Aug. 1, 1950 G. S. RIDNER, SR 2,517,029

TELESCOPIC TOOTHBRUSH

Filed Aug. 15, 1946

Fig. 1.

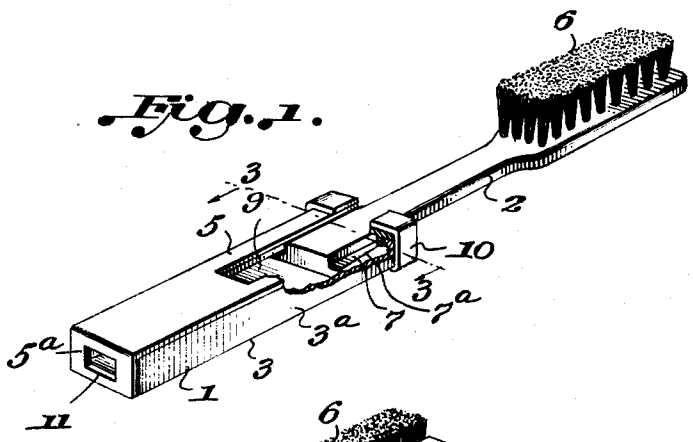


Fig. 2.

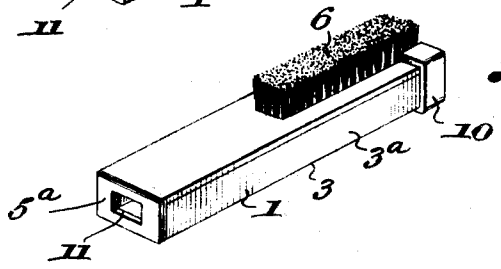


Fig. 3.

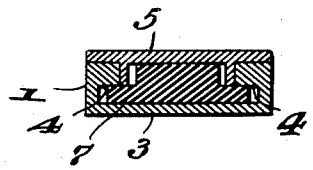


Fig. 4.

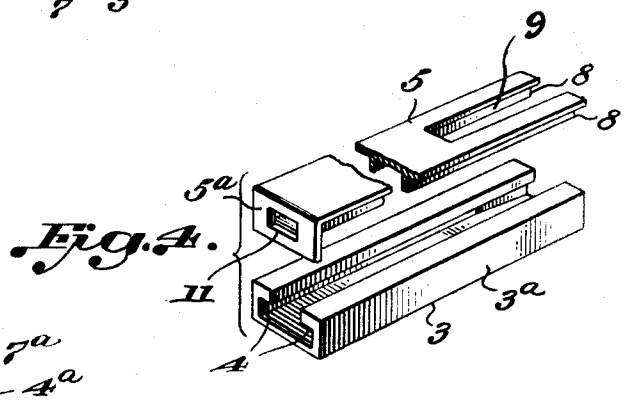
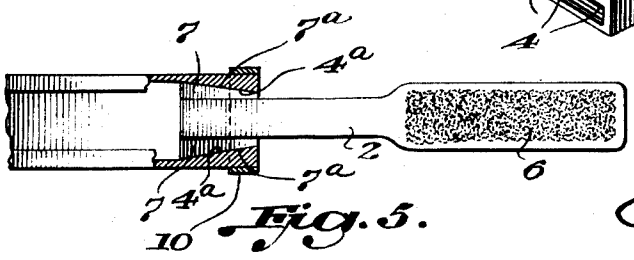


Fig. 5.



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Patented Aug. 1, 1950 2,517,029

UNITED STATES PATENT OFFICE

2,517,029

TELESCOPIC TOOTHBRUSH

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Application August 15, 1946, Serial No. 690,752

1 Claim. (Cl. 15—184)

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This invention relates to tooth brushes of the collapsible type.

An important object of my invention is to provide a tooth brush comprising a hollow handle and a brush head adapted to be telescoped within the handle when the tooth brush is not in service but which is slidable outwardly to extended position through an open end of the handle when the brush is to be used for brushing the teeth.

Another object of my invention is to provide a tooth brush of the above character including means which, when the brush is telescoped to inoperative position, engage the rows of bristles and press them laterally together so that during drying of the bristles they will restore themselves to generally the same erect position as when new, thus preserving the life of the tooth brush.

Still another object of my invention is to provide a tooth brush of the above character in which the brush head as it is drawn outwardly from the handle forms a tight frictional lock therewith so as to maintain the tooth brush against collapse during its period of use.

As an additional object, my invention provides a tooth brush which is adapted to be quickly and conveniently extended and collapsed and which in the latter condition occupies a very small space so as to be readily carried about upon the person or in a toilet kit or a lady's handbag.

Other objects and advantages will be apparent from the following detailed description of a preferred embodiment of the invention, reference being had to the annexed drawing in which:

Figure 1 is a perspective view showing a telescopic tooth brush in extended position:

Figure 2 is a perspective view showing the tooth brush fully collapsed;

Figure 3 is a transverse cross-sectional view of the brush taken on the line 3—3 of Fig. 1;

Figure 4 is an exploded view of the handle; and

Figure 5 is a plan view in part sectional of one end of the tooth brush with the brush head in extended position.

The collapsible tooth brush shown in the drawing comprises a hollow handle 1 and a brush head 2 slidably associated with the handle so as to be telescoped into and out of the handle through an open end thereof.

The handle, as best shown in Fig. 4, is made in two sections, namely a trough-shaped shell 3 having its side walls 3a longitudinally recessed, as indicated at 4 to provide a trackway for the brush head, and a cover 5 adapted to overlie and close the open side of the shell.

The brush head is of generally rectangular

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cross-section and is provided with rows of bristles 6 projecting outwardly from one of its two flat faces adjacent an end thereof. The other end of the brush head is widened to define a block 7 adapted to fit and travel within the recesses 4 in the handle. The sides 7a of the block 7 nearest the bristle-carrying end of the brush head are tapered forwardly and inwardly to define a wedge-shaped portion and the walls of the recesses 4 adjacent an end of the handle are correspondingly tapered, as indicated at 4a, so that when the brush head is drawn outwardly of the handle the block makes a wedge fit within its trackway as the brush head reaches its fully extended position, as indicated in Fig. 5.

The cover 5 rests upon the upper edges of the two side walls 3a of the shell 3 and has a pair of downwardly projecting ribs 8 which rest against the inner faces of the walls 3a of the shell 3 and are cemented thereto so as to hold the shell and cover together in unitary assembly. One end of the cover—that is, the end overlying the tapered trackway section 4a of the shell—has a longitudinal slot 9 into which the bristles 6 of the brush head are adapted to slide when the brush is collapsed. The width of this slot corresponds to approximately the width of the area on the head occupied by the bristles so that as the brush head is slid into the handle the sides of the slot exert lateral pressure upon the longitudinal outer rows of bristles whereby the bristles are forced together and urged to upright position. Thus, following use of the tooth brush while the bristles are still wet, the slot 9 serves to restore the bristles to their original erect position which, after drying out, the bristles will tend to maintain and thereby prolong the effective life of the brush.

The end of the shell 3 nearest the brush head is externally reinforced by a metal band 10 to avoid spreading of the sides 3a as the block 7 wedges against the converged portion 4a of the grooves 4, while the opposite end of the shell is closed by a down-turned section 5a of the cover 5 which is cemented to the end of the shell. A drain opening 11 is formed in the downturned section 5a for the escape of any soap or water that may become entrapped within the handle.

The tooth brush is preferably made of plastic although it may be made of metal, or partly plastic and partly metal.

It will be apparent that when the brush is telescoped into the handle the tooth brush occupies a small space and may be conveniently carried in a pocket or compactly stowed away in a toilet kit, or lady's hand bag. In order to prevent the

bristles from becoming soiled or from wetting the inside of the pocket, kit, or handbag, the tooth brush will preferably be placed in a waterproof receptacle, such as a plastic container, but since such container forms no part of the present invention it is not described herein.

It is within the purview of my invention to make the handle of unitary one-piece construction, if found desirable, instead of utilizing the shell and cover construction as described above.

Obviously various changes in the form, construction, arrangement and combination of the several parts of my new telescopic tooth brush may be made and substituted for those herein shown and described without departing from the nature and principle of my invention as defined by the following claim.

I claim:

A collapsible tooth brush comprising an elongated hollow handle open at one end, a brush head adapted to slide inwardly and outwardly through the open end of the handle, and rows of bristles projecting from a face of the brush head, said handle comprising a trough shaped shell having its side walls cut away so that they together define a generally T-shaped recess for slidably receiving the brush head, said side walls being convergingly inclined towards the open end of the handle and located adjacent thereto, and one end of the brush head terminating in a block of T-shaped cross-section adapted to travel within the recess and to bind within the convergingly inclined portions of the side walls, a cover closing the open longitudinal side of the shell and having

a pair of downwardly projecting ribs engaging the inner faces of the side walls of the shell, said ribs terminating short of the bottom of the shell, and a slot in said cover of a width corresponding approximately to the width of the area occupied by the bristles on the brush head whereby the sides of the slot are adapted to engage opposite rows of bristles and press them laterally together when the brush head is retracted into the handle.

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