Sept. 24, 1929. W. E. KNAPP 1,729,168

TOOTHBRUSH

Filed April 3, 1928

Fig. 1

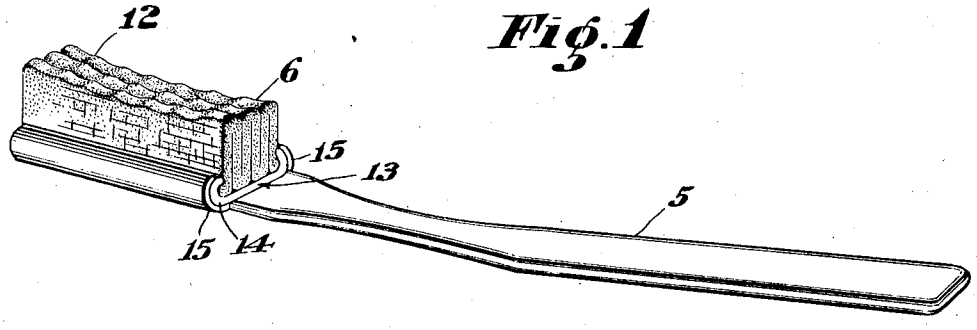


Fig. 3

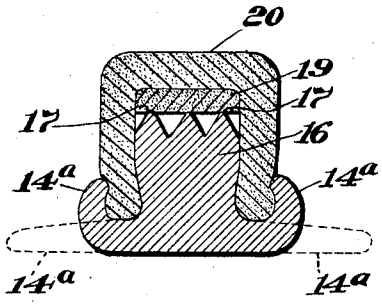


Fig. 2

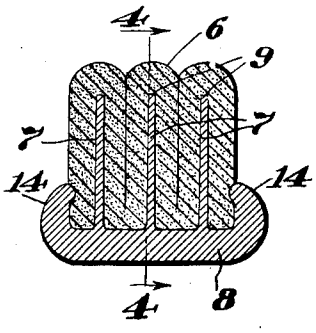
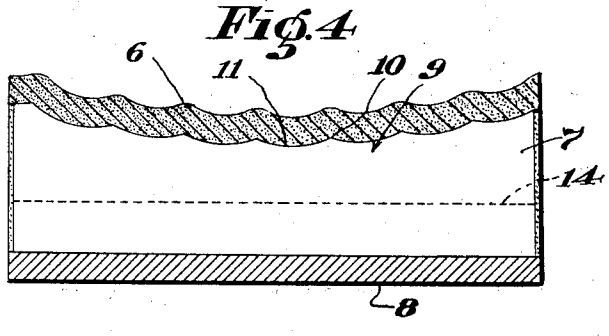


Fig. 4



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UNITED STATES PATENT OFFICE

WALTER E. KNAPP, OF LOWELL, MASSACHUSETTS

TOOTHBRUSH

Application filed April 3, 1928. Serial No. 266,985.

The present invention relates to tooth brushes, and more particularly to tooth brushes, the tooth-engaging surface of which may be purified by fire or by boiling water.

The object of the present invention is to produce a tooth brush having the above characteristics which will be simple, durable and inexpensive and well adapted to the use for which it is designed.

To the accomplishment of this object, and such others as may hereinafter appear, the various features of the present invention consist in certain devices, combinations and arrangements of parts, the advantages of which will be obvious to those skilled in the art from the following description.

The various features of the present invention will be explained in connection with the accompanying drawing illustrating a simple form of the invention, in which,

Figure 1 is a perspective of the tooth brush;

Fig. 2 is a transverse section, in elevation, through the asbestos body portion;

Fig. 3 is a similar transverse section, in elevation, of a modification; and

Fig. 4 is a longitudinal section, in elevation, on the line 4—4 of Fig. 2.

Referring to the drawing, the tooth brush comprises a handle 5 and a tooth-engaging surface 6. The tooth-engaging surface 6 is composed of asbestos. Preferably a textile fabric sheet is used, formed by weaving or by braiding. As shown in Fig. 2 the asbestos fabric sheet is folded three times thus forming a longitudinally corrugated tooth-engaging surface.

In order to concave and laterally corrugate the tooth-engaging surface 6 a metallic filler member, comprising plates 7, is inserted from below between the folds of the folded asbestos, the upper surface of this filler acting as a support for the tooth-engaging surface 6. As shown in Fig. 4 the plates 7 rise in a parallel formation from a base 8 and preferably have serrated upper edges 9 which may be concaved longitudinally. The serrations in the upper edges 9 present peaks 10 and hollows 11. The longitudinally corrugated tooth-engaging surface 6 may be pressed into engagement with the upper edges of the plates 7 whereby the tooth-engaging surface 6 is provided with the lateral corrugations 12 as shown in Fig. 1. In using the tooth brush the peaks of these lateral corrugations will engage the interstices between the teeth while the hollows of the lateral corrugations will engage the lateral surfaces of the teeth. Obviously the upper edges of the plates 7 may be shaped to conform the tooth-engaging surface 6 to fit any particular set of teeth.

The folded asbestos is held firmly on the filler member by longitudinal flanges 14 on each side of the base 8 which may be bent upwardly to grip the asbestos at each side. The filler thus constitutes a holder 13 adapted to be detachably connected to the handle 5 by sliding it into and out of a suitably shaped channeled end 15 formed on the handle 5.

With this construction the tooth-engaging surface 6 may be readily detached from the handle 5 and then subjected to the action of a blue flame or it may be boiled which purifies the asbestos surface without injury thereto. Experience in the use of this tooth brush demonstrates that it massages the gums in a highly beneficial manner without that tendency to puncture the gums which is a characteristic feature of the lancet-like animal bristle type of tooth brush.

In the modification illustrated in Fig. 3 the filler member is a metallic filler member comprising a casting 16 having three serrated edges 17 thereon, each of which is concaved longitudinally and provided with the serrations comprising peaks 10 and hollows 11 like those shown in Fig. 4. Textile asbestos is folded over the casting 16 to which it is gripped along each side by turning up the bendable base flanges 14^a. Interposed between the serrated edges 17 and the asbestos is an asbestos pad 19. The tooth-engaging surface 20 (Fig. 3) may be shaped to conform it to the shape determined by the serrated edges 17 thus producing a tooth-engaging surface similar to the tooth-engaging surface 12 except that in the form illustrated in Fig. 3 there are no longitudinal cor-

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rugations owing to the fact that the tooth-engaging surface 20 is formed from a single fold of the asbestos fabric.

It will be apparent to those skilled in this art that changes may be made in the details of construction, the described and illustrated embodiment of the invention being intended as an exploitation of its underlying essentials, the features whereof will be definitely stated in their true scope in the claims hereto appended.

What is claimed as new, is:

1. A tooth brush having an asbestos body portion folded to form a corrugated tooth-engaging surface, and a metallic form for determining the shape of the corrugations, having flanges for holding the asbestos in engagement with the form.

2. A tooth brush having an asbestos body portion folded and pressed to form a longitudinally concave tooth-engaging surface, and a metallic form for determining the shape of the concavity having flanges for holding the asbestos in engagement with the form.

3. A tooth brush having an asbestos body portion folded to form a longitudinally corrugated tooth-engaging surface a metallic plate inserted between each fold, and a support for the asbestos and the plates provided with flanges which grip the asbestos.

4. A tooth brush having an asbestos body portion folded to form a longitudinally corrugated tooth-engaging surface and pressed to form lateral corrugations in said surface, a metallic plate inserted between each fold for determining the shape of the lateral corrugations, and a support for the asbestos and the plates provided with flanges which grip the asbestos.

5. A tooth brush having an asbestos body portion folded to form a longitudinally corrugated tooth-engaging surface and pressed to form a concavity and lateral corrugations in said surface, a metallic plate inserted between each fold for determining the shape of the concavity and the lateral corrugations, and a support for the asbestos and the plates provided with flanges which grip the asbestos.

WALTER E. KNAPP.