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C. H. SEIFERT

2,159,295

TOOTH BRUSH

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Fig. 1.

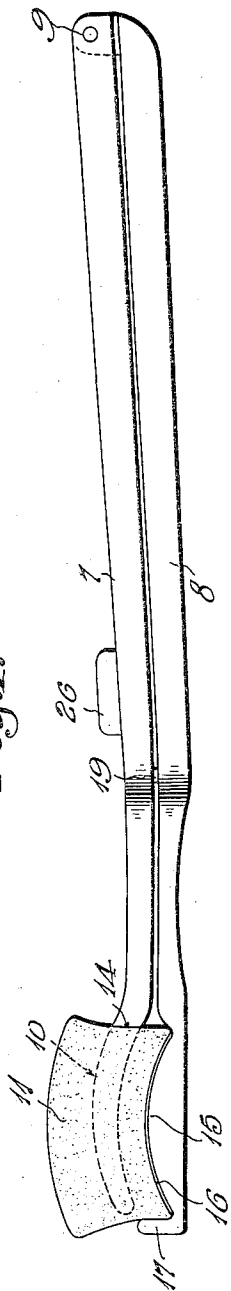


Fig. 2.

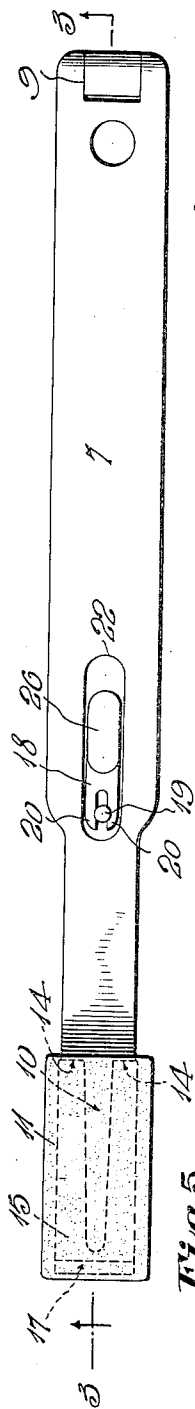


Fig. 5.

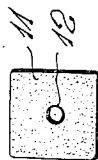


Fig. 4.

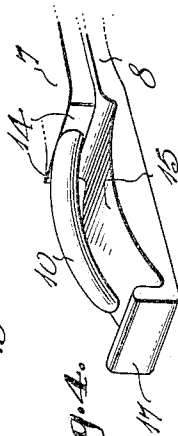
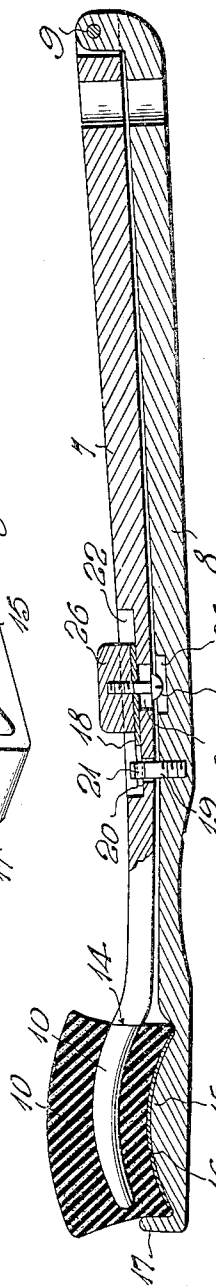


Fig. 6.



Fig. 3.



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UNITED STATES PATENT OFFICE

2,159,295

TOOTH BRUSH

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Application October 14, 1937, Serial No. 169,065

2 Claims. (Cl. 15-244)

The invention relates to improvements in toothbrushes of the general type in which a cleaning element consisting of a block of sponge rubber, is held by a holder and used for cleaning the teeth.

The principal object of the invention is to provide a new and improved holder having novel construction permitting the cleaning element to be quickly and easily engaged therewith or disengaged therefrom, the construction being such that said cleaning element will be firmly held in an operative position.

A further object is to make novel provision for holding the cleaning element in a longitudinally curved form for more convenient operation and better cleaning results.

A still further object is to provide a novel thumb-applied and thumb-released means for retaining the holder in closed position properly engaged with the cleaning element and for permitting opening of said holding means for removal of one cleaning element and substitution of another.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, description being accomplished by reference to the accompanying drawing.

Fig. 1 is a side elevation.

Fig. 2 is a side elevation at right angles to Fig. 1.

Fig. 3 is a central longitudinal sectional view on line 3-3 of Fig. 2.

Fig. 4 is a perspective view of the front portion of the holder.

Figs. 5 and 6 are end elevations showing two slightly different forms of cleaning elements which may be employed.

In the drawing above briefly described, a preferred construction has been illustrated, and while this construction will be specifically explained, it is to be understood that variations may be made within the scope of the invention as claimed.

Two elongated handle members 7 and 8 are provided of substantially the same proportions as an ordinary toothbrush handle, the rear ends of said members being pivoted to each other at 9 or otherwise suitably connected to permit said members to have relative opening and closing movements.

The front end of the member 7 is provided with a central longitudinally curved forwardly projecting finger 10 upon which to empale a sponge rubber cleaning element 11, when the two mem-

bers 7 and 8 are relatively opened, said element either having a longitudinal opening 12 (Fig. 5) or a mere longitudinal slit 13 (Fig. 6) to receive said finger. The front end of the member 7 is also provided with forwardly facing shoulders 14 disposed at the rear end of the finger 10, at opposite sides of this finger, to abut the rear end of the element 11.

The front portion of the member 8 is provided with a curved surface 15 which is longitudinally convex and preferably transversely straight, the concavely curved side of the finger 10 being disposed toward said convex surface 15. Against the surface 15, the back 16 of the empaled cleaning element 11, comes to rest, when the closing movements of the two members 7 and 8, are complete. The front end of the member 8 is also provided with an integral lug 17 which projects inwardly beyond the front extremity of the convex surface 15, to abut the front end of the empaled cleaning element 11, when said closing movements of the two members 7 and 8, are complete. Thus, when the two members 7 and 8 are closed as seen in the drawing, the cleaning element 11 will be firmly held in place and will have a convenient and effective longitudinal curvature. This curvature is imparted to the normally rectangular rubber block, by the finger 10 and the convex surface 15, between which a portion of said cleaning element is firmly gripped, said cleaning element being therefore held against rotating upon said finger. The shoulder 14 abutting the rear end of the element 11 and the lug 17 abutting the front end thereof, effectively hold said element against any longitudinal sliding.

For holding the two members 7 and 8 in closed position, I have shown a slidable thumb-actuated slide 18 carried by the member 7 and engageable with a stud 19 carried by the member 8, the front end of said slide 18 being provided with two forwardly projecting fingers 20 and the opposite sides of the stud 19 being formed with transverse grooves 21 which receive said fingers when said slide is pushed forwardly. In the present showing, the slide 18 is mounted in a longitudinal groove 22 in the member 7 and is held in place in said groove by means of a screw 23 passing through a slot 24, said slot communicating with said groove. To accommodate the head of this screw, the inner side of the member 8 may be recessed as shown at 25.

The thumb piece 26 by means of which said slide 18 may be applied and released, may be secured to the slide 18 by the same screw 23

which holds said slide in the groove 26, and it is, of course, possible that said thumb piece could be of such design as to cover the groove 22.

While holding the handle portions of both of the members 7 and 8 in one hand, it is an easy matter with the thumb of this hand to pull rearwardly upon the thumb piece 26, thereby releasing the slide 18 from engagement with the stud 19 and thus permitting relative opening of said members for removal of one cleaning element and substitution of another. After closing the two members and pressing them together to compress the portion of the cleaning element between the finger 10 and the surface 15, the slide 18 may again be pushed forwardly by use of the thumb, engaging said slide with the stud 19 and causing firm holding of the two members 7 and 8 in closed position. If, due to wear, the slide 18 should have a tendency to become disengaged from the stud 18, the position of the thumb piece 26 makes it possible for the user to hold said slide in operative position with his thumb while grasping the holder and operating the brush.

As excellent results have been obtained from the general construction shown and described, this construction is preferably followed. However, within the scope of the invention as claimed, variations may be made.

I claim:

1. A holder for a sponge rubber or similar cleaning element, comprising two elongated handle members connected at their rear ends for relative opening and closing movements, one member being provided with a longitudinal forwardly projecting finger upon which to empale the cleaning element when the two members are relatively opened, said one member being provided at the rear end of said finger with a shoulder to limit the relative empaling movements of the finger and cleaning element, the front portion of the other member being provided with a longitudinal surface against which the empaled cleaning element comes to rest when the closing movements of the two members are complete, the front extremity of said other member being provided with a fixed lug which abuts the front end of the empaled cleaning element when said closing movements of the two members are complete, and releasable means spaced rearwardly from said finger for holding the two members in closed position.

2. A structure as specified in claim 1; said longitudinal surface being longitudinally curved convexly, said finger being correspondingly curved, whereby to impart a convex curvature to the tooth-engaging portion of the cleaning element.

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