No. 882,352. PATENTED MAR. 17, 1908.

F. F. SHUMER.

TOOTH BRUSH.

APPLICATION FILED AUG. 30, 1907.

Fig. 1.

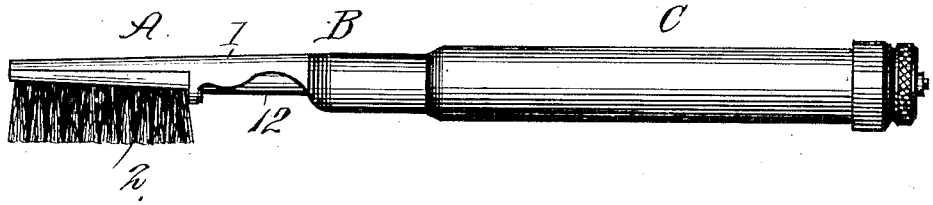


Fig. 2.

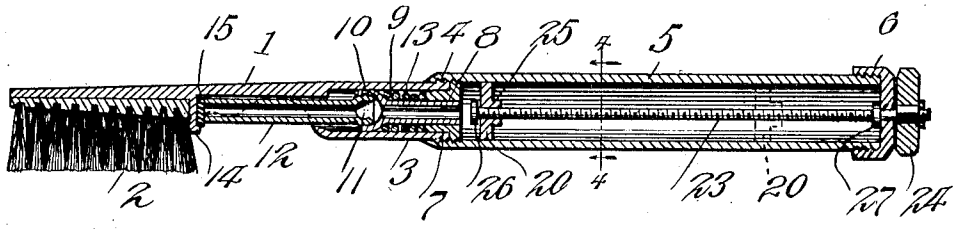


Fig. 3.

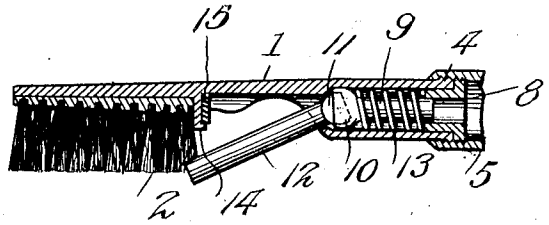
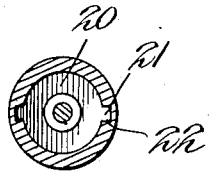


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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TOOTH-BRUSH.

No. 882,352. Specification of Letters Patent. Patented March 17, 1908.

Application filed August 30, 1907. Serial No. 390,774.

To all whom it may concern:

Be it known that I, FREDERICK F. SHUMER, a citizen of the United States, residing at Norwalk, in the county of Huron and State of Ohio, have invented new and useful Improvements in Tooth-Brushes, of which the following is a specification.

This invention relates to tooth brushes, and it has for its object to provide a simple, convenient and efficient device of this class in which the handle of the brush shall constitute a reservoir for the liquid, powder, paste or other material, detergent or otherwise, which is utilized for the purpose of cleansing the teeth; further objects of the invention being to simplify and improve the construction and operation of this class of devices.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawing, Figure 1 is a side elevation of a tooth brush constructed in accordance with the invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a longitudinal sectional view of a portion of the brush showing the discharge tube in position for discharging a portion of the material contained in the reservoir within the handle. Fig. 4 is a transverse sectional view of the handle taken on the plane indicated by the line 4—4 in Fig. 2.

Corresponding parts in the several figures are denoted by like characters of reference.

The improved tooth brush comprises the head section A having the shank B, and the tubular handle section C, which constitutes a reservoir for the cleansing material, and which is detachably connected with the shank of the head section as will be presently more fully explained.

The head section A and the shank B include an integral back piece 1 at one end of which the bristles 2 are mounted and secured in any suitable well known manner. The opposite end of the back piece 1 constitutes a sleeve 3, the extremity of which is externally threaded, at 4, and is screwed into one end of a tube 5, made of metal or other suitable material and which constitutes the body of the handle section C; said tube 5 also constitutes a receptacle for cleansing material which may consist of liquid, powder or paste of any description. The outer end of the tube 5 constitutes the handle section, whereby is meant the end opposite to that into which the sleeve 4 is inserted, and is provided with a screw threaded cap 6 constituting a closure.

The end of the sleeve 4 which is connected with the tubular handle section is provided with a plug 7 having a central aperture 8 wherein is fitted a slidable discharge tube 9 having at its outer end a spherical bulb or enlargement 10 wherein is fitted a ball 11 formed at the inner end of the extension tube 12 which is thus connected with the discharge tube 9 in such a manner as to be capable of universal movement with relation thereto. The discharge tube 9 together with the extension tube 12 is forced away from the plug 7 by the action of a spring 13 which is coiled upon the tube 9 between the bulb 10 and the plug 7. The back piece 1 is provided with a lug or flange 14 adjacent to the bristles 2, said lug or flange being provided with a recess wherein is seated a washer 15 adapted to be engaged by the outer extremity of the extension 12 of the discharge tube. It will be observed that the extension tube 12 is exposed in such a manner as to be readily grasped by the fingers of the operator, who, by seizing said tube may press the latter and the discharge tube 9 against the tension of the spring 13 until the outer or free end of the extension tube 12 may be disengaged from the washer 15 and lowered to the position shown in Fig. 3 of the drawings, when, by properly shaking and manipulating the brush, a portion of the contents of the tubular handle may be readily discharged through the tubes 9 and 12 and onto the bristles of the brush. When a sufficient quantity of the cleansing material has been discharged, the discharge tube 9 and its extension member 12 may readily be restored to the position shown in Fig. 2 of the drawings, with the discharge end of the extension member engaging the washer 15, which latter may thus be regarded as constituting a closure for the

receptacle containing the cleansing material. The discharge tube will be retained in closed position by the pressure of the spring 13, as will be readily understood.

When the cleansing material contained in the tubular section is in liquid or in powder form, it may be readily shaken out through the discharge tube and through the extension member of the latter; but when the said cleansing material is in the form of a paste, it will be found desirable to use special means for discharging the same, said special means being constructed as follows:—A longitudinally movable follower 20 is arranged in the tubular handle section, 5, said follower being provided with laterally extending lugs 21 engaging longitudinal grooves 22 in the tubular member 5, to prevent the follower from turning within the latter. An operating screw 23 is swiveled, or supported for rotation in the cap 6, said screw being provided with a handle 24 by means of which it may be conveniently rotated for the purpose of effecting adjustment of the follower 20, which latter has a longitudinally threaded aperture 25 engaging the screw 23. The latter is provided with a terminal disk or button 26 to prevent disengagement of the follower; and it also has an annular flange or collar 27 abutting upon the inside of the cap 6 for the purpose of retaining the adjusting screw in position relative to said cap.

It will be readily seen that when the follower 20 is in position closely adjacent to the cap 6, the tubular handle may be filled with a detergent paste, by separating said handle from the shank B with which, as hereinbefore stated, it has threaded connection. After re-assembling the parts, the contents of the tubular handle section may be discharged through the discharge tube 9 of the extension tube 12 by manipulating the screw to operate the follower 20, as will be readily understood.

From the foregoing description taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood. It is simple in construction, inexpensive and thoroughly efficient for the purposes for which it is provided; being especially useful for travelers and tourists in enabling a supply of cleansing material to be conveniently carried in the brush handle, and discharged from the latter as it is needed for use.

Having thus fully described the invention, what is claimed as new is:—

1. A brush having a tubular handle member constituting a receptacle, a tubular shank detachably connected therewith, a tubular discharge member movable in the tubular shank and having an extension connected thereto by a ball and socket joint, and a stationary closure for the free end of the extension of the tubular discharge member.

2. A brush having a tubular handle member constituting a receptacle, a tubular shank detachably connected therewith, and having an apertured plug, a spring actuated discharge tube longitudinally movable in the tubular shank, a tubular extension member connected with the discharge tube for universal movement with relation thereto, and a stationary brush.

3. A brush having a tubular handle member constituting a receptacle, a tubular shank connected detachably therewith, and a tubular spring actuated discharge member seated for longitudinal movement in the tubular shank, said discharge member including a discharge tube and an extension member connected therewith for universal movement and a closure for the discharge member consisting of a flange stationary on the shank and an elastic washer supported upon said flange.

4. A brush having a tubular handle member constituting a receptacle, a tubular shank detachably connected therewith, and having an apertured plug, a spring actuated tubular discharge member longitudinally slidable in the tubular shank, a follower movable longitudinally in the tubular handle member, a threaded cap constituting a closure for the latter, and an operating screw supported for rotation in the cap and having threaded engagement with the follower.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK F. SHUMER.

Witnesses:
B. B. Wood,
Chas. P. Wickham, Jr.