. However, I prefer to provide a closure, which also may act as a support for the threaded neck of the tube.

In the embodiment of the invention illustrated, a block 30 is mounted on the bottom wall 10^a of the box in such manner as to be slidable longitudinally of the box. A rail 31 is fixed to the bottom wall of the box and the block 30 is provided with suitable intumed flanges 32, 32 (see Figure 5) for engagement with said rail. The rail 31 terminates short of the hinge-end of the box to permit the removal of the block 30 from the rail 31 when it is not desired to use said block.

The block 30 has an aperture 33 to receive and support the neck of the tube. In Figure 8, 34 indicates the body of the tube; 35, the part of the body which has passed between the rolls 14, 15; and 36, indicates the neck of the tube engaged in the aperture 33. A set screw 37 in the block may be provided for engagement with the neck of the tube to hold the same in the aperture 33.

The block 30 has a suitable transverse recess to receive a gate 37^a, which is normally held in raised position above the area of the aperture 33 by a coiled spring 38 (see Figure 5). Said gate in this position projects above the plane normally occupied by the top wall 11^a of the cover 11, when in closed position, a distance equal to the depth that it must descend in order to close the aperture 33. Thus, when the cover is closed, the gate 37^a, normally open under the pressure of the spring 38, will be engaged by the top wall 11^a of the cover and brought to a position to close the opening in the neck 36

of the tube. When the cover is opened back, the gate 37^a is released and will be raised by the spring 38 to uncover the opening in the neck of the tube.

5 The box of the device is made long enough, not only to accommodate the full length of the tube below the plane of the rolls 14, 15, as required when the tube of paste is first introduced, but also is long
10 enough to receive and contain in this case a tooth brush. A pin or stud 40 is fixed to the side of the bottom roll bearing frame 16 so as to project somewhat into the space 22 and a flat spring 41 is fixed to the adjacent plate 19 in such manner that when a
15 tooth brush 43 is suspended by its handle 44 from the stud 40, it will be retained on said stud by reason of the engagement of the spring 41 with said handle. The bristle
20 part of the brush 45, depends down into the lower end of the box body and a pad 46 treated with some antiseptic powder or solution is preferably supported in the cover
25 against the top wall 11^a thereof in such position that when the cover is closed, said pad will be brought into engagement with the bristles of the brush. The pad is held in position by means of clips 47, 47 fixed to the
30 top wall 11^a of the cover, so that the pad may be withdrawn from the clips and renewed or retreated with the antiseptic solution.

The cover 11 is provided at its top end with a spring catch 48 (see Figures 1 and
35 8) by means of which it may be locked in closed relation against the body 10. Said catch is operated by a button 49. Thus, after the brush and paste have been used and the brush has been returned to its place
40 in the box, the cover may be closed and locked. The box as a whole is detachably supported against the back 13 by means of tongues 50, 50 which are adapted for engagement in eyes in the bottom wall 10^a of the box.

The convenience and ease with which the device may be used to dispense paste for the brush will be manifest from the foregoing description. The user simply presses the
50 button 49 and opens up the box, whereupon, the gate 37^a (where such a slide is used) rises leaving the neck of the tube open for discharging the paste. The button 29^a is then pressed on the plunger 29 to actuate
55 the feed rolls 14, 15 by means of which a certain length of ribbon of paste is fed from the tube. This is removed from the tube by the brush in the usual manner and if more than this is required, the button 29^a is again
60 pressed, an equal length of ribbon being thereby again discharged.

After the brushing and cleansing operation is completed, the brush is again returned to its position suspended from the
65 stud 40 and the cover is closed and locked,

the gate 37^a being again brought to position to close the tube in the operation of closing the cover of the box.

The block 30 with its gate 37^a being fixed to the neck of the tube by the set screw 37
70 will move along its rail 31, towards the feed rolls 14, 15 as the tube is drawn towards said rolls in their operation of squeezing paste from the tube.

When traveling, it is only required to detach the box as a whole from the back or
75 base 13 and place the box either loosely in the traveling bag or in a toilet case, and neither place is there any danger of the discharge of paste on the articles surrounding
80 the box.

While in describing my invention I have referred to many details of mechanical construction and arrangement of parts, it is to be understood that the invention is in no
85 way limited thereto, except as pointed out in the appended claims.

I claim as my invention:—

1. In combination, a container including an open hollow body, a cover hinged thereto
90 at its bottom end, means for detachably locking said cover to said body, interengaging fluted feed rolls mounted in said body, one of said rolls being removable to disengage it from the other roll, means for
95 locking said removable roll in engaged relation with the other roll, a pawl and ratchet device for rotating one of said rolls, and a spring controlled plunger for actuating said pawl and ratchet device.

2. In combination, a container including an open hollow body and a cover hinged thereto, means for releasably locking said
100 cover in closed relation to said body, interengaging feed rolls locked in fixed position on said body and adapted to receive a tube between them, means for intermittently rotating said rolls through a predetermined arc, a block slidably connected to said body adapted to receive the neck of the tube, and
105 a gate carried by said block adapted to close against the neck of said tube.

3. In combination, a container including an open hollow body and a cover hinged thereto, means for releasably locking said
110 cover in closed relation to said body, interengaging feed rolls locked in fixed position on said body and adapted to receive a tube between them, means for intermittently rotating said rolls through a predetermined arc, a block slidably connected to said body adapted to receive the neck of the tube, and a normally opened spring controlled gate adapted to close against the neck of said
115 tube, said gate being operable by the closing of the cover of the body.

4. In combination, a container including an open hollow body and a cover hinged thereto, means for releasably locking said
120 cover in closed relation to said body, inter-

engaging feed rolls locked in fixed position on said body and adapted to receive a tube between them, means for intermittently rotating said rolls through a predetermined arc, a block slidably connected to said body adapted to receive the neck of the tube, means for fixing said block to the neck end of said tube, and a normally open spring controlled gate adapted to close against the neck of said tube, said gate being operable 10 by the closing of the cover of the body.

In testimony that I claim the foregoing as my invention, I affix my signature this 26th of March, A. D. 1925.

GUSTAV WOLKENHAUER.