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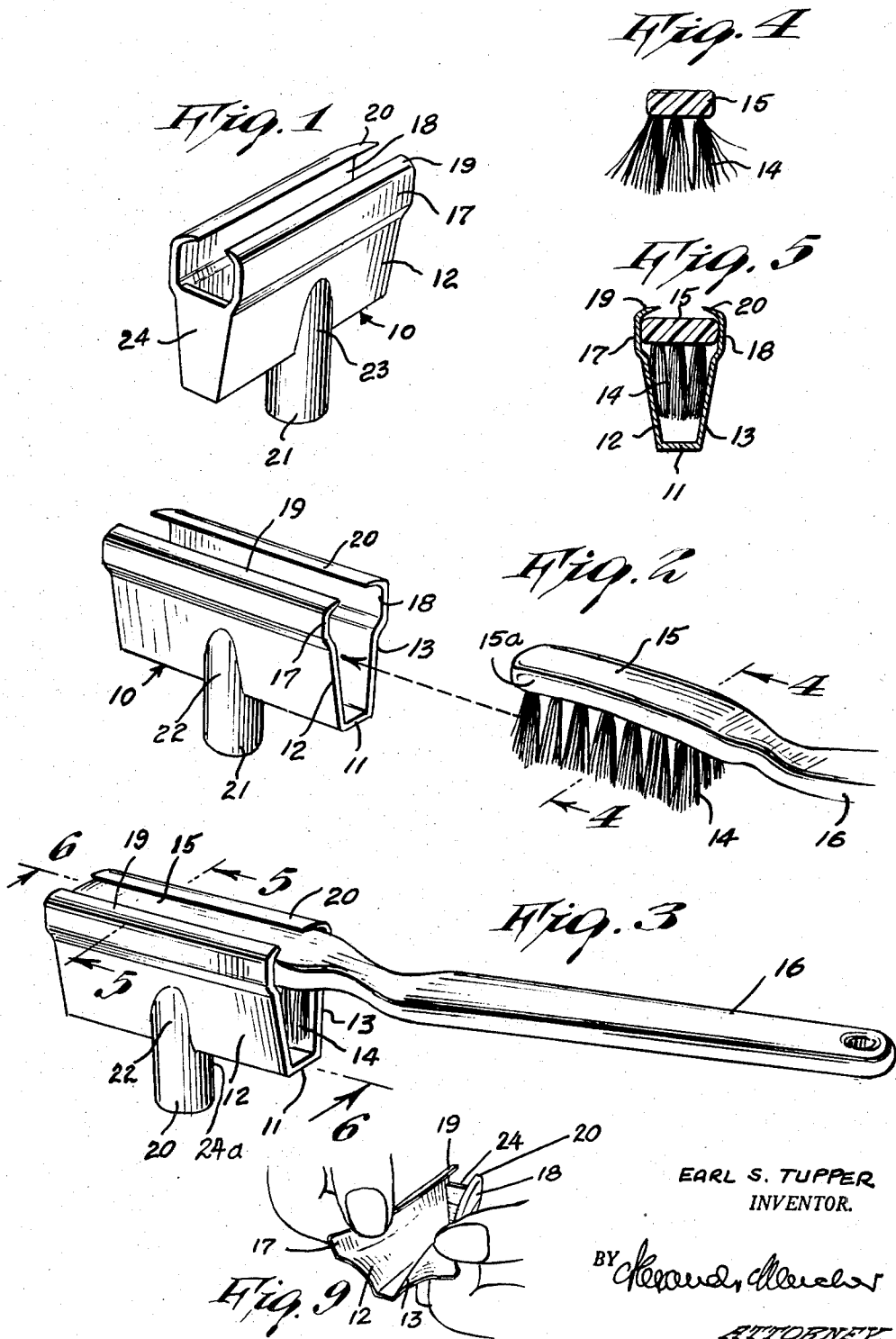
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2,947,412

BRUSH HOLDER AND SHAPER

Filed Dec. 18, 1956

2 Sheets-Sheet 1



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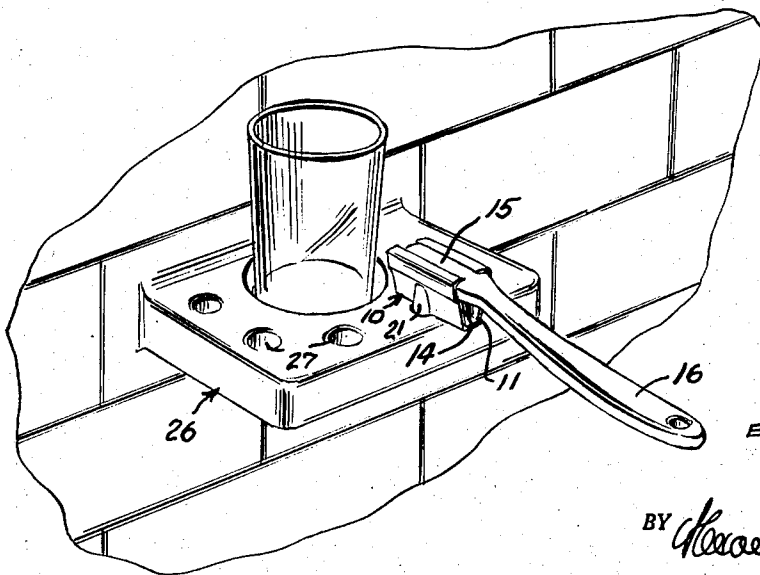
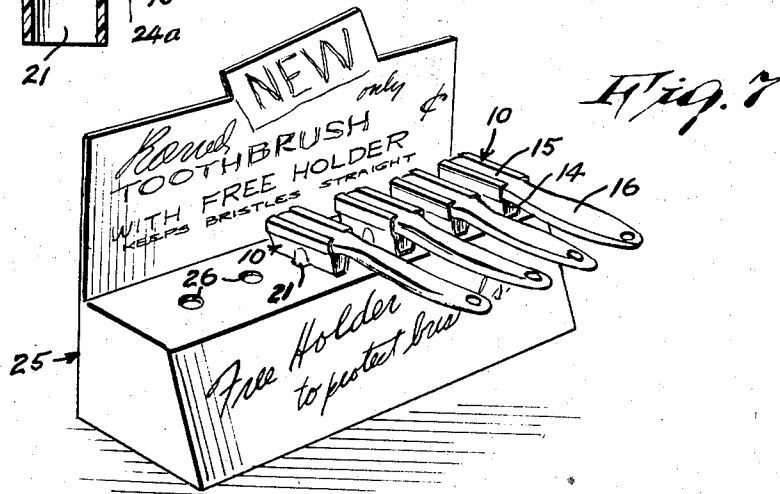
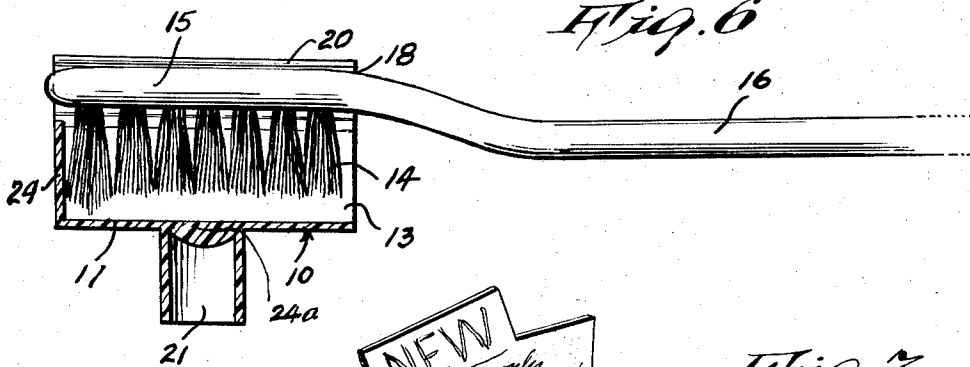


Fig. 8

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BRUSH HOLDER AND SHAPER

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3 Claims. (Cl. 206—15.1)

This invention relates to a brush holder and shaper generally.

It is the principal object of the present invention to provide a toothbrush holder and shaper which receives the brush bristles by simply sliding the brush head into the holder from one end thereof thereby forming a sanitary covering for and maintaining the shape of the bristles for long and more effective use of the brush.

It is another object of the invention to provide a toothbrush holder and shaper which is formed of flexible and deformable plastic material such as polyethylene or other substance having similar physical and inert properties to permit the easy insertion of the toothbrush thereinto yet sufficiently rigid as to draw inwardly the brush bristles from the sides of the brush and maintain and keep them shaped.

It is still another object of the invention to provide a toothbrush holder and shaper that can be easily kept clean and sanitary and which is formed of flexible and deformable plastic material so that the device can be flexed for exposing the inside thereof without destroying the normal shape of the same to provide access to a cleaning cloth, brush or other material so that the device may be maintained clean and free of bacteria.

It is a further object of the invention to provide such a brush holder and shaper in which a rigidifying portion is provided to maintain the shape of the holder intermediate its length and also wherein the back ends of the side walls are bridged or tied together to provide stiffness to the rear end of the shaper but at the same time allowing the forward ends of the shaper to be spreadable by the brush head divergently as it is forced thereinto to make for easy insertion of the brush into the holder.

It is a still further object of the invention to provide a brush holder and shaper as described with sufficient overlying top flanges to prevent the placing of the brush in the holder from the top thereof and requiring its insertion to be made only from one end thereof.

Other objects of the invention are to provide a brush holder and shaper, having the above objects in mind, which is of simple construction, inexpensive to manufacture, durable, sanitary, of pleasing appearance and easy to use.

These objects and other incidental ends of the invention will hereinafter appear in the progress of the disclosure and as pointed out in the appended claims.

Accompanying this specification are drawings showing an illustrative form of the invention wherein:

Figure 1 is a perspective view looking from the rear end of the holder;

Figure 2 is a perspective view looking from the open front end of the holder illustrating the manner in which the brush head is inserted into the holder;

Figure 3 is a perspective view of the holder with the brush fully inserted therein;

Figure 4 is a transverse sectional view of the brush head with the bristles unrestrained, the view being taken on line 4—4 of Figure 2;

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Figure 5 is a transverse sectional view taken through the brush and the holder as viewed on line 5—5 of Figure 3;

Figure 6 is a longitudinal sectional view of the holder taken on line 6 of Figure 3;

Figure 7 is a perspective view of a display rack with several of the holders with toothbrushes assembled thereon supported on a rack;

Figure 8 is a perspective view of a bathroom rack with one of the holders and a brush supported thereon in a transversely longitudinal position; and

Figure 9 is a perspective view of the holder showing ease of spread by the fingers from the front end.

Referring now to the drawings, numeral 10 represents generally the holder embodying the features of the invention herein. Holder 10 preferably is formed of any inert flexible and deformable plastic such as polyethylene or other plastic having similar physical properties and may be molded or formed by conventional molding and forming techniques. The holder is self-supporting, but the walls may be deflected, and spread without substantially affecting return to the original and normal shape.

Holder 10 has a bottom wall 11 with upstanding side walls 12 and 13 diverging upwardly from one another and to a height to receive and contain brush bristles 14 of a brush head 15 extending from a handle 16. The upper ends of the side walls 12 and 13 provide respectively opposing channel or groove portions 17 and 18 to accommodate, support and guide the side edges 15a of the brush head 15 when inserted into an end thereof in the manner illustrated in Figure 2. Brush bristles 14 will thereby be suspended above bottom wall 11 so that insertion of the brush bristles into the holder may be effected smoothly and without any wiping action along said bottom wall.

Channel portions 17 and 18 of side walls 12 and 13 flex sufficiently to accommodate the width of the brush head on introduction and offer sufficient resistance to the side edges 15a of the brush to maintain brush bristles 14 elevated within the holder above bottom wall 11. Side walls 12 and 13, in addition to the formation of opposing channel portions 17 and 18 are further provided with inwardly directed covering flanges or lips 19 and 20 which run throughout the length of the holder and which are normally separated from one another but not sufficiently to permit the insertion of the brush into the holder from above.

Intermediate the length of holder 10 is a rigidifying element, but as shown includes a port or stem portion 21 for insertion in an opening in a rack as will hereinafter appear. The rigidifying element consists of an integral saddle formation having sides or extensions 22 and 23 that proceed upwardly from a bottom transverse reinforcement element 24a disposed on the underside of bottom wall 11. Extensions 22 and 23 preferably proceed upwardly along the respective side walls 12 and 13 to supply a certain amount of reinforcement and rigidity thereto for rendering them less flexible along the intermediate portion and at the same time not restraining the walls sufficiently to prevent a finger or a cleaning instrument to still separate the walls for cleaning the bottom 11 of the holder as illustrated in Figure 9. Depending from transverse element 24a is the stem portion 21 heretofore mentioned.

In order to give further rigidity to the flexible side walls 12 and 13 at one end, a stop wall 24 is provided and extends from the bottom wall 11 between the rear ends of said side walls 12 and 13 up to the channel portions 19 and 20. The stop wall 24 maintains the shape of the holder, prevents access to the interior and further serves as a stop for bristles 14.

The brush holder through its hollow post or stem por-

tion 21 may be mounted on a counter display or sale rack 25, Figure 7; by inserting same into openings 26 in the top of the rack. The individual holder may not only be inserted in the commercial rack 25 but also may be inserted in a bathroom rack 26 in the same manner through holes 27 therein and as shown in Figure 8. Of course handle 16 may also be inserted conventionally in holes 27.

It will be observed that the holders of the invention take up little extra space. When the brushes and the holders are mounted horizontally in Figure 8, a sliding movement from and into the holder as illustrated in Figures 2 and 8 are all that is necessary for brush use and storage.

As the brush is inserted into the holder, side walls 12 and 13 will expand slightly so that the side edges 15a of the brush head 15 will be accommodated in the channel portions 17 and 18. Brush bristles 14 will be contracted and drawn inwardly and maintained by the side walls 12 and 13 in the manner shown in Figure 5. Moreover, the brush is held elevated in the channel portions 17 and 18 at all times.

Thus, it will be seen that the brush holder 10 is most flexible at the front end so that brush head 15 may be easily introduced. The brush holder, however, is made more rigid intermediate its length and most rigid at the rear end thereof to maintain the return shape of the holder after the introduction of the brush.

To clean the holder, it is only necessary to spread it from the open end as best seen in Figure 9 whereby the whole interior becomes accessible for rinsing, cleaning and scrubbing.

Thus, there has been provided a simple size-accommodating toothbrush holder and shaper wherein the holder is cleanable, may be installed in an ordinary bathroom toothbrush holder rack; wherein the bristles of the toothbrush are maintained in compressed shape to preserve resiliency, are protected against exposure by a substantial envelope of a material which is resistant to microorganisms and wherein the holder is unbreakable, durable and compact. Moreover, the device is capable of being integrally formed by conventional molding techniques.

Although the drawings and description have stressed one particular type of brush, namely, a toothbrush, nevertheless, the holder may be used in conjunction with other types of brushes by varying dimensions. In this connection, the use of the word brushes in the claims is to be an inclusive term including toothbrushes and other types of brushes having a head and depending bristles.

It is understood that minor changes and variations in the location, size, integration, material and proportion of parts may all be resorted to without departing from the spirit of the invention and scope of the appended claims.

I claim:

1. A bristle brush holder and shaper of resilient, flexible and deformable plastic having a narrow bottom and opposing diverging side walls with opposing parallel channel portions on their upper ends adapted to accommodate the side edges of the brush head, the diverging side walls at one end having an end closure wall, said channel portions being elevated above the bottom wall a distance greater than the length of the brush bristles to maintain the bristles suspended from its head above the bottom wall of the holder, a rigidifying element on the outer side of the bottom wall and intermediate the length thereof and having side extensions proceeding over the respective side walls to provide further rigidity to the side walls intermediate their length thereof and limiting the flexibility of the side walls at the opening end of the holder yet not sufficient to prevent the flexing of the side walls beyond the said band when it is desired to forcibly clean the interior of the holder.

2. A bristle brush holder and shaper as defined in claim 1 wherein said rigidifying element is a hollow mounting post portion extending downwardly from the bottom wall of the holder.

3. A bristle brush holder and shaper of resilient, flexible and deformable plastic having a narrow bottom and opposing diverging side walls with opposing channel portions on their upper ends adapted to accommodate the side edges of the brush head, said channel portions being elevated above the bottom wall a distance greater than the length of the brush bristles to maintain the bristles suspended from its head above the bottom of the holder, a rear bridging wall extending between the rear ends of the bottom and side walls to close the end of the holder whereby to provide rigidity between the side walls at the rear end of the holder and yet permit resilient free separation of the side walls at the forward end of the holder to allow for the easy insertion of the brush head therethrough, opposing parallel lips on the upper ends of the channel portions normally spaced from one another but insufficiently to permit insertions of the brush therebetween and thereby confine the insertion of the brush to the holder through the open end thereof, an internal saddle formation intermediate the ends of the holder comprising a hollow post portion extending from said bottom wall and portions integral with the side walls forming outwardly projecting ribs.

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