July 8, 1924. 1,501,020

F. E. SMALL

TOOTHBRUSH SHIELD ATTACHMENT

Filed Sept. 22, 1923

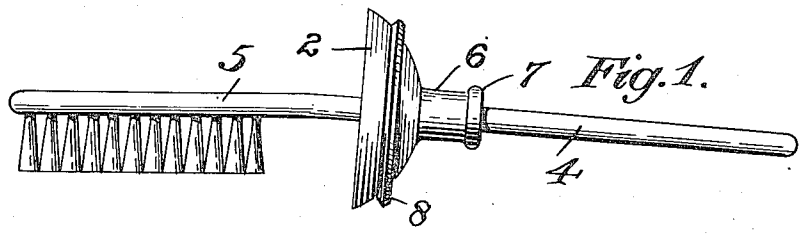


Fig. 1.

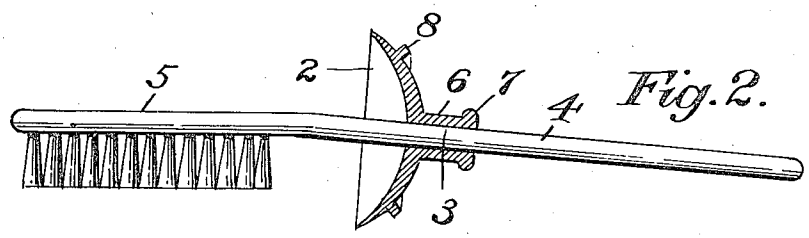


Fig. 2.

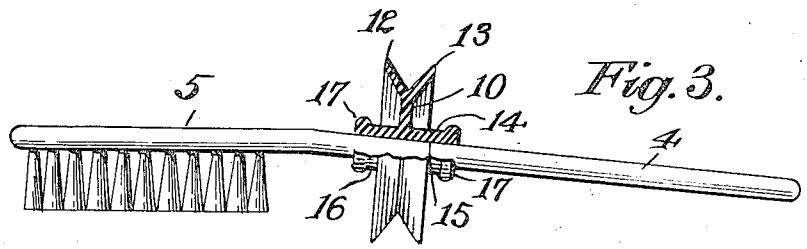


Fig. 3.

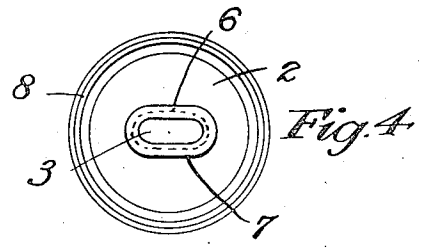


Fig. 4.

Inventor
Frank E. Small
By his Attorney
Wm. H. Reid.

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UNITED STATES PATENT OFFICE.

FRANK E. SMALL, OF JAMAICA, LONG ISLAND, NEW YORK, ASSIGNOR TO NANCY MARIA SMALL, OF JAMAICA, LONG ISLAND, NEW YORK.

TOOTHBRUSH SHIELD ATTACHMENT.

Application filed September 22, 1923. Serial No. 664,189.

To all whom it may concern:

Be it known that I, FRANK E. SMALL, a citizen of the United States, and a resident of Jamaica, Long Island, in the county of Queens and State of New York, have invented certain new and useful Improvements in Toothbrush Shield Attachments, of which the following is a specification.

This invention relates to an improved form of tooth brush shield or guard, adapted to be placed on the handle of a tooth brush for the purpose of preventing liquid on the brush, such as water, saliva, dentifrice, or the like from flowing back on the handle, and thereby pass to the hand or clothing of the user.

The object of this invention is to provide an improved device of this character that can be readily applied to the usual flat handle of a tooth brush, by merely sliding it on the handle and which will provide means for causing the liquid from the brush end to pass downwardly and not flow back on the handle.

A further object of the invention is to provide in a device of this character, means to assist in applying the article, and also in removing the same.

The device is preferably formed of comparatively soft rubber and is an integral structure as shown. As most tooth brushes in use have a flat handle, it is provided with a narrow slot at the middle portion adapted to slide on the handle and to be frictionally retained for use, yet readily removable when desired.

A further object of the invention is to provide an improved shield of this character that is integral with the tooth brush handle.

In the accompanying drawing showing embodiments of my invention, Figure 1 is a side elevation of the device applied to a tooth brush.

Fig. 2 is a similar view with the attachment in section.

Fig. 3 shows a modification, partly in section.

Fig. 4 is an end view of the device shown in Figs. 1 and 2.

In the form shown in Figs. 1 and 2, the device comprises a disc 2 of soft rubber, or similar resilient material, having a slot 3 at the central portion, of a size to fit the usual handle 4 of a tooth brush. In these views the disc 2 is shown concave, or preferably concavo-convex, or cresent shaped, and it is applied to the handle with the concave side facing the brush end 5.

To assist in retaining this disc on the handle, I provide a tubular extension 6 whose bore corresponds with the slot 3 and hence is a flat tube, and is of a size to slide on the handle 4. This will act to strengthen the position of the disc on the handle. At the free end of the tube I preferably provide a comparatively large bead 7. This will permit the user to readily grasp the tube at its enlarged outer portion; and such bead will also assist in causing liquid that might flow back from the disc, to pass downwardly, instead of along the handle.

While any liquid flowing back from the brush would tend to flow downwardly on the concave face of the disc, and pass off at this edge, to prevent any of this liquid from flowing back on the opposite face of the disc to the handle, I provide a flange 8 extending outwardly from the disc a short distance inside of the margin, on the rear or convex face of the disc. This flange is preferably of rubber integral with the entire structure. Any liquid from the brush end that might flow back over the edge of the concave face, would be engaged by this flange and caused to flow outwardly, and not pass back to the handle or tubular extension.

While the disc is shown as substantially concavo-convex in Figs. 1 and 2, the disc may be comparatively flat and extend transverse to the handle, as shown in Fig. 3, with a slotted central portion to engage the flat handle, and be provided with a rim corresponding somewhat to the above described. In Fig. 3 I show such a structure, comprising a flat disc 10 having flange portions 12 and 13 extending in opposite directions from the disc to form a kind of channel of wide V-shape at the periphery. This arrangement can also be provided with a flat tubular extension 14 at a central slot 15. This tubular portion may extend also in an opposite direction as at 16, in which case each tubular portion is less in length than the tubular portion of the other form. These tubular portions can also be each provided with a bead 17 at the free end.

The latter construction will obviously operate in substantially the same advantageous manner. The liquid flowing back from the brush would engage the disc and the

flange on that side. If it did not flow outward from the flange 12, it would be received by the other flange 13, and prevented from flowing back on the handle.

This modified construction can readily be applied or removed by sliding the flat tubular portion on the handle. It is further practically reversible and either side can be used adjacent the brush end.

What I claim is:—

1. A tooth brush shield comprising a disc having an apertured central portion adapted for slidable engagement with a flat handle to frictionally retain the shield on the handle, the shield being provided with a marginal portion forming a V-shaped channel having its apex directed inwardly and its side walls diverging outwardly from the apex.

2. A tooth brush shield comprising a disc having a slotted central portion with a tubular extension adapted for slidable engagement on a flat handle to frictionally retain the shield on the handle, the shield being provided with a marginal portion forming a V-shaped channel having its apex directed inwardly and its side walls diverging outwardly from the apex.

3. A tooth brush shield comprising a disc having a narraw slotted central portion provided with a tubular extension on each side adapted for slidable engagement with a flat handle to frictionally retain the shield on the handle, the said shield being provided with a marginal portion forming a V-shaped channel having its apex directed inwardly and its side walls diverging outwardly from the apex.

4. A brush shield comprising a tubular portion adapted for slidable engagement with the handle of a brush, said shield having a cup portion surrounding the tubular portion and provided with a annular channel on the convex side adjacent its periphery.

Signed at New York, N. Y., on September 17, 1923.

FRANK E. SMALL.