

J. T. BARKER.

APPARATUS FOR HOLDING AND DISCHARGING COLLAPSIBLE TUBES.

APPLICATION FILED OCT. 21, 1908.

971,818.

Patented Oct. 4, 1910.

2 SHEETS—SHEET 1.

Fig- 2

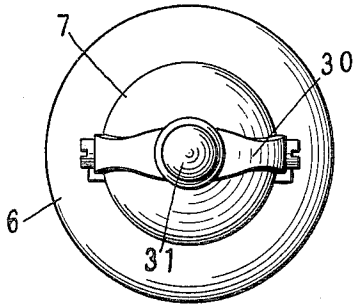


Fig- 3.

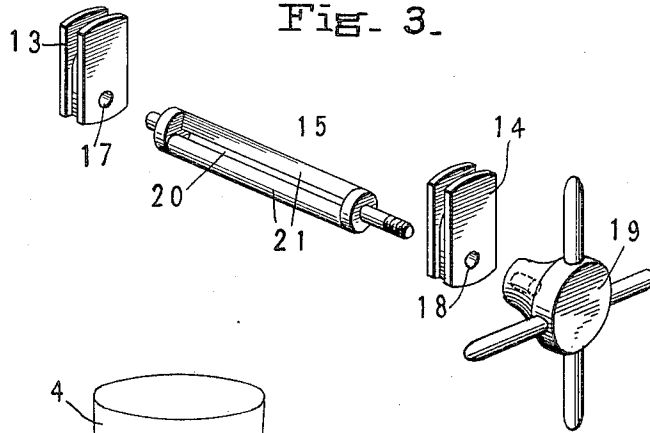
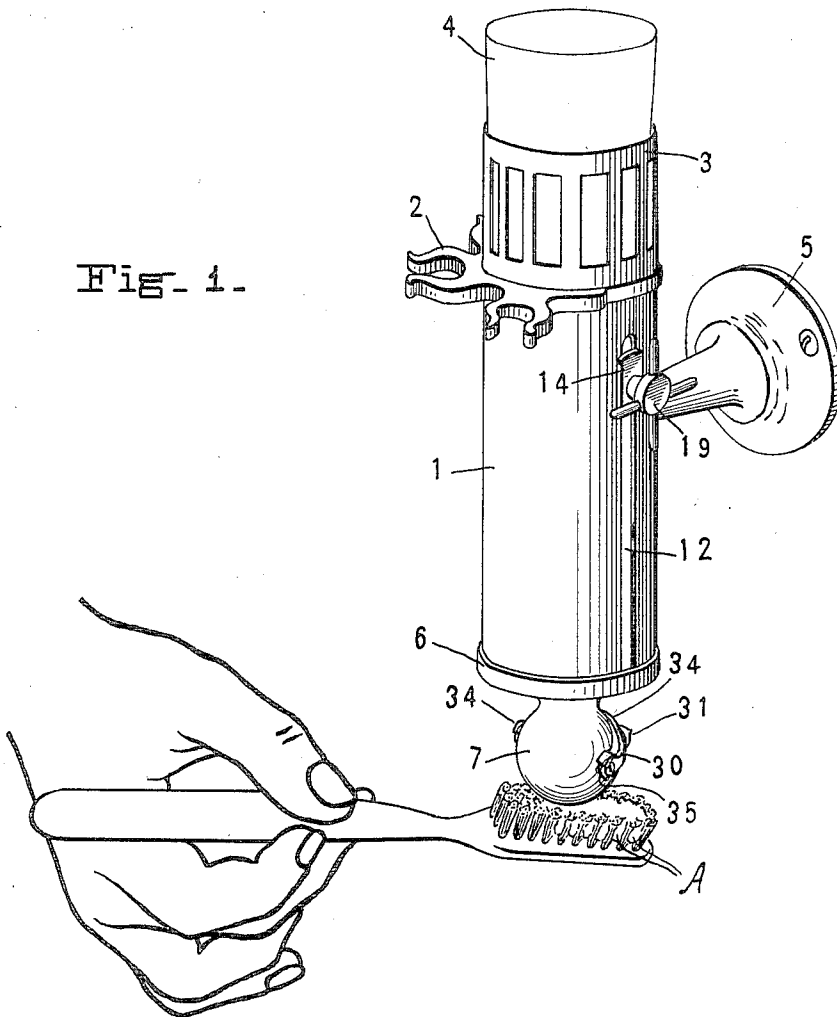


Fig- 1.



WITNESSES

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Fig. 4.

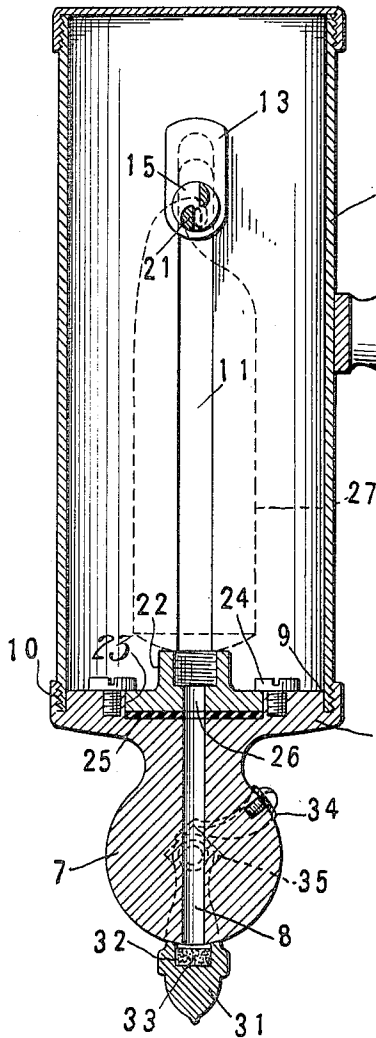


Fig. 7.



Fig. 5.

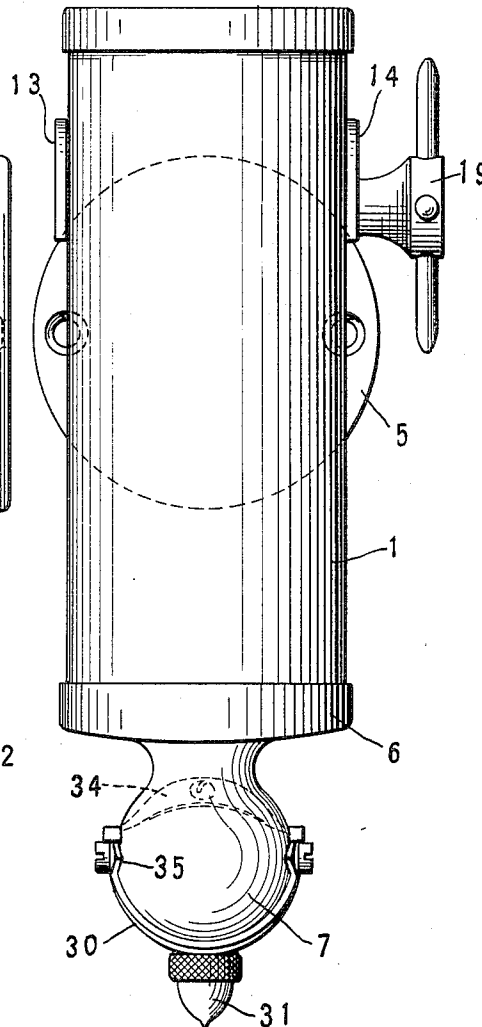
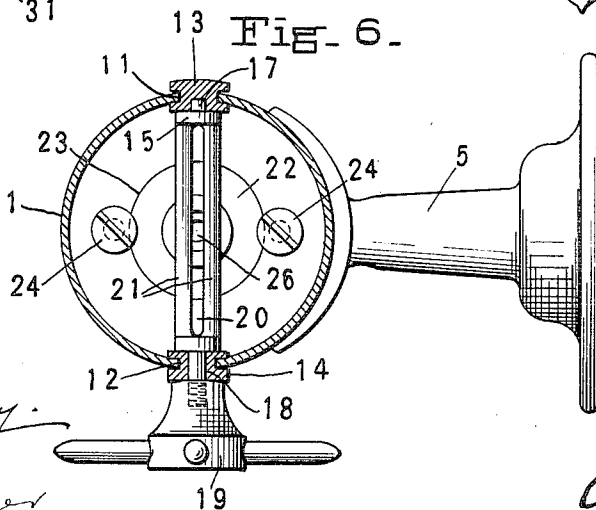


Fig. 6.



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APPARATUS FOR HOLDING AND DISCHARGING COLLAPSIBLE TUBES.

971,818.

Specification of Letters Patent.

Patented Oct. 4, 1910.

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To all whom it may concern:

Be it known that I, JOHN TENNEY BARKER, a citizen of the United States, and a resident of Wallingford, in the county of New Haven and State of Connecticut, whose post-office address is Wallingford, Connecticut, have invented certain new and useful Improvements in Apparatus for Holding and Discharging Collapsible Tubes, of which the following is a full, clear, and exact description, whereby anyone skilled in the art may make and use the same.

The invention relates to an apparatus for inclosing and holding flexible tubes, such as are commonly employed for holding substances, for toilet use and the like and pertains more particularly to an ornamental fixture for holding collapsible tubes of tooth-paste, in such manner, that the paste may be extracted from the device when desired by the user.

The objects of the invention are to provide a simple and efficient holder for a collapsible tube which will completely inclose the tube and its contents against dirt and injury and will permit extracting the contents of the tube in quantities as desired and to suit the convenience of the user.

A further object is to provide not only for retaining the collapsible tube in an inclosed casing, but also to provide a means for extracting the entire contents of said tube in a most hygienic manner.

A still further object is to provide a receptacle for a collapsible tube simple in construction and with the parts so arranged that the tubes may be readily inserted and removed.

Referring to the drawings:—Figure 1 is a perspective view of the device showing in addition to the collapsible tube receptacle, a rack for holding brushes and a cup holder. Fig. 2 is a bottom plan view of the lower end of the device or movable head. Fig. 3 is a perspective view of the guide blocks, spindle, and operating handle in the relative position occupied when assembled in the casing. Fig. 4 is a central vertical sectional view through the casing and appurtenant parts. Fig. 5 is a view in elevation of the device. Fig. 6 is a cross sectional view in horizontal section through the casing and appurtenant parts above the operating spindle. Fig. 7 is a cross sectional view through the tube plate illustrating the method of applying supplemental bushings.

The invention, as illustrated herein, comprises a casing which may, through a suitable bracket part, be applied to a wall or similar support in any convenient position and arranged to inclose and retain a tooth-paste tube in such manner that the paste may be forced from the tube through the lower end of the casing.

The collapsible tube for tooth-paste is well known in the art and needs no specific description other than to indicate that the tubes are made of a material which, when compressed, will cause the expulsion of the contained material through a nozzle at one end, which nozzle is ordinarily closed with a screwed cap. As these screw caps and the nozzles are made of a soft material, it is not unusual for the threads to become worn and jammed so that the cap cannot be readily applied to and removed from the tube. Furthermore, the tubes are of such a size and form that they are often misplaced, dropped upon the floor or otherwise misused with a result that the paste may become infected from almost any source. Furthermore, the tubes are somewhat unsightly and the paste is frequently smeared over the exterior increasing the unsightliness. It is also a frequent occurrence for the end of the tube most remote from the nozzle to give way with a result that the paste squeezes out from said end soiling the hands of the user, to say nothing of liability of the paste oozing from the nozzle end when the tube is not in use and is inadvertently left with the screw cap removed.

It is the object of the present invention to eliminate, so far as possible, these disagreeable features of using a collapsible tube, by arranging a receptacle which will always retain the tube in position ready for use and with attachments for completely discharging the tube with ease, certainty, and under the most hygienic conditions.

Referring to the drawings, the numeral 1, denotes a casing, shown herein as of cylindrical form and illustrated in Fig. 1 as surmounted by a rack 2, suitable for the suspension of tooth-brushes and with a glass-holder 3, for retaining a glass. The surmounting parts illustrated in Fig. 1 comprise a cover for the upper end of the tubular casing 1. The casing is secured to a suitable bracket member 5, which may be screwed to any support desired, preferably holding the casing in a vertical position, al-

though the exact positioning of the casing is not material. The lower end of the tubular casing 1, is screw-threaded and upon said casing is screwed a head 6, having a bulb-like extension 7, through which extends an outlet passage 8. The head 6, is provided with an annular recess 9, threaded on one side, as at 10, to engage the threaded end of the tubular casing in such manner that the casing will be firmly held when screwed into the annular opening 9. The casing 1, on diametrically opposite sides, is slotted as at 11, 12, and engaging these slots are guide-blocks 13, 14, which support and form a bearing for a spindle 15. The guide-blocks 13, 14, are grooved on opposite sides to engage the opposite edges of the respective slots 11 and 12 and are provided adjacent to their lower ends with recesses 17, 18, to receive the spindle 15. The spindle 15, passes through the block 14, to the outside of the casing and has secured to it an operating handle 19, which, when turned, will rotate the spindle 15. The blocks 13, 14, are of such a length that the spindle 15, may be moved downward with the blocks to the extreme lower end of the casing permitting the spindle to extend slightly below the lower end of the tubular slotted casing 1, without disengaging the blocks from the slots. This permits ready access to the spindle for the purpose hereinafter defined without necessitating the removal of the slide blocks from the slot. The spindle 15, is of somewhat peculiar form and is provided with a slot 20, formed between 2 semi-circular bars 21, in such manner that the end of a collapsible tube may be inserted through said slot and upon a slight rotation of the spindle 15, will be firmly held therein so that, as the spindle is rotated, the tube will be firmly compressed and bound about the two bars 21. This compression, of course, will completely empty the flexible tube. Centrally arranged with reference to the head 6, is a screw-threaded nipple 22, into which the threaded end or nozzle of the collapsible tube may be firmly screwed. This nipple 22, is of such a height as to permit the spindle 15, to bind and compress the entire tube before the slide-blocks 13, 14, come into engagement with the head 6.

The nipple 22 is swiveled in a recess 23, formed in the inner face of the head and is held in place by screws 24. A gasket 25, being interposed between the base of the nipple 22, and the bottom of the opening 23. Of course, it is understood that the nipple is perforated as at 26, which perforation registers with the discharge opening 8, of the head. The arrangement of the various parts is clearly shown in Fig. 4, where the collapsible tube is shown in dotted outline as at 27, the tube not being shown in full lines in order to avoid confusion. As the

threading upon the collapsible tubes varies in different makes of tubes, a convenient arrangement is illustrated in Fig. 7, for providing for said threads. In this figure the nipple plate 22, is provided with a threaded opening 28, to take the largest sized tube, and bushing nipples, having the proper interior thread to receive the end of the collapsible tube, may be screwed into the threaded opening of the tube or nipple plate 22.

To provide for closing the opening 8, a bail piece 30, is pivoted on diametrically opposite sides of the spherical head 7, and is provided with a dependent projection 31, which may be of any desired ornamental design and which will provide a handle for moving the bail 30. This dependent portion 31, is preferably recessed at its center as at 32, and within the recess may be arranged a cork or other non-corroding material 33, to form a tight closure for the bottom of the discharge opening 8.

It is desirable to insure the return of the bail piece 30, to normal position to cover the discharge opening after it is swung away from said opening to secure the necessary quantity of material from the collapsible tube and to provide against accidental removal of the bail-piece. To effect these results a two-armed spring 34, is attached to the spherical head, and its arms over-lie and bear against angularly disposed surfaces 35, on the bail-piece. The bail-piece and spring arms are so formed that said bail-piece is held against accidental movement in position to cover the discharge opening, and unless the bail-piece is raised until the spring engages the next angular projection, said spring will always return it to closed position.

The operation of the device is as follows. The head 6, is first unscrewed and the spindle brought down to its lowermost position. The threaded cap of the collapsible tube is then removed and the tube is screwed into the nipple plate 22, which, of course, is attached to the head 6, although free to rotate with reference thereto. The flattened end of the collapsible tube is then inserted in the slot 20, of the spindle 15, and said spindle is turned just enough to bind the end of the tube between the bars 21. The tube with the spindle is then forced upward into the casing 1, until the head 6, may be screwed to the bottom of said casing. Now upon turning the spindle 15, the contents of the tube will be forced downward through the opening 8, whenever the bail-piece 30, is moved aside and the discharge opening 8, is left uncovered.

In Fig. 1, an important advantage of the device is illustrated. Ordinarily, in using a collapsible tube, the tooth-paste is forced out upon the brush and if the material is

somewhat hard, will lie upon the upper surface thereof so that in use, it will not be easily distributed over the teeth. As illustrated in Fig. 1, it is clearly shown that by
 5 holding the brush firmly against and moving it across the discharge opening while the spindle is being turned, the paste will be forced between the bristles of the brush and will completely fill the same as illustrated at A, instead of resting on the upper
 10 surface of the bristles.

Obviously, various changes may be made in the mechanism without departing from the intent of the invention, which contem-
 15 plates the holding and discharge of a collapsible tube by positive means under the control of the user with features of completely inclosing said tube.

What I claim as my invention and desire
 20 to secure by Letters Patent is:

1. In a device for holding collapsible tubes, a casing, a removable head attached to said casing and provided with a discharge opening, a tube plate rotarily mounted with
 25 reference to the head, and provided with means for the attachment of a collapsible tube, and means for collapsing said tube.

2. In a device for holding collapsible tubes, a casing provided with a head, means
 30 for attaching a collapsible tube to said head, guide ways formed in said casing, a spindle extending through said guide ways, and

means traversing said guide ways forming a support for the spindle, said spindle adapted to engage and collapse the tube. 35

3. In a device for holding collapsible tubes, a casing provided with a discharge opening and having means rotarily arranged with reference to said opening for the attachment of a collapsible tube, a spindle operatively arranged in said casing to engage
 40 and collapse the flexible tube, and means for rotating said spindle.

4. In a device for holding collapsible tubes, a casing provided with a discharge
 45 opening, a collapsible tube adapted to be secured in said opening, a spindle projecting within the casing and provided with means for attachment of the collapsible tube, and
 50 slide blocks forming a bearing for said spindle and adapted to move on rotation of the spindle, whereby the tube may be wound upon the spindle from end to end.

5. In a device for holding collapsible tubes, a casing provided with a head, means
 55 for attaching a collapsible tube to said head, guide-ways formed in said casing, guide-blocks traversing said guide-ways, and a spindle mounted in said guide-blocks and adapted to engage and collapse the tube.

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Witnesses:

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