

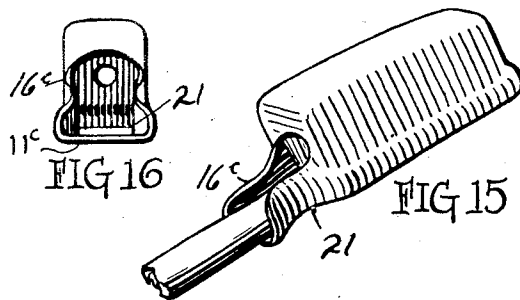
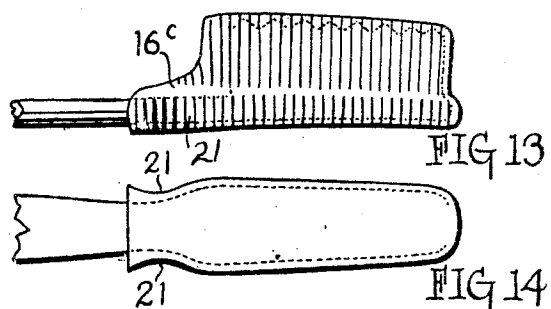
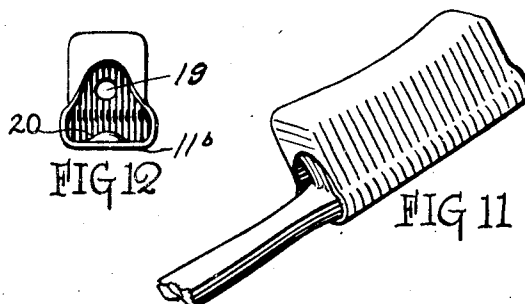
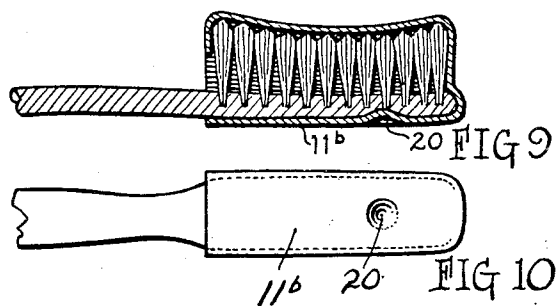
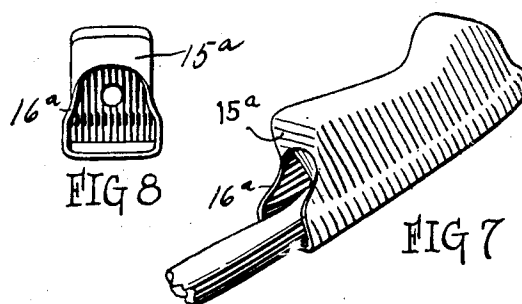
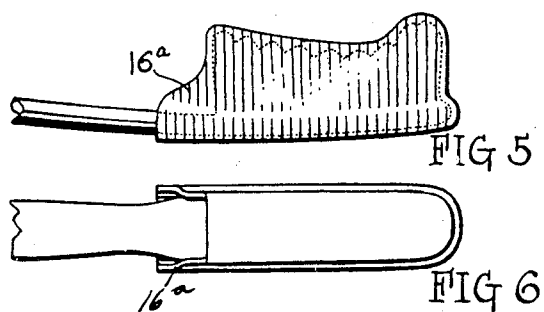
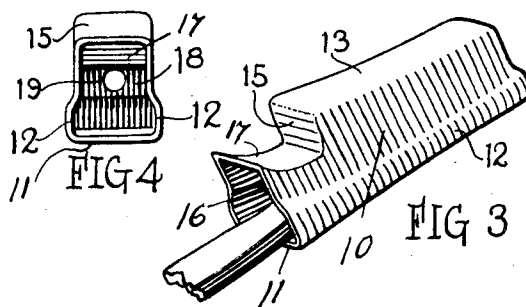
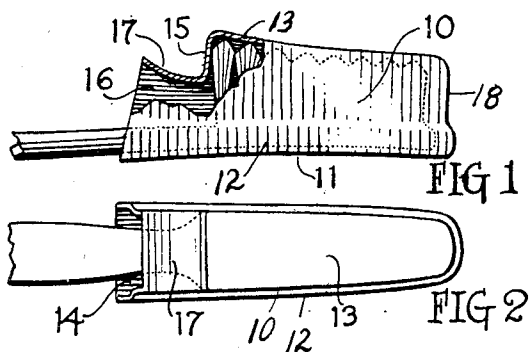
Dec. 20, 1927.

1,653,540

T. W. BIGONEY

TOOTHBRUSH COVER

Filed Oct. 5, 1926



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UNITED STATES PATENT OFFICE.

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TOOTHBRUSH COVER.

Application filed October 5, 1926. Serial No. 139,733.

This invention relates to tooth brushes, the main object being to promote oral hygiene by providing a tooth brush with a protective device which in addition to its mere mechanical effectiveness will, by reason of certain qualities inherent in the device, be instrumental in inducing the average user of the brush to regularly employ the device to keep the brush protected from contaminating contacts between periods of use.

In my improved construction I use a sheath-like cover of thin material such, for instance, as celluloid, which fits snugly over the head of the brush so as to practically enclose the bristle portion. Thus the part of the brush which is placed in the mouth when brushing the teeth, is protected from contact with germ laden surfaces and from dust and germs in the air. The brush may be inserted in its protecting device by a single thrusting motion, and when thus inserted is automatically secured until its forcible removal.

The matrix form of the cover, that is to say, the visual and tactual effect, is in each case determined by the form of the bristles and the back of the brush with which the cover is to be used. The form of the cover is made to conform to the bristle portion of the brush, and thus constitutes a sheath or envelope representing a hollow counterpart of the head of the brush.

Because of this structural feature there can be no doubt as to the purpose or manner of use of the cover, and by reason of the similarity in shape of the cover and the brush head, a powerful psychological suggestion is made to bring the two parts together, which thus to a very great degree insures the replacing of the brush within the cover after the brush has been used. The shape of the cover enables it to be placed in position on the brush head by the sense of touch alone, and without visual inspection of the cover to make sure that it is turned to the proper position before the brush is inserted.

As the cover, when in place on the brush, leaves its handle free and does not appreciably increase its bulk or materially change its contours, the whole may be hung up by the handle, laid on a shelf or placed in a receptacle just as the user has been accustomed to do with the naked brush. Thus the user is not moved to neglect the use of the cover because of interference with his habit-

ual toothbrush procedure, which is almost invariably the case with box-like or cylindrical protective devices.

In the accompanying drawings I have illustrated several forms which my invention may assume, whereby the sheath or cover is adapted for use with different shapes and forms of brushes. In these drawings:

Figs. 1, 2 and 3 are side, top plan, and perspective views respectively of one form of cover with the brush inserted therein.

Fig. 4 is an end view of the cover shown in Figs. 1, 2 and 3.

Figs. 5, 6 and 7 are side, top plan and perspective views respectively of another form of cover and brush.

Fig. 8 is an end view of the cover shown in Figs. 5, 6 and 7.

Figs. 9, 10 and 11 are longitudinal section, bottom plan and perspective views respectively of another form of cover and brush.

Fig. 12 is an end view of the cover shown in Figs. 9, 10 and 11.

Figs. 13, 14 and 15 are side, bottom plan and perspective views respectively of a fourth form of cover and brush, and

Fig. 16 is an end view of the cover shown in Figs. 13, 14 and 15.

In each of these embodiments the brush is retained within its cover by reason of the matrix or form-fitting qualities of the latter in relation to its respective brush. In each case a portion, that is approximately the lower two thirds of the front end wall, is omitted to form an opening through which the bristle portion of the brush may be thrust by flexing the bristles. The case may be molded or otherwise formed of celluloid or any other suitable material as long as its matrix shape is preserved. The walls may be comparatively thin and substantially rigid, although obviously they may be slightly flexible.

In the form shown in Figs. 1 to 4 inclusive, the shape of the tooth brush selected, by way of example, is such that the complementary part in this instance is a sheath or casing of substantially tubular form with an opening at one end to receive the head of the brush. The casing includes a body portion 10 which is adapted to substantially conform to the bristle portion. Adjacent to one side 11, the casing is slightly wider to provide side grooves 12 adapted to receive the edges of the back of the brush. The side wall 13 opposite to the side wall 11 substan-

tially follows the contour of the ends of the bristles. The opening 14 at one end of the casing extends from the wall 11 up approximately two thirds of the distance to the wall 13; and beyond this opening is an inwardly directed wall 15 which serves to engage with the rear end of the bristle portion to hold the brush in place in the casing.

For guiding the brush into the casing the latter may be provided with a flared neck portion 16 which includes flared extensions of the groove 12. The wall 17 of this neck portion opposite to the wall 11 inclines inwardly to the inner end of the wall 15 so as to deflect the bristles as the brush is inserted. The end opposite to the opening 14 also has a transverse groove to receive the extreme end of the back of the brush, so that the entire casing substantially conforms to the head of the brush. This end wall 18 may have an opening 19 to facilitate the drying of the brush if the latter be inserted while wet.

In Figs. 5 to 8, inclusive, a tooth brush is shown of a different shape from that shown in Figs. 1 to 4 and hence requiring a different matrix to conform to the contour of the surface formed by the brush head comprised of the back portion and inset bristles. Preferably the neck portion 16^a is in the form of a short extension of the back of the cover with two side walls curving upwardly and merging into the relatively short end wall 15^a.

In the form shown in Figs. 9 to 12 inclusive, the neck portion is entirely omitted. In this form I have shown an additional means for retaining the brush in proper position in the casing. The back wall 11^b is provided with a boss or projection 20 adapted to enter a corresponding depression in the surface of the head of the brush. Obviously this same retaining means might be employed in connection with the other two forms hereinbefore described.

The form shown in Figs. 13 to 16 inclusive is similar in most respects to that shown in Figs. 5 to 8 inclusive except that the neck portion 16^c is contracted adjacent to the lower wall 11^c so as to form a pair of oppositely disposed inwardly directed bosses 21 which may engage with the edges of the handle of the brush at a point spaced a short distance from the end of the head of the brush. The material forming the sheath is sufficiently flexible and resilient so that these bosses 21 may be spread apart during the insertion or removal of the brush and will serve to grip the sides of the handle and form auxiliary means for holding the brush in place. If desired, the bottom wall 11^c along the neck portion 16^c may be longitudinally slitted to permit of the desired spreading action.

Generically the device of the present in-

vention is not limited to any particular shape and where throughout the foregoing reference is made to "grooves" and "flared neck portions" it is to be understood that these appear only because the shape of the brush is such as to require their formation to produce the desired matrix-like form. Thus while several different shaped brushes are shown, each with its different shaped cover, it will be apparent there are an endless number of different shaped brushes upon the market and each in accordance with the present invention must have its particular cover so that when the two are assembled the brush will fit as though molded into its cover. When the cover and brush are separated there is a powerful psychological suggestion to replace the brush-head or male member within its cover or female counterpart, and this is a wide distinction from the ordinary brush cover which is merely a receptacle receiving the brush loosely therein and lacking any suggestion of fitting or being a component part of the brush. Furthermore the cover being molded to conform to the contours of the brush ensures an automatic interlocking of the two parts so that it is impossible for the cover to drop off of the brush or become accidentally disengaged therefrom. Also, this complementary inter-fitting of the brush and cover produces a visual effect which is of great value in achieving the objects of the invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A tooth brush protective device comprising a casing internally shaped as a matrix to conform to the contour of the head and bristles of a tooth brush, said contour characteristically deviating from simple rectilinear shape, said casing having an end opening for the passage of the brush head therethrough.

2. A tooth brush protective device comprising in combination a tooth brush and a casing, said casing in assembled condition having contact relation with practically all portions of the brush head and bristles said contact relation serving normally to hold the combination in assembled condition by reason of the frictional resistance of the parts to distortion.

3. In combination with a tooth brush, a protective device composed of relatively thin material such as celluloid, said protective device forming mechanically, a hollow counterpart of the brush-head and visually a replica of the same the mechanical relation of the parts serving to hold them in combination and the visual relation of the same facilitating their proper assemblage.

4. The combination with a tooth brush of a protective enclosure composed of relatively thin material such as celluloid, the walls

of said enclosure, when the latter is normally in place over the brush head, lying in planes respectively contiguous to planes bounding the outer limits of practically all parts of the said brush-head, said enclosure having an aperture means allowing the forcible insertion or withdrawal of the brush-head by flexure of the parts. portions corresponding practically throughout to the external proportions of the said brush-head such correspondence constituting a means for normally retaining the said brush-head within the said enclosure when the two are in assembled condition and until forcible separation by flexure of the parts. 15

5. A tooth brush protective device comprising in combination a tooth brush and an enclosure for the bristle containing portion thereof, said enclosure having internal pro- Signed at Philadelphia in the county of Philadelphia and State of Pennsylvania, this second day of October, A. D. 1926. 20

THOMAS W. BIGONEY.