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M. W. KOHLER ET AL

2,139,593

TOOTH BRUSH

Filed May 23, 1936

Fig. 1.

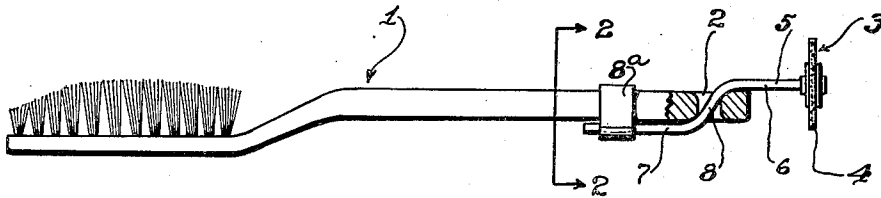


Fig. 2.

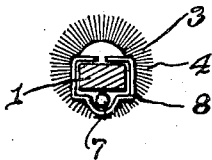


Fig. 3.

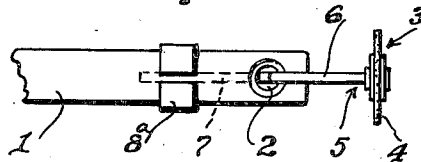


Fig. 4.

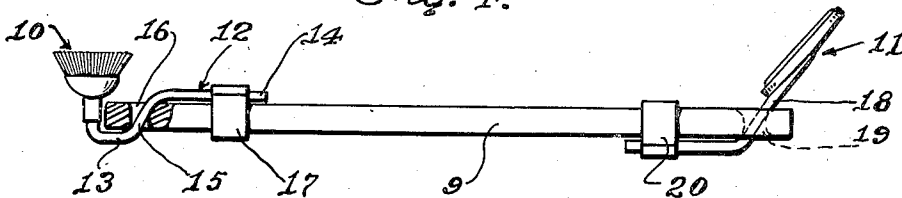


Fig. 5.

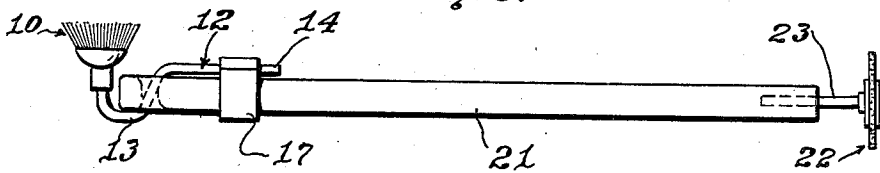


Fig. 6.

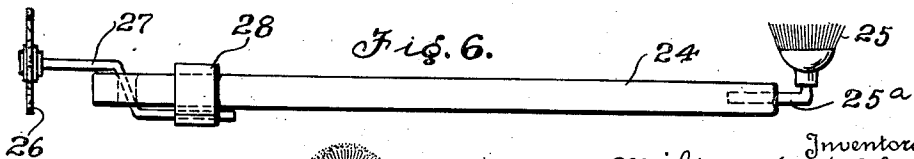
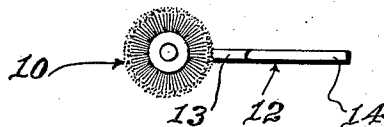


Fig. 7.



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2,139,593

TOOTH BRUSH

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3 Claims. (Cl. 15—167)

This invention relates to tooth brushes and more particularly to the means for combining an auxiliary tooth cleaning and polishing element with an ordinary tooth brush.

5 The main object of the invention is to provide means for increasing the usefulness of an ordinary tooth brush by removably attaching to the handle member thereof an extra tooth cleaning and polishing element for treating parts of the
10 teeth which cannot be reached by the ordinary tooth brush.

A still further object of the invention is to provide an auxiliary tooth cleaning and polishing element which can be removably attached to any
15 standard tooth brush.

A further object of the invention is to provide a brush for cleaning the teeth in the ordinary way and for cleaning teeth in the manner followed by dentists, namely by a wheel and cup
20 shaped brush known in the trade as "Abbott", "Excell", "Star Heldryte", or "Robinson" brushes.

A still further object of the invention is to provide a slip ring for holding the stem of the auxiliary cleaning element against the handle member
25 of the brush.

Other objects will appear as the disclosure progresses. The drawing is intended to merely indicate a possible embodiment of the invention. It is obvious that the actual needs of manufacture may necessitate certain mechanical changes.
30 It is therefore not intended to limit the invention to the embodiment illustrated but rather to define such limits in the appended claims.

For a more general understanding of the invention attention is called to the drawing in which like reference characters indicate like parts
35 throughout the specification.

Figure 1 is a side view of the brush showing the auxiliary tooth cleaning and polishing element attached to the handle member.
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Figure 2 is a section on line 2—2 of Figure 1.

Figure 3 is a fragmentary top view of the handle end of the brush shown in Figure 1.

Figure 4 is a side view of a handle member
45 showing a tooth cleaning element attached at one end and a dental mirror attached to the opposite end.

Figure 5 is a similar view as Figure 4 but showing different tooth treating elements attached to
50 the opposite ends of the handle member.

Figure 6 is a view showing a handle member having a wheel brush at one end and a cup shaped brush at the opposite end.

Figure 7 is a top view of the cup shaped cleaning element.
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Referring now to the drawing in detail and especially to Figures 1, 2 and 3, numeral 1 designates the handle member of a standard tooth brush, 2 the hole in the end of the handle member and 3 the auxiliary tooth cleaning element.
5 The tooth cleaning element comprises a relatively thin wheel shaped brush 4 having radiating bristles and mounted on a stem 5. The stem 5 includes two parallel disposed members 6 and 7
10 between which is an offset portion 8. The offset portion passes through the hole 2 while the member 6 of the stem rests on one side of the handle member and the member 7 engages the opposite
15 side of the handle member. A slip ring 8a is provided to hold the end of the stem in place. The slip ring engages the end of the stem and can be moved out of engagement thereof when it becomes necessary to remove or replace the auxiliary
20 element.

In Figure 4 the same attaching mechanism is shown for holding a cup shaped brush and a dental mirror. Numeral 9 designates the handle member, 10 the cup shaped brush and 11 the dental mirror. The said cup shaped brush is fixed to the end of the stem 12 provided with
25 parallel portions 13 and 14 and an offset portion 15 which passes through the hole 16 of the handle member. The slip ring 17 holds the handle member properly positioned in place and can be moved out of the way of the stem whenever it becomes necessary to remove or replace the said
30 brush. The dental mirror 11 at the opposite end of the handle member is attached to a stem 18 which passes through the hole 19 of the handle member. The end half portion of the stem 19
35 is bent at an obtuse angle in relation to the forward portion of the stem so it will fit against the underside of the handle member. A slip ring 20 is provided to keep the stem removably in place against the handle member.
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In Figure 5 one end of the handle member 21 is provided with a similar brush as the brush 10 shown in Figure 4 while the opposite end is provided with a wheel brush 22 having a straight stem 23 which protrudes in the end of the handle
45 member.

In Figure 6 one end of the handle member 24 is provided with a cup shaped brush 25 mounted on an L-shaped stem 25a protruding in the end of the handle member while the opposite end is
50 provided with a wheel brush 26 mounted on a stem 27 and held in place by the slip ring 28.

In operation the standard constructed brush is of course used in the ordinary manner. The wheel shaped brush can be used either in a hori-
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zontal or vertical position with the bristles contacting the teeth one at a time and is especially adapted for occlusal and lingual surfaces of the teeth. The cup shaped brush can however be
 5 used in any position and particularly useful in cleaning and polishing the occlusal, labial and buccal surfaces of the teeth and also can be used on the lingual surfaces.

It will thus be seen that we have provided a
 10 simple, efficient and practical device for increasing the usefulness of a tooth brush. The bristles of the cup or wheel shaped brush will reach the remote teeth and the crevices between them where the ordinary brush would ordinarily not
 15 touch. The devices can be made to fit any standard brush or can be built as a unit in combination with the brush.

Having described our invention, we claim:

1. In a brush of the class described, a handle
 20 member, a tooth treating element removably attached to the end of the handle member, said handle member having a hole at the end thereof with its axis arranged at right angles to the longitudinal axis of said handle member, said tooth
 25 treating element mounted on a stem, said stem having an offset portion, said offset portion passing through said hole in said handle member, and a slip ring engaging the end of said stem and locking it to said handle member, the ends
 30 of said stem lying on opposite sides of said hole

and handle member and in planes parallel with the top of said handle member, to hold same in rigid relation to said handle member.

2. In a brush of the class described, a handle member, a tooth treating element attached to the
 5 end of said handle member, said tooth treating element comprising a brush mounted on a stem, said stem provided with a bent portion, a part of said bent portion passing through a hole in
 10 the handle member, the end of said part of said stem lying on a plane parallel with a side of said handle member, and a slip ring mounted on said handle for fastening the end of said stem and
 handle member together.

3. In a brush of the class described, a handle
 15 member, a tooth treating element removably attached to the end of the handle member, said handle member having a hole at the end thereof with its axis arranged at right angles to the longitudinal axis of said handle member, said
 20 tooth treating element mounted on a stem which lies along one side of the said handle member, said stem having an offset portion, said offset portion passing through said hole in the handle
 25 member and having a straight portion extending rearwardly along the handle on the other side thereof and a slip ring directly engaging said stem and locking it to said handle member.

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