July 16, 1940. C. A. BAKER 2,208,013

BRUSH FOR DENTAL PLATES

Original Filed June 19, 1937

Fig. 1.

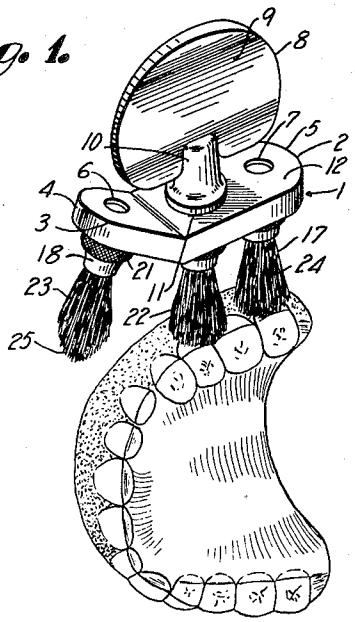


Fig. 2.

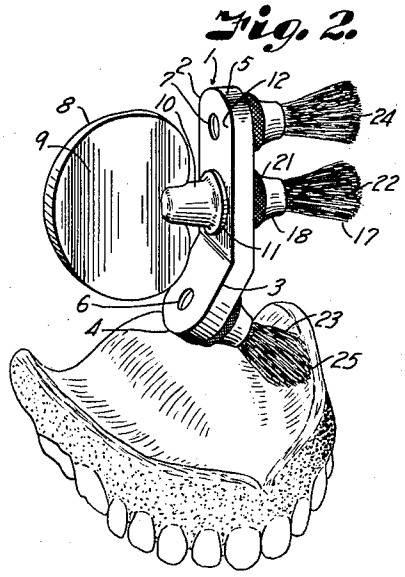


Fig. 3.

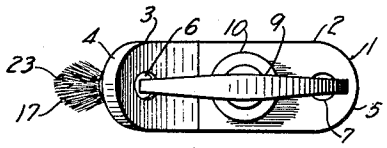


Fig. 4.

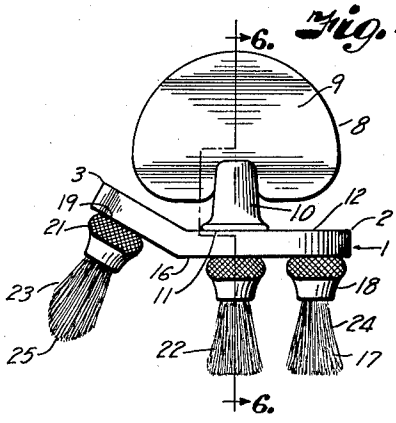


Fig. 5.

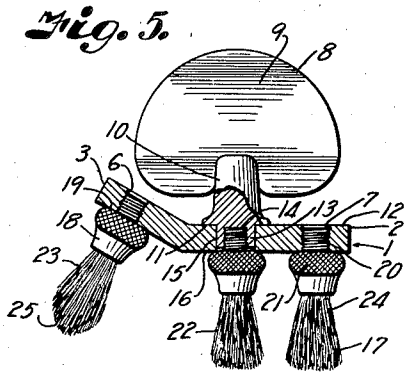


Fig. 6.

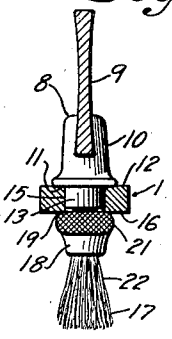


Fig. 7.



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BRUSH FOR DENTAL PLATES

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Application June 19, 1937, Serial No. 149,152

Renewed December 14, 1939

3 Claims. (Cl. 15—167)

This invention relates to brushes and more particularly to a brush for cleaning dental plates, and has for its principal object to provide a bristle arrangement wherein the bristles are grouped in individual sets located for conveniently brushing all of the parts of a plate.

Other important objects of the invention are to provide for independent removal and replacement of the respective sets of bristles when they become worn, to provide a simple and relatively inexpensive handle construction, and to provide for demounting of the handle relatively to the bristle holder.

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 brush constructed in accordance with my invention and showing the method of using the bristle sets in scouring the flat or relatively wide surfaces of a plate.

Fig. 2 is a similar view showing the bristle set used in scouring the grooved and angular portions of a plate.

Fig. 3 is a plan view of the brush.

Fig. 4 is a side elevational view of the brush showing the relative location and angular relation of the bristle sets.

Fig. 5 is a longitudinal section through the holder illustrating the method of mounting the bristle sets and handle.

Fig. 6 is a cross section through the brush on the line 6—6, Fig. 4.

Fig. 7 is a detail view of one of the bristle sets.

Referring more in detail to the drawing:

1 designates the brush holder which includes a flat horizontal portion 2 and an upwardly inclined portion 3 extending therefrom at an obtuse angle, the portion 2 preferably being longer than the portion 3.

The ends of the holder are rounded, as at 4 and 5, and are provided with internally threaded openings 6 and 7 having their axes extending at right angles to the respective portions of the holder.

The handle for the holder is designated by the numeral 8 and includes a wing shaped finger gripping portion 9 having a flanged shank 10 terminating in a shoulder 11 to engage the upper face 12 of the horizontal portion of the holder.

Extending from the shank 10 below the shoulder 11 of the handle is a reduced anchoring portion 13 provided in its lower face with an internally threaded socket 14 having the same diameter and threads as that of the openings 6 and 7.

The anchoring portion 13 is preferably cylindrical in form and of a suitable outer diameter to be snugly received in an opening 15 that extends through the holder at a point between the threaded openings 6 and 7.

The anchoring portion of the shank is of slightly less length than the thickness of the holder, so that when the shoulder engages the upper face 12 thereof, the socket end terminates short of the lower face 16 for a purpose hereinafter described.

The bristle sets each include a tuft of bristles 17 having their ends set within a socket 18, as in customary practice. The socket 18 has a flat shouldered upper face 19 for engaging against the lower face 16 of the holder and an upwardly threaded shank 20 conforming to the diameter and threads of the openings in the holder.

To facilitate application of the bristle sets to the holder, the sockets are preferably knurled, as at 21, so that they may be more firmly gripped by the fingers.

In the brush illustrated, I provide three bristle sets 22, 23 and 24 respectively, the bristles 22 being threaded into the socket 14 of the handle and the other bristle sets 23 and 24 in the openings 6 and 7 until their shouldered faces 19 engage the under face 16 of the holder, as shown in Fig. 5, and thereby frictionally locking the sets against accidental rotation.

Attention is directed to the fact that when the bristle set 22 is threaded into the socket 14 and its shoulder 19 engages the holder, the shoulder will not engage the face of the anchoring portion 13, so that the shoulder 11 of the handle is drawn tightly against the opposite face of the holder to firmly anchor the handle in the openings 15.

When the brushes are threaded into their respective positions, the flat portion of the holder mounts the brushes 22 and 24 so that they cooperate in scouring the flat surfaces of the plate, as shown in Fig. 1, and the angular portion of the holder carries a single brush 23 for cleaning the grooved portions of the plates, as in Fig. 2.

While all of the bristles may be of the same size and shape, so that they are interchangeable, I prefer that the set 23 should be pointed, as illustrated at 25, since it will more readily conform to the curvature and small impressions of the plate.

In assembling a brush constructed as described, anchoring portion 13 of the handle is pressed into the opening 15 until the shoulder 11 thereof

engages the upper face 12 of the holder. The gripping portion of the handle may then be adjusted to a convenient angle relatively to the holder by rotating the anchoring portion in its opening, after which the bristle set 22 is threaded into the socket 14 to anchor the handle in adjusted position.

The other bristle sets 23 and 24 are then screwed into their respective places to complete the assembly.

The bristle sets may be used on the respective parts of a plate, as they are found to be more convenient, but the brushes are so arranged that all of the portions of a plate may be reached by one or more of the bristle sets.

After the bristles become worn, it is obvious that they may be readily replaced with new sets. It is also obvious that the brush may be completely disassembled for cleaning and sterilization purposes.

While I have described the bristle sets as being threaded into the holder, it is obvious that bayonet or other securing means may be provided without departing from the spirit of the invention.

Attention is directed to the fact that the set of bristles 22 may be removed to permit removal of the handle 8 from the holder 1. This set of bristles or any one of the other sets may then be screwed into the handle and used independently of the holder.

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

1. A brush of the character described including, a holder having an opening therein, a handle member having an anchoring portion pressed into said opening and having a socket, a bristle set, and a shank on the bristle set removably engaged in said socket for retaining the handle member and bristle set on said holder.

2. A brush of the character described including, a holder having horizontal and angular portions respectively provided with openings, a handle member having a portion engaging one side of the holder in registry with one of said openings, and a bristle carrying member engaging the opposite side of the holder, one of said members having a shank threadedly engaged with the other for retaining said members on the holder.

3. A brush of the character described including a holder having horizontal and angular portions arranged at an angle relatively to each other and having a threaded opening in one portion and a larger unthreaded opening in the other portion, a handle member having an anchoring portion pressed into the unthreaded opening and having a threaded socket, said threaded socket being a counterpart of the threaded opening, individual bristle sets, and shanks on the bristle sets for interchangeably and removably mounting the bristle sets in the threaded opening and in said socket.

CHESTER A. BAKER.