No. 824,087. PATENTED JUNE 26, 1906.

S. E. BABCOCK.

TOOTH BRUSH.

APPLICATION FILED APR. 12, 1905.

Fig. 1.

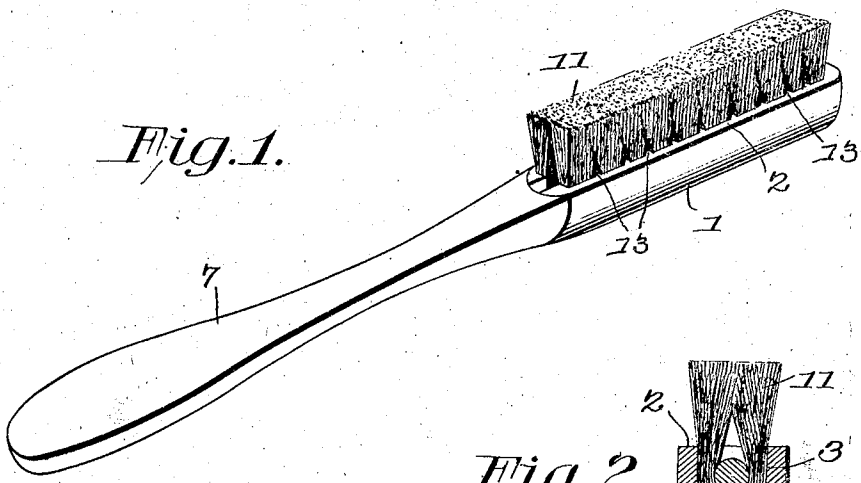


Fig. 2.

Fig. 4.

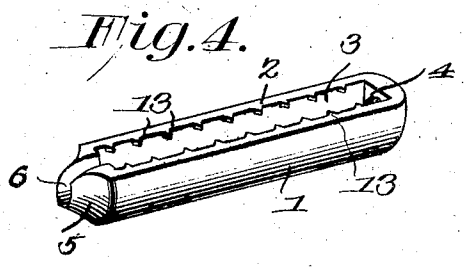


Fig. 5.

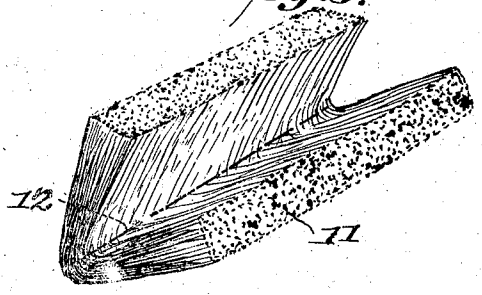


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

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TOOTH-BRUSH.

No. 824,087. Specification of Letters Patent. Patented June 26, 1906.

Application filed April 12, 1905. Serial No. 255,209.

To all whom it may concern:

Be it known that I, SOLON E. BABCOCK, a citizen of the United States, residing at Plateau City, in the county of Mesa and State of Colorado, have invented a new and useful Tooth-Brush, of which the following is a specification.

This invention relates to brushes, and has for its object to effect removal and replacing of worn bristles in a simple and improved manner.

While the invention is applicable to various forms of brushes, it has been particularly designed as a tooth-brush and includes a head and a handle which are detachably connected in a maner to removably secure the bristles to the head.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of a tooth-brush embodying the features of the present invention. Fig. 2 is a cross-sectional view taken through the head of the brush. Fig. 3 is a detail perspective view of the handle detached. Fig. 4 is a similar view of the head. Fig. 5 is a detail perspective view of the bristles removed.

Similar numerals of reference indicate corresponding parts in each and every figure of the drawings.

In carrying out the present invention there is provided a head member 1, having the conventional shape of tooth-brush heads and provided with a flat face 2, having a longitudinal socket 3 formed therein and terminating short of the opposite ends of the head. In the outer end of the socket there is a threaded opening 4, and the inner end of the head is provided with a tapered or conical extension 5, which is intersected by a longitudinal slot 6, communicating with the socket 3. The handle 7 is of conventional form and is provided in its inner end with a tapered or conical socket 8, from the center of which projects a stem 9, disposed longitudinally of the handle and having a threaded outer terminal 10.

To assemble the brush, the bristles 11 are placed transversely across the socketed face of the head 1, and then the stem 9 of the handle is placed upon the top of the bristles with its outer end engaged with the perforation 4 of the head, after which the handle is pressed down upon the outer end of the stem as a fulcrum, thereby folding the bristles into the socket 3 until the stem enters the slot 6, whereupon the handle is rotated to screw the stem 9 into the threaded opening 4, and thereby wedge the conical projection 5 into the conical socket 8 of the handle, the free ends of the bristles of course projecting outwardly through the open side of the socket 3, as clearly indicated in Figs. 1 and 2 of the drawings.

When the parts have been assembled, the present brush has the appearance and the characteristics of an ordinary tooth-brush, while at the same time the handle and the head may be conveniently detached, so as to permit removal of the bristles when worn, and the head and handle may be again conveniently assembled to connect a new set of bristles to the head.

In addition to the feature of replacing the bristles when worn the parts of the tooth-brush may be frequently disconnected and cleansed, whereby the present tooth-brush possesses sanitary advantages over the ordinary form of tooth-brush, wherein the bristles are permanently connected to the head and cleansing of the bristles can be only ineffectual.

As best indicated in Fig. 5 of the drawings, it will be noted that the bristles are arranged in a stack or pile and are connected by a longitudinal row of stitches 12, located midway between the ends of the bristles, the stack or pile of bristles being folded along the line of stitches to enable the insertion of the bristles into the socket of the head.

Means for loosening and causing a spreading of the free ends of the bristles is shown in Fig. 4 and consists of a plurality of wedge-shaped projections 13, carried by the longitudinal walls of the sockets 3 and flush with the flat edges 2 of the head, whereby when the stack or pile of bristles is secure within the head the projections 13 will be entered between certain of the bristles, which tends to spread the outer free ends thereof, thereby to render the projected portions of the bristles comparatively loose, so as to avoid a hard brush.

Having fully described the invention, what is claimed is—

1. A brush-head having a bristle-receiving socket, and a handle detachably carried by the head and capable of engagement sidewise

across the open side of the socket to retain bristles therein.

2. A brush-head having a bristle-receiving socket, a handle having a fulcrum connection with the head at one end of the socket and capable of being swung sidewise into the socket to clamp bristles therein, and means other than the fulcrum connection to hold the handle against the head.

3. A brush comprising a head, a handle having a fulcrum connection with the head, bristles held between the head and the handle, and means other than the fulcrum connection for connecting the handle to the head to clamp the bristles between the head and the handle.

4. A brush comprising a head having a bristle-receiving socket which is provided in its outer end with an opening and in its inner end with a slot, a handle having a stem to engage the terminal opening of the socket as a fulcrum-bearing and capable of being pressed down against the bristles to force the latter into the socket, the slot serving to receive the inner end of the stem when the handle is fitted in place, and means other than the engagement of the stem with the head to connect the handle with the head.

5. A brush comprising a head having a socket which is provided in its outer end with a threaded opening and in its inner end with a longitudinal slot, a handle having a stem which is threaded at its front end for engagement with the threaded opening, the slot of the head receiving the inner end of the stem when the handle is fitted in place, said handle being rotatable to engage and disengage the threaded portion of the stem with the threads of the opening, and means at the end opposite the threaded opening for connecting the handle and the head.

6. A brush having a head provided with a longitudinal socket, the outer end of the socket being provided with a threaded opening, the inner end of the head being provided with a conical projection having a longitudinal slot intersecting the open side of the socket, bristles carried within the socket, and a handle having a stem to engage the bristles and retain the same in the socket, the outer end of the stem being threaded for engagement with the threaded opening of the head and the inner end portion of the stem being received within the slot when the handle is in position, the inner end of the handle having a conical socket to receive the conical projection of the head and said handle being rotatable to engage and disengage its threaded end with the threads of the opening in the head.

7. A brush comprising a head having a longitudinal socket, one end of the socket being provided with a threaded opening and the other end having a longitudinal slot, a handle having a stem to engage the slot and the socket and provided with a threaded terminal for detachable engagement with the threaded opening of the head, and means at the slotted end of the socket for connecting the handle and the head.

8. A brush comprising a head having a longitudinal socket which is provided in one end with a threaded opening, the other end of the head being provided with a conical extension having a longitudinal slot intersecting the open side of the socket, and a handle having a terminal socket to receive the conical projection of the head and provided with a longitudinal stem extending forwardly from the center of the socket to engage the slot and socket of the head, the outer end of the stem being threaded to detachably connect the threaded opening of the head.

9. A brush comprising a head having a socket, a stack of bristles folded intermediate of its ends with its folded portion introduced into the socket and the free ends of the bristles projected externally of the head into position for use, projections within the socket and entering between the bristles to separate and loosen the outer free ends thereof, and means to hold the bristles in the socket.

10. A brush comprising a head having a socket provided with internal projections and a seat at one end of the socket, a stack of bristles folded intermediate of its ends with the folded portion introduced into the socket, a handle having a stem engaged with the seat and the folded portion of the bristles to hold the latter in the socket, and means other than the engagement of the stem with the seat to connect the handle with the head.

11. As a new article of manufacture, a set of brush-bristles arranged in a pack and connected longitudinally at a point substantially midway between the ends of the pack, the pack capable of being folded along the line of connection between the bristles.

12. As a new article of manufacture, a set of brush-bristles disposed in a pack and connected by a row of stitches disposed substantially midway between the ends of the pack, the pack capable of being folded along the line of connection between the bristles.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

SOLON E. BABCOCK.

Witnesses:

JAS. I. BALDRIDGE,

W. E. PHILLIPS.