

R. H. LIEBERTHAL.
 TOOTHBRUSH.
 APPLICATION FILED OCT. 20, 1919.

1,343,570.

Patented June 15, 1920.

Fig. 1.

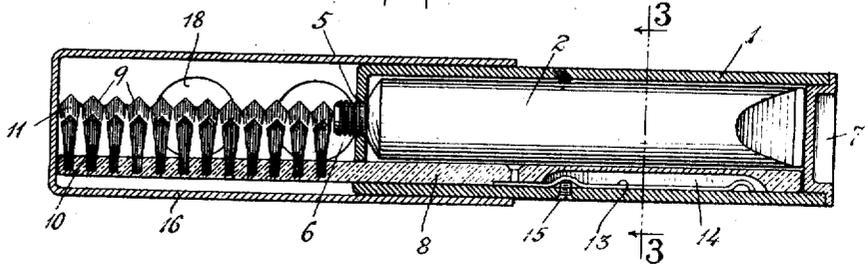


Fig. 2.

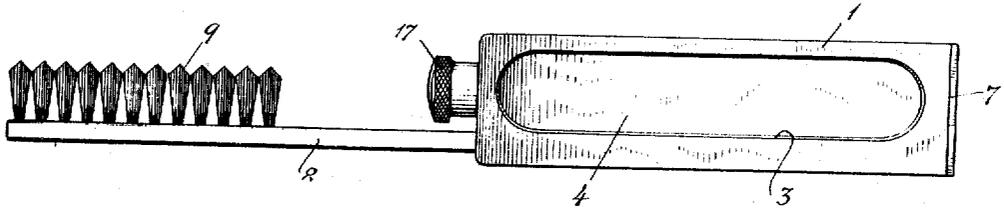


Fig. 3.

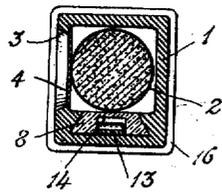
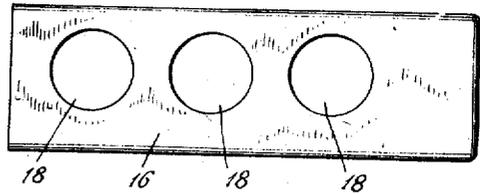


Fig. 4.



WITNESSES

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TOOTHBRUSH.

3,343,570.

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To all whom it may concern:

Be it known that I, ROBERT H. LIEBERTHAL, a citizen of the United States, and a resident of Bridgeport, county of Fairfield, and State of Connecticut, have invented certain new and useful Improvements in Tooth-brushes, of which the following is a specification.

The present invention relates to brushes and has for an object to provide an improved tooth brush of the type in which provision is made for carrying dentifrice in that part of the device which serves as the handle.

Brushes known as fountain brushes, as heretofore made, have usually been provided with a dentifrice container, carried in fixed position in, or upon, the brush handle. In such structures the container has usually been positioned at a distance from the bristle head and the dentifrice has been conducted to the bristle head by a tube either formed in the brush shank or made separate. Such tubes easily become obstructed in use, and are generally unsanitary and objectionable. If the dentifrice container were positioned close to the bristle head to avoid the use of a long conducting tube, the container would interfere with the use of the brush.

The present invention avoids the use of a conducting tube and at the same time avoids the interference with free use of the brush by the container by making the container movable toward and from discharging position. In the preferred embodiment of the invention a container is slidable toward the bristle head to discharge dentifrice onto the bristle head, and slidable from the bristle head to retracted position to leave the bristle head free and unobstructed in use.

The invention will be better understood from the following specification which should be read in connection with the accompanying drawings forming a part hereof and in which:

Figure 1 is a central longitudinal section of a tooth brush constructed in accordance with the invention, the handle which carries dentifrice being shown moved to its forward position on the brush shank and a cover being shown in position to protect the brush;

Fig. 2 is a side view of the same, the brush and handle being shown in extended

position ready for use, and the cover being removed;

Fig. 3 is a transverse sectional view taken on the line 3—3, Fig. 1;

Fig. 4 is a side view of the cover.

In the construction illustrated, the handle, 1, is hollow to inclose the dentifrice. Preferably it is so constructed that a container of some type already on the market, may be inserted bodily into the carrier and easily positioned for immediate use, as, for example, a collapsible tube, 2, of standard type and size. Suitable provision may be made for compressing the tube to extrude dentifrice by providing an opening 3, in one side of the hollow handle. Preferably an extruding plate 4, is inserted within this opening so as to form, in effect, a movable side of the hollow handle. The inner end of the handle is provided with a hole 5, through which the end 6 of the collapsible tube projects and by which it is held in position. This opening may be threaded as shown, in order more rigidly to support the tube and to hold it in correct position to discharge directly onto the center of the bristle head. The outer end of the handle is closed by a cap 7, which is frictionally retained in place.

The handle is slidably mounted upon the shank 8, in such manner that it may be slid forward to discharge dentifrice directly onto the bristle head 9, or rearwardly away from the bristle head to a position permitting convenient use of the brush without interference by the handle.

The bristle head may be of any desired type, preferably, however, it consists of a central row of short bristles 10 between rows of longer bristles 11 upon both sides. This arrangement accomplishes two functions: the dentifrice is more readily retained upon the brush when projected into the trough so formed and, also, the row of short bristles permits the nozzle of the dentifrice container to be positioned closer to the shank 7, thus facilitating a more compact and less cumbersome construction. It is to be noted that, in accordance with the present invention, dentifrice is discharged directly on to the face of the brush, that is to say, without passing through an unsanitary conducting tube, formed in the shank of the brush

or otherwise to discharge among the bristles. I thus avoid this unsanitary feature which is common to many types of fountain brushes as heretofore devised.

5 In order to hold the handle in either its forward or rearward position on the shank, a spring detent 13 is secured in a slot 14 in the shank and is engaged by a detent screw 15 in the handle to hold the parts in either
10 extreme position of adjustment.

The brush may be folded by pushing the handle to its forward position adjacent the bristle head, and a cover 16, may be provided to slip over the bristle head to protect the same when folded. The dentifrice tube is closed by the removable cap 17 which ordinarily serves as a closure for such tubes. If desired, the cover 16 may be made to fit over the hollow handle so that when
15 the brush is in use, the cover is not laid aside to be forgotten and lost. If the cover is to be so applied, holes 18 should be provided through which the tube may be compressed. When the cover is applied to the
20 folded brush it overlies the bristle head, the holes 18 permitting ventilation of the bristle head.

I claim:

1. In combination with a tooth brush
30 having a bristle head of a holding member slidably mounted on the brush for movement in the general direction of the length of the brush toward and from the bristle head, said member being adapted to removably carry a dentifrice container with its
35 discharge opening so positioned that when the member is moved toward the bristle head, the dentifrice may be discharged from the container directly on to the face of the
40 bristles.

2. In combination with a tooth brush having a bristle head, of a dentifrice container having a discharge opening, said container being mounted for sliding movement in the
45 general direction of the length of the brush toward and from the bristle head so as to bring the discharge opening of the container in position for discharging the dentifrice directly from the container on to the
50 bristle head when in its forward position.

3. In a tooth-brush the combination with a bristle head and a shank of a handle slidably mounted on said shank, a dentifrice
55 container carried by said handle and having a discharge opening so positioned that when the handle is slid to its forward position dentifrice may be discharged directly on to

the face of the bristle head and a detent for holding said handle and shank in adjusted positions.

4. In a tooth-brush the combination with a bristle head and a shank of a hollow handle slidably mounted on said shank adapted to house a dentifrice tube with its nipple projecting forwardly through the inner end
60 of the handle toward the bristle head, one side of said handle being movable inwardly against the dentifrice tube to extrude dentifrice therefrom.

5. In a tooth-brush the combination with a bristle head having a row of relatively short bristles between two rows of relatively long bristles of a dentifrice container mounted for sliding movement toward and from the brush to bring the discharge opening
75 of the container to a position to discharge dentifrice onto said short bristles, substantially as described.

6. In a tooth-brush the combination with a shank and a bristle head comprising a row
80 of relatively short bristles extending longitudinally thereof, of a dentifrice containing handle slidably mounted on said shank, and arranged when in its forward position to discharge dentifrice directly onto the face of
85 the row of short bristles, substantially as described.

7. In a fountain tooth-brush the combination with a shank and a bristle head of a hollow handle slidably mounted on said
90 shank toward and from the bristle head comprising a casing having a threaded opening in the end toward the bristle head to receive the threaded nipple of a collapsible tube and open at its opposite end and
95 on one side, a closure for said open end and a movable extruding plate in the open side, substantially as and for which purpose described.

8. In a tooth brush the combination with a shank having bristles projecting from one
100 side thereof forming a bristle head, of a handle slidable on said shank toward and from the bristle head constructed and arranged to carry a dentifrice tube with its
105 discharge end spaced from said shank and positioned substantially in line with the face of said bristle head whereby when said handle is slid to its forward position adjacent to the bristle head, dentifrice may be
110 discharged onto said bristle head.

In testimony whereof I have hereunto set my hand.

ROBERT H. LIEBERTHAL.