

Feb. 8, 1955

R. RIPPER

2,701,380

ATTACHMENT FOR TOOTHBRUSHES

Filed July 14, 1950

FIG. 1.

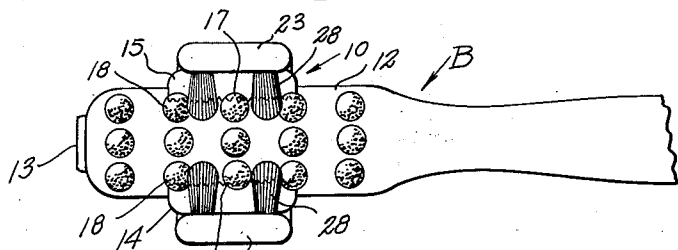


FIG. 2.

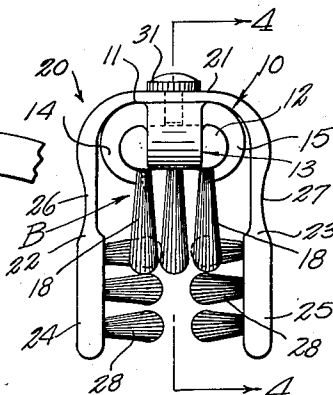
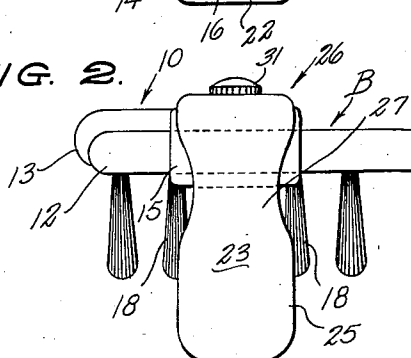


FIG. 3.

FIG. 5.

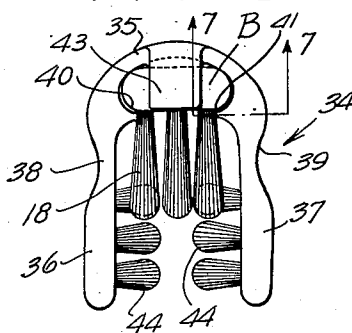


FIG. 7.

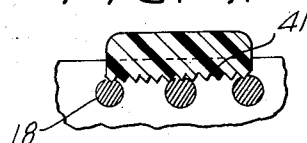


FIG. 4.

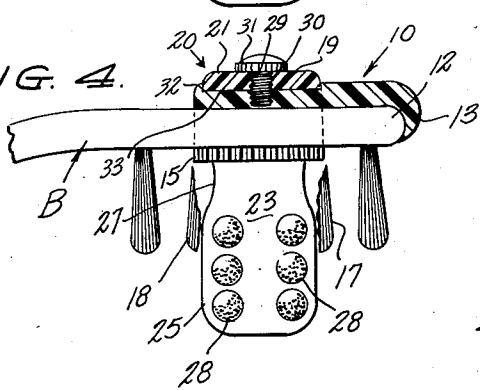
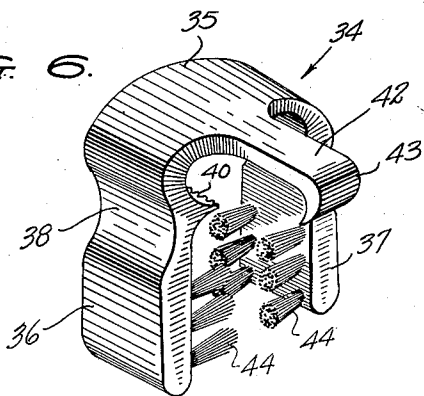


FIG. 6.



INVENTOR.

Rudolf Ripper  
1950

1

2,701,380

## ATTACHMENT FOR TOOTHBRUSHES

Rudolf Ripper, Washington, D. C., assignor of one-half to Sophia T. Ripper, Washington, D. C.

Application July 14, 1950, Serial No. 173,870

2 Claims. (Cl. 15-167)

This invention relates to tooth brushes and more particularly to an attachment adapted to be removably mounted on a tooth brush of conventional construction.

The primary object of the invention is to provide an attachment of the character indicated above having a U-shaped cross section and being equipped with a plurality of rows of tufts of bristles secured on the inner sides of the flanges of the attachment extending toward each other and located below the level of the bristles of the tooth brush proper when the attachment is mounted on a tooth brush.

Another object of the invention is to provide an attachment of the character indicated above made of one piece of a resilient material and equipped with projections or the like adapted to enter between and engage the bristles of the tooth brush proper to prevent accidental displacement of the attachment in relation to the bristles of the tooth brush.

A further object of the invention is to provide an attachment of the character indicated above comprising a clamping member equipped at its front end portion with a stop for engaging the front end of the head of the tooth brush.

An additional object of the invention is to provide an attachment of the character indicated above the bristles of which are arranged on the inner sides of the outer end portions of the flanges of the U-shaped attachment so that said bristles are adapted to engage the inner and outer surfaces of the teeth being cleaned.

A still further object of the invention is to provide an attachment of the character indicated above the bristle supporting means of which are easily and readily removable from the tooth brush for the purpose of cleaning the bristles.

With the foregoing objects in view together with such other objects and advantages as may subsequently appear, the invention resides in the parts and in the combination, construction and arrangement of the parts hereinafter described and claimed, and illustrated by way of example in the accompanying drawings in which:

Figure 1 is a bottom view in elevation of a tooth brush attachment in accordance with the invention mounted on a partly shown tooth brush of conventional construction.

Figure 2 is a side view in elevation.

Figure 3 is an end view in elevation.

Figure 4 is a view in section taken on line 4-4 in Figure 3.

Figure 5 is an end view in elevation of a modified form of a tooth brush attachment in accordance with the invention mounted on a tooth brush of conventional construction.

Figure 6 is a view in perspective of the modified form of the tooth brush attachment, and

Figure 7 is a view in section taken on line 7-7 in Figure 5.

The tooth brush attachment as embodied herein comprises a clamping member 10 having a body 11 adapted to extend across the top surface of the head 12 of a tooth brush B of conventional construction. The front end portion 13 of the body 11 is curved downwardly and tapers outwardly so that this front end portion 13 is adapted to engage the front end of the tooth brush head 12 to prevent the attachment from sliding too far back on the tooth brush.

The longitudinal edge portions 14 and 15 respectively of the rear end portion of the body 11 are curved downwardly so that they embrace the longitudinal edges of

2

the tooth brush head 12. The clamping member 10 is made of a resilient material preferably a plastic such as "Lucite" or the like so that said member is adapted to be mounted on tooth brush heads of different sizes. The two curved longitudinal edge portions 14 and 15 are provided with a plurality of projections 16 and 17 respectively extending toward each other and adapted to enter between and engage the bristles 18 of the tooth brush B and which prevent accidental displacement of the clamping member 10.

On the longitudinal center line of the body 11 of the member 10 a tapped hole 19 is provided approximately one-half of the length of said body 11 from the rear end thereof.

A bristle carrier 20 has a U-shaped form and its web 21 rests on the rear end portion of the clamping member 10 and its flanges 22 and 23 respectively extend downwardly beyond the bristles 18 of the tooth brush B when the bristle carrier 20 is arranged on the clamping member 10 and said member is disposed in working position on the brush B.

The bristle carrier 20 is made of one piece of a suitable resilient material preferably a plastic such as "Lucite" or the like. The upper end portions 26 and 27 of the flanges 22 and 23 respectively connect said flanges with the web 21 and are reduced in thickness and in width in comparison with the lower end portions 24 and 25 of the flanges 22 and 23, and a plurality of bristles 28 are secured to the inner sides of said lower flange portions so that they extend toward each other.

A hole 29 is provided in the web 21 of the bristle carrier 20 so that it will be coaxial with the tapped hole 19 in the clamping member 10 when the bristle carrier 20 is located in working position on the clamping member. A screw 30 having a knurled head 31 or the like extends through the hole 29 and engages the tapped hole 19, whereby the bristle carrier 20 is secured to the clamping member 10. To prevent a pivotal movement of the bristle carrier 20 about the screw 30 a transverse centrally located groove 32 is provided in the body 11 of the clamping member 10 and a longitudinal rib 33 is formed on the inner side of the web 21 of the bristle carrier 20 to engage the groove 32.

In the Figures 5, 6 and 7 a modified form of the tooth brush attachment in accordance with the invention is illustrated. The attachment as embodied in said figures is made of a suitable, resilient material, preferably a plastic such as "Lucite" or the like and has a U-shaped body 34 comprising a thin web 35 curved from side to side so that its under side is concave. The two flanges 36 and 37 of the body 34 extend downwardly from the web 35 and are thicker than said web. The upper portions of the flanges 36 and 37 are reduced in thickness and in width as shown at 38 and 39. On the inside surfaces of the connections between the flanges 36 and 37 and the web 35 ribs 40 and 41 are formed so that they extend toward each other and are provided with inwardly extending projections.

A finger 42 is formed on the web 35 and extends forwardly therefrom. The front end portion of said finger 42 is curved downwardly as at 43. A plurality of bristles 44 are arranged on the inside surfaces of the thicker portions of the flanges 36 and 37 and extend toward each other.

The attachment as embodied in Figures 5, 6 and 7 is adapted to be mounted on a tooth brush B by pushing it onto said brush from the front until the curved portion 43 of the finger 42 engages the front end of the tooth brush. This action is facilitated by pressing downwardly on the web 35 of the body 34, whereby the flanges 36 and 37 and the ribs 40 and 41 are spread from each other. When the pressure on said web is terminated the flanges and the ribs return into their normal position so that the projections on the ribs will engage the bristles 18 of the brush B.

When an attachment in accordance with the invention is mounted on a tooth brush and said brush is being used, the tooth brush bristles are cleaning the top surfaces of the teeth while the bristles of the attachment engage the inside and the outside surfaces of the teeth. The resiliency of the material of which the attachment is made

3

is increased by the shape of the bristle carrying flanges and will insure the cleansing of the incisors as well as the cleansing of the broader molars.

The entire attachment or the bristle carrying portion thereof can be removed easily and readily from the brush for the purpose of purifying the bristles of the attachment.

I claim:

1. An attachment for conventional tooth brushes including a body made from resilient material and comprising a web adapted to extend across and rest removably on the back of the head of the brush, a pair of flanges extending downwardly from the web, the upper portions of said flanges being integrally connected with the web, an inwardly extending rib formed on each of the upper portions of the flanges, a plurality of projections formed on each of said ribs at a level to be adapted to engage the outer bristles of the tooth brush when the attachment is in working condition, a plurality of bristles on and extending inwardly from each flange at a level below the bristles of the brush and a forwardly extending finger which is curved downwardly and adapted to engage the front end of the tooth brush, said finger being formed on and extending from the web.

2. A U-shaped removable attachment for conventional tooth brushes including a clamping member made from resilient material and comprising the combination of a body adapted to extend across the back of the brush head, the longitudinal edge portions of the rear end portion of the body being curved downwardly ending below the upper ends of the bristles of the brush proper when in

4

working position, and adapted to embrace the longitudinal sides of the back of the head of the brush, a plurality of inwardly extending projections formed on each of the curved edge portions of the body and adapted to engage the bristles of the tooth brush, the front end portion of the body being tapered to form a forwardly extending finger which is curved downwardly and adapted to engage the front end of the tooth brush, a U-shaped bristle carrier, the web of said carrier extending over the rear end portion of the clamping member, the flanges of the carrier extending downwardly and a plurality of rows of tufts of bristles on the inner sides of the carrier flanges, at least some of said bristles being disposed below the level of the end of the bristles of the tooth brush, when the attachment is in working position, and means for securing the U-shaped bristle carrier to the clamping body.

#### References Cited in the file of this patent

##### UNITED STATES PATENTS

552,114	Frye	Dec. 31, 1895
568,836	Cook	Oct. 6, 1896
1,297,944	Wallace	Mar. 18, 1919
1,830,995	Genn	Nov. 10, 1931
1,993,662	Green	Mar. 5, 1935
2,129,082	Byrer	Sept. 6, 1938
2,464,509	Horwitz	Mar. 15, 1949

##### FOREIGN PATENTS

729,442	France	Apr. 26, 1932
---------	--------	---------------