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C. E. DODSON

1,908,510

TOOTHBRUSH

Filed May 6, 1931

Fig. 1.

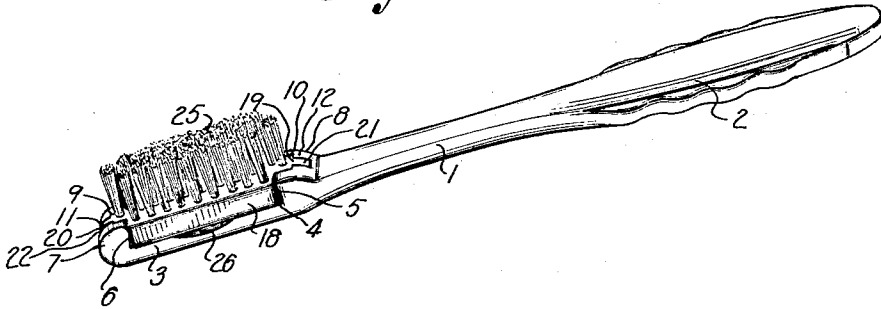


Fig. 2.

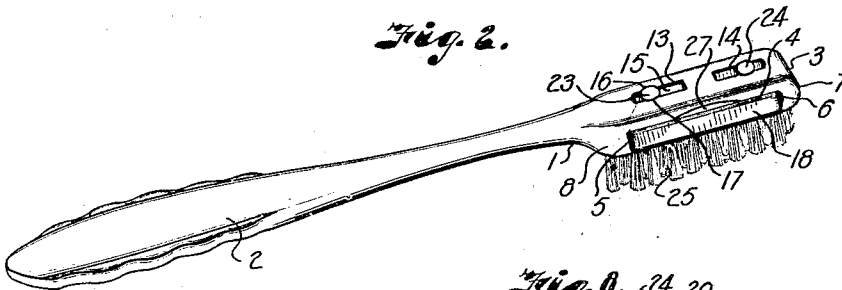


Fig. 3.

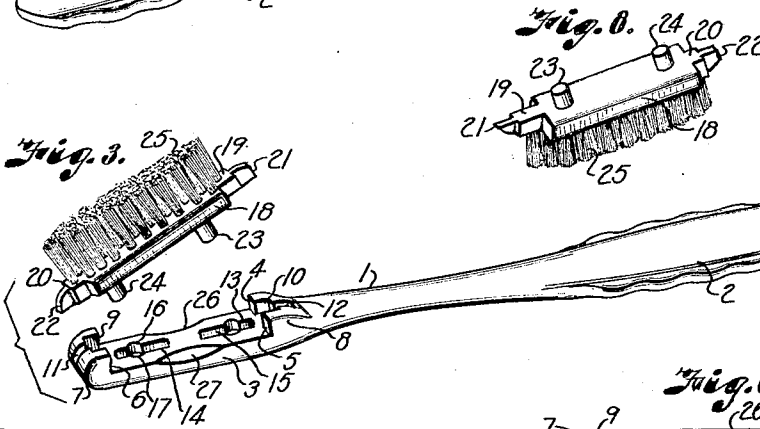


Fig. 4.

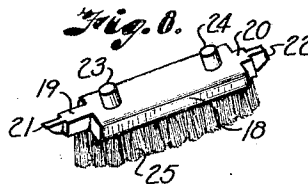


Fig. 5.

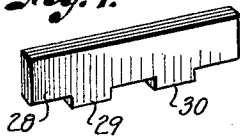


Fig. 6.

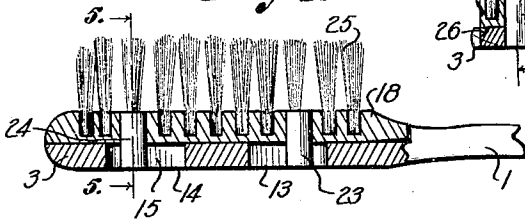


Fig. 7.

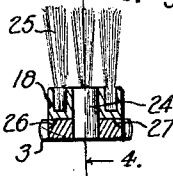
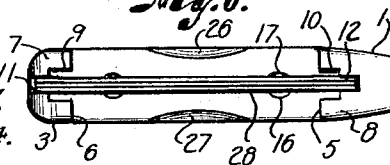


Fig. 8.



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TOOTHBRUSH

Application filed May 6, 1931. Serial No. 535,452.

This invention relates to tooth and like brushes and has for its principal object to provide a detachable bristle-carrying member which may be removed from the handle and replaced with a head formed as a gum massaging pad or a head carrying a new set of bristles.

Other important objects of the invention are to provide for retention of the bristle-carrying member on the handle so that it is not easily displaced when the brush is in use, but may be readily and quickly detached from the handle, and to provide for securing the massaging pad to the handle member with means which secures the bristle-carrying member.

In accomplishing these and other objects of the invention I have provided improved details of structure, the preferred form of which is illustrated in the accompanying drawing wherein:

Fig. 1 is a perspective view of a tooth brush constructed in accordance with my invention.

Fig. 2 is a similar perspective view of the brush particularly illustrating the pin and slot connection of the bristle-carrying member with the head portion of the handle member.

Fig. 3 is a perspective view of the brush showing the bristle-carrying member detached from the handle member.

Fig. 4 is an enlarged vertical sectional view through the head portion of the handle member, illustrating connection of the bristle-carrying member with the handle member.

Fig. 5 is a cross sectional view on the line 5-5, Fig. 4.

Fig. 6 is a plan view of the head portion of the handle member illustrating the application of a massage pad.

Fig. 7 is a detail perspective view of a detached massage pad.

Fig. 8 is a detail perspective view of a bristle-carrying member, particularly illustrating the anchoring pins.

Referring more in detail to the drawing: 1 designates a handle member which may be constructed of any suitable material, such as celluloid, amber, or similar compositions that may be readily cast or machined to the

desired form and includes a handle portion 2 having an integral head portion 3. The handle portion 2 may be of any suitable shape conforming to the style of present tooth brush construction.

The head portion 3 preferably includes an enlarged portion of the handle and is provided with a recess 4 extending across the width thereof and having its end walls 5 and 6 preferably slightly dovetailed for aiding in retention of the bristle-carrying head member, later described.

Shoulder portions 7 and 8 are thus formed at the opposite ends of the recess and they are provided with rectangular shaped sockets 9 and 10 opening into the end walls of the recess 4 as best illustrated in Fig. 3.

The shoulder portions 7 and 8 are also provided with slots or grooves 11 and 12 which intersect with the sockets 9 and 10 on the median line of the head portion of the handle member. The slots 11 and 12 preferably extend to the depth of the recess 4 to receive tongues on the bristle-carrying member hereinafter described.

The head portion of the handle member is also provided with spaced longitudinally extending slots 13 and 14 extending through the head in longitudinal alignment with the slots 11 and 12. The side walls 15 of the slots 13 and 14 are provided with arcuate notches 16 and 17 to form openings for receiving anchoring pins on the bristle-carrying member now described.

The bristle-carrying member is best illustrated in Figs. 3 and 8 and comprises a substantially rectangular shaped block 18 preferably formed of the same material from which the handle member is constructed and is of a shape complementary to the recess 4 formed in the head portion of the handle member so that when the block 18 is received in the recess, the sides and ends thereof will align with the sides and ends of the recess to fill out the head portion of the handle and form a structure having a smooth contour similar to an ordinary brush.

The ends of the blocks are provided with reduced extensions 19 and 20 complementary in shape to the sockets 9 and 10 and the ends

thereof are provided with tongues 21 and 22 engageable in the slots 11 and 12 to assist in anchoring the bristle-carrying member in the handle member.

5 Extending laterally from the back of the bristle-carrying member are pins 23 and 24 for engaging in the openings formed by the notches 16 and 17 in the head portion of the handle member to cooperate with the tongues
10 21 and 22 to retain the bristle-carrying member.

The bristle-carrying member carries a plurality of rows of bristles 25, preferably three in number, and the end bristles of the center
15 row are preferably anchored in the reduced portions 19 and 20 of the block 18. The openings formed by the notches 16 and 17 are preferably smaller in diameter than the diameter of the pins 23 and 24 so that the pins
20 slightly spread the slots and are gripped by the side walls of the notches, the resiliency of the material from which the handle member is constructed allowing sufficient expansion to permit ready reception of the pins.

25 In order that the bristle-carrying member may be readily grasped to aid in its removal from the handle member, the head portion of the handle adjacent the sides of the recess 4 is provided with arcuate recesses 26 and 27.

30 In Fig. 7 is illustrated a massage pad 28 preferably comprising a plurality of juxtaposed layers of cellulose or the like having tongues 29 and 30 projecting from one edge thereof to engage in the slots 13 and 14 when
35 the bristle-carrying member is removed. The massage pad is preferably of sufficient length so that the ends thereof are received in the slots or grooves 11 and 12 of the handle member, as illustrated in Fig. 3, to cooperate with
40 the tongues 29 and 30 and the slots 13 and 14 to retain the pad.

To remove the bristle carrying member of a tooth brush constructed and assembled as described, the bristle-carrying member may be
45 gripped between the thumb and finger so that the finger nails can enter in the recesses 26 and 27 to draw the bristle-carrying member from the head portion of the handle. The resiliency of the material from which the handle
50 is formed allows the dovetailed portions of the recess to open sufficiently to allow passage of the block carrying the bristles.

The pad may then be applied to the head portion of the handle so that its ends are received in the slots 11 and 12 and the tongues
55 29 and 30 in the slots 13 and 14. When the pad is moistened it expands sufficiently to retain it in the slots in the handle member. When the bristle-carrying member is to be replaced, the pad may be withdrawn from the handle member and the bristle-carrying member pressed into the recess 4 so that the pins enter the openings formed by the notches and the reduced extensions and tongues 21 and
60 22 enter the sockets 9 and 10 and the slots 11

and 12, respectively, the sides of the head portion adjacent the slots 13 and 14 yielding sufficiently to permit reception of the pins and tightly grip them to prevent accidental displacement of the bristle-carrying member. 70

What I claim and desire to secure by Letters Patent is:

1. A brush including a handle having a head portion of yieldable material provided with a recess in one of its faces forming a seat for a removable head member, the head
75 portion of the handle having a slot extending therethrough from the base of the recess and having sockets at the ends of the recess, and a head member including a body seated in said recess having a projection adapted to spread the head portion of the handle upon
80 insertion into said base slot and having end portions adapted for seating in said sockets to frictionally retain the head member on the head portion of the handle and brace said
85 head member against lateral thrust.

2. A brush including a handle having a head portion of yieldable material provided with a recess in one of its faces forming a seat for a removable head member, the head
90 portion of the handle having spaced slots extending therethrough from the base of the recess and having sockets at the ends of the recess, and a head member including a body seated in said recess having projections adapted to spread the head portion of the handle upon
95 insertion of said projections into said slots, the head member having end portions adapted for seating in said sockets to frictionally retain the head member on the head portion of the handle and brace said head
100 member against twisting and lateral thrust.

3. A brush including a handle having a yieldable head portion provided with a recess in one of its faces forming a seat for a removable head member, the head portion of the handle having slots extending there-
105 through from the base of the recess provided with arcuate enlargements, and having sockets at the ends of the recess, and a head member seatable in said recess having pins adapted to spread said head portion upon pro-
110 jection of said pins into the enlarged portions of said slots, the head member having end portions adapted to seat in said sockets to frictionally retain the head member on the head portion of the handle and brace said
115 head member against twisting and lateral thrust.

4. A brush including a handle having a head portion of yieldable material provided with a recess in one of its faces forming a seat for a removable head member, said head
120 portion having slots extending therethrough from the base of the recess and provided with arcuate enlargements, and having sockets at the ends of the recess including reduced extensions, and a head member seatable in said
125 recess having pins adapted to spread said
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head portion upon projection of said pins into the enlarged portions of said slots, said head member having shouldered end portions adapted to seat in said sockets and the extensions thereof to frictionally retain the head member on the head portion of the handle and brace the head member against twisting and lateral thrust.

5. A brush including a handle having a head portion of yieldable material and provided with a recess and with an elongated slot in said recess, and a head member adapted to seat snugly in said recess and having a projection of slightly greater width than said slot for spreading the slot when engaged therewith to frictionally retain the head member on said handle member.

6. A brush including a handle having a head portion of yieldable material and provided with a recess and with spaced elongated slots in said recess, an a head member adapted to seat snugly in said recess and having spaced projections of slightly greater width than said slots for spreading the slots when engaged therewith to frictionally retain the head member on said handle.

In testimony whereof I affix my signature.
CARROLL E. DODSON.

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