

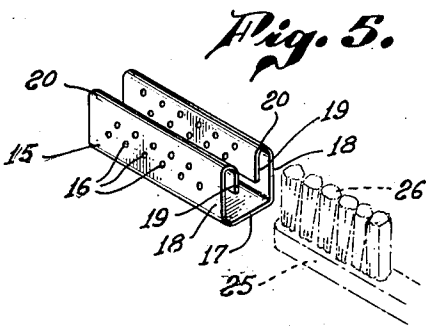
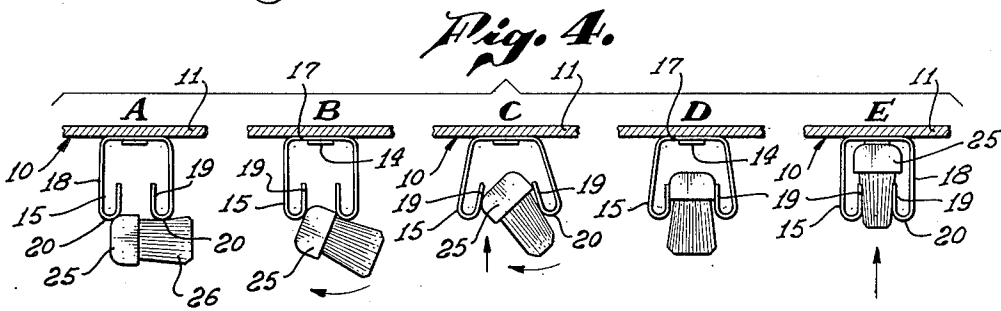
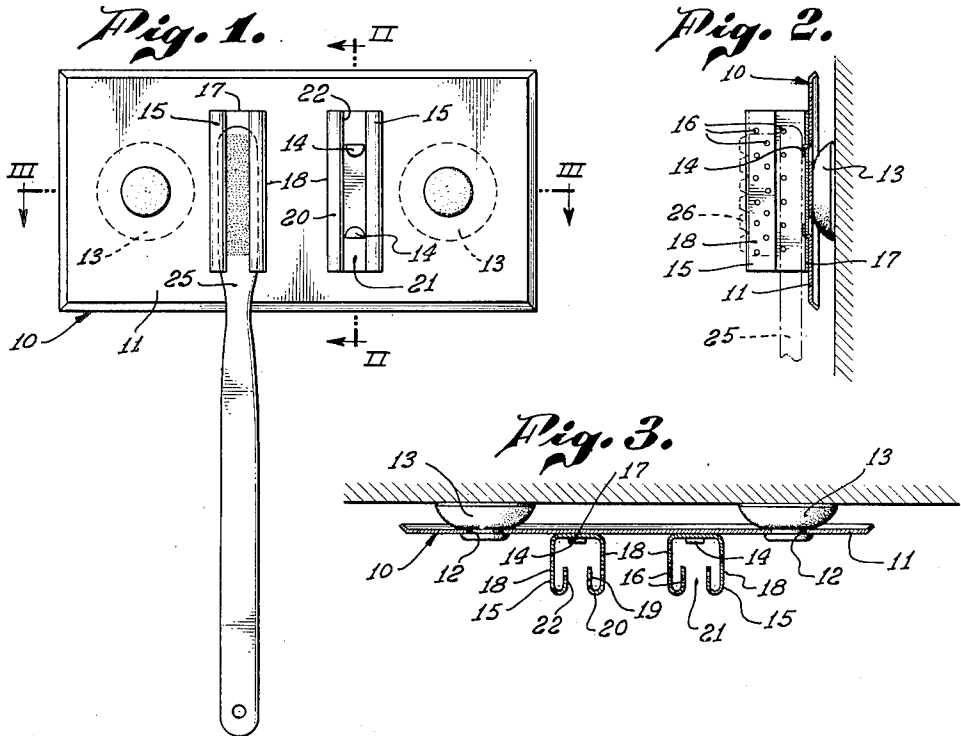
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COMBINED TOOTHBRUSH HANGER AND BRISTLE STRAIGHTENER

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**COMBINED TOOTHBRUSH HANGER AND BRISTLE STRAIGHTENER**

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1 Claim. (Cl. 248—113)

This invention relates to a combined toothbrush hanger and bristle straightener and more particularly to a clip-like means for hanging a toothbrush by resiliently grasping the groups of bristles forming the toothbrush while holding said groups in serried relation.

Daily wetting and use of toothbrushes generally causes softening of the bristles of the brush. As a result, the bristles generally lose their resiliency and tend to bend, cross, mat or stick out from their normal bristle arrangement of parallel longitudinally extending lines of groups of bristles. When toothbrushes are used which include bristles out of their normal parallel relationship, the ends of such bristles are further bent and distorted from such parallel relationship and rapid wear of the brush occurs. The use of such a toothbrush does not provide efficient and effective cleaning of teeth because the ends of the bristles are readily deflected by the teeth and are not capable of extending into cavities and recesses in and between the teeth.

The primary object of this invention is to disclose and provide an improved hanger and bristle straightener for toothbrushes wherein a toothbrush may be held in novel manner for drying after use.

An object of this invention is to provide a toothbrush hanger and holder wherein the groups of bristles are held in virtually the same relationship as when new, and wherein bristles which have become bent and displaced through use are held in proper aligned relationship while drying.

Another object of this invention is to disclose and provide an improved toothbrush hanger wherein a toothbrush may be readily inserted into the hanger in novel manner and removed therefrom.

A still further object of this invention is to provide a toothbrush holder which is so arranged as to prolong the life of the toothbrush by maintaining the bristles thereof in aligned serried relationship.

Generally speaking, this invention contemplates a combined toothbrush hanger and bristle straightener wherein perforated spaced parallel resilient side walls extend in upstanding relationship to a support means, said side walls having wall portions infolded into spaced parallel relationship with said side walls so as to form a slot-like opening adapted to receive a toothbrush. The wall portions press against opposite sides of groups of bristles on a toothbrush to maintain the bristles in serried relationship while drying. The resiliency of the side walls and wall portions serves to grasp the bristle groups so as to frictionally hold the toothbrush in hanging position.

Other objects and advantages of this invention will be readily apparent from the following description of the drawings.

In the drawings:

Fig. 1 is a front view of a combined toothbrush hanger and bristle straightener embodying this invention.

Fig. 2 is a fragmentary transverse sectional view taken in the plane indicated by line II—II of Fig. 1.

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Fig. 3 is a fragmentary longitudinal sectional view taken in the plane indicated by line III—III of Fig. 1.

Fig. 4 is a schematic end view of a toothbrush holder shown in Fig. 1 illustrating the several steps required to insert a toothbrush into the toothbrush holder of this invention.

Fig. 5 is a perspective view of a toothbrush holder and toothbrush, indicating the method of removal of the toothbrush from the holder.

In Fig. 1 there is shown a toothbrush hanger and bristle straightener generally indicated at 10 which embodies this invention. The hanger 10 generally comprises a mounting plate 11 made of any suitable material and illustrated as being of rectangular form. The mounting plate 11 may include a pair of longitudinally spaced ports 12 which are adapted to secure in grommet fashion a pair of suction cups 13 of well-known make and manufacture. The suction cups 13 afford a suitable means for readily attaching plate 11 to a wall as indicated in Fig. 2. It is understood that other means may be employed for attaching the mounting plate 11 to a wall or other supporting member.

The toothbrush hanger and bristle straightener 10 also includes an open-ended clip-type elongated member 15 secured to plate 11 in any suitable manner as at 14. Two members 15 are illustrated in Fig. 1 and it is understood that any number of such members may be associated with the mounting plate 11. Each member 15 is of generally U cross section and may be formed from a single sheet of resilient metal material which may be suitably formed as by stamping and provided with a plurality of spaced perforations 16.

The member 15 includes an elongated bottom wall 17 which integrally merges with a pair of spaced parallel side walls 18 which extend outwardly from the surface of the mounting plate 11. The side walls 18 are spaced apart a sufficient distance to accommodate the back of a toothbrush when positioned adjacent the bottom wall 17.

Side walls 18 terminate in inturned or infolded parallel inner walls or wall portions 19 which are spaced from and lie between the side walls 18. Each wall portion 19 merges with its side wall 18 along a smoothly rounded edge 20 formed by the infolding of wall portion 19 about a selected radius. The wall portion 19 extends toward the bottom wall 17 for a substantial distance and terminates therefrom in spaced relation thereto so as to accommodate the thickness of the back of a toothbrush therebetween.

Wall portions 19 define a longitudinally extending slot-like opening 21. The opposed surfaces 22 of said wall portions are generally flat and extend for the entire length of the member 15. The width of the slot-like opening 21 as defined by the flat surfaces 22 is preferably slightly less than the thickness of the arrangement of groups of bristles on a toothbrush so that when a toothbrush is inserted into the opening 22 the flat surfaces will bear against and resiliently grip sides of the bristle groups. While the flat surfaces 22 have been illustrated as being in substantially parallel relationship, it is understood that the wall portions 19 may be arranged in slightly divergent relation so that the top ends of the groups of bristles will be pressed somewhat more tightly together than lower portions of said bristles. The wall portions 19 are thus arranged to maintain the parallel lines of bristle groups in a tight compact form or in serried relationship while the brush is not being used.

In Fig. 4 there is illustrated several steps required for inserting a toothbrush into the hanger of this invention. Unlike other forms of toothbrush holders, this invention requires that the toothbrush be inserted by laterally turning and squeezing the toothbrush between the resilient side walls 18 and the wall portions 19. In Fig. 4A a

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toothbrush 25 is illustrated in position against a member 15 for insertion thereinto. It will be noted that the bristle groups 26 bear against one rounded edge 20 while the solid portion of the back of the toothbrush bears against the other rounded edge of the holder. Upon twisting the toothbrush clockwise, as illustrated in Figs. 4B and 4C, the resilient side walls are spread apart by the solid back of the toothbrush, as illustrated. The solid back of the toothbrush spreads apart to some extent the wall portions 19. After the side walls and wall portions have been spread apart to receive the solid back of the toothbrush, as shown in Fig. 4D, the toothbrush may be finally positioned by moving the back of the toothbrush rearwardly into abutment with the bottom wall 17 thereof. In such a position, as will be best seen in Fig. 4E, the wall portions 19 have virtually returned to their normal relationship and extend along the groups of bristles of the toothbrush for the length thereof and also press against the side bristles for a major portion of their height. The bristle groups are held in slightly converging relationship and discrete bristles are not permitted to extend outwardly and away from the bristle group.

A toothbrush 25 held in the holder of this invention may be readily removed therefrom by simply withdrawing the toothbrush in a direction longitudinally of the brush and of the holder and sliding the bristles along the inner walls 19. It will be readily apparent from Fig. 5 that such withdrawal will not harm the bristle group because of the large guiding surfaces 22 provided by the wall portions 19.

It should be noted that the method of introducing the toothbrush between the wall portions 19 and through the opening formed thereby tends to straighten any bent or misaligned bristles. The walls 19 lie in planes which are spaced apart a distance such that the bristles are slightly compressed, as shown in Fig. 4E.

Ventilation for the toothbrush bristles held by the member 15 is adequately provided for by the longitudinally extending slot-like opening, the open ends of the member 15 and the plurality of perforations provided in the side walls and in the wall portions 19.

It is understood that the clip-like member 15 may be employed independently of the mounting plate 11 for maintaining the groups of bristles on a toothbrush in serried relationship. The member 15 is especially useful

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for maintaining the bristles in proper relationship when a toothbrush is packed for traveling.

It is understood that various modifications and changes may be employed in the construction of the toothbrush hanger and bristle straightener described above, and all such changes in modifications coming within the scope of the appended claim are embraced thereby.

I claim:

A toothbrush bristle straightener and protective holder comprising in combination: an integral elongated clip-like member having a length adapted to exceed the length of a group of bristles on a toothbrush, said member including a bottom wall and spaced longitudinal side walls extending from longitudinal edges of the bottom wall, said side walls having co-extensive side wall extension portions infolded and terminating in longitudinal edges disposed opposite the central longitudinal portion of the side walls, said extension portions being disposed in spaced relation to each other and to their respective side walls, the bottom wall and the longitudinal edges of the extension portions providing an enlarged space for reception of a toothbrush body portion carrying the bristle group, said extension portions having longitudinal opposed faces spaced apart a distance to accommodate therebetween under compression the bristle group, whereby said side walls and extension portions are adapted to be transversely spread apart to facilitate insertion of the toothbrush body portion and adapted to resiliently frictionally grip the bristle group to maintain the bristles in serried relation, said side walls and side wall extension portions being provided with perforations.

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