

E. G. HUBBEL, JR.
TOOTH BRUSH.
APPLICATION FILED MAY 13, 1911.

Patented Dec. 26, 1911.

1,013,089.

Fig. 1.

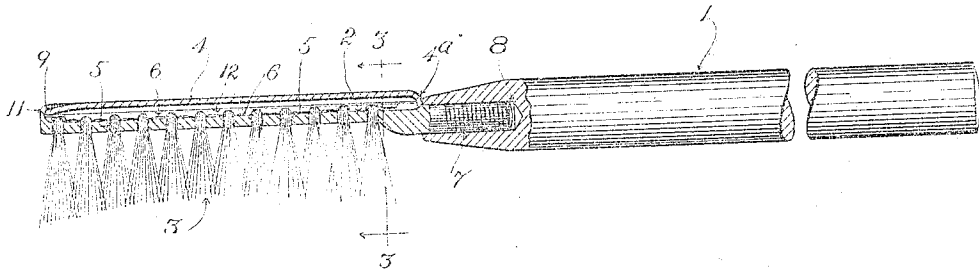


Fig. 2.

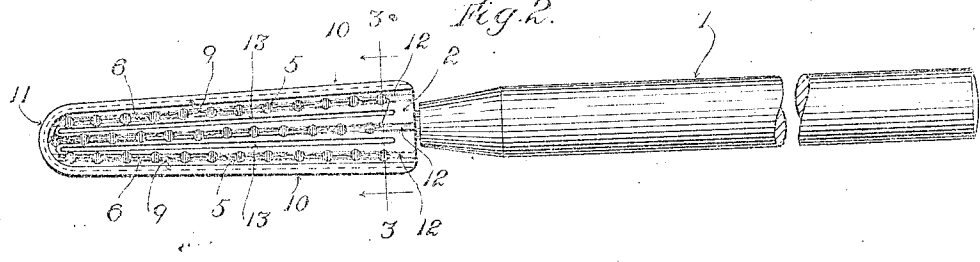
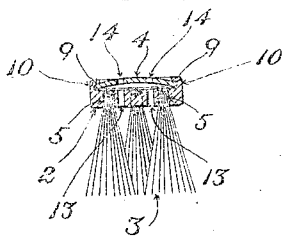


Fig. 3.



Witnesses:
Oscar F. Hill
Edith A. Wiseman

Inventor:
Edgar G. Hubbel Jr.
by Chas. F. Randall
Attorney.

UNITED STATES PATENT OFFICE.

EDGAR G. HUBBEL, JR., OF BOSTON, MASSACHUSETTS.

TOOTH-BRUSH.

1.013,089.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDGAR G. HUBBEL, JR., a citizen of the United States, residing at Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Tooth-Brushes, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention has reference to tooth brushes, and the like.

More particularly it relates to brushes having metal bristle-holders or blocks and handles, although the principles of construction may, if desired, be embodied in brushes having the said parts, or one or more of them, composed of other material or materials.

A general object of the invention is to provide a brush of separable construction, of practical and simple character, capable of being manufactured at low cost, and admitting of conveniently and readily being disassembled, cleansed thoroughly and completely throughout, and reassembled in readiness for further use.

A convenient embodiment of the invention is illustrated in the drawings, in which latter,—

Figure 1 shows a brush containing the said embodiment, the brush head and adjacent portion of the handle being in section and the rest of the handle in elevation. Fig. 2 is a plan view of the said brush. Fig. 3 is a view in section in the plane of lines 3, 3, of Figs. 1 and 2.

A brush embodying the invention comprises a handle 1, a bristle-block 2, bristles 3, and a backing-strip or plate 4 combined with the said bristle-block and covering the upper surface thereof, as well as the holes 5, 5, etc., in said bristle-block, the portions of the bristle-tufts which occupy the said holes, and the wire or wires 6, 6, etc., or other means employed for securing the bristle-tufts in the holes.

The handle 1 and bristle-block 2 are formed as separate parts and are in screw-threaded engagement by means of a projecting screw-threaded stem on one thereof entering a screw-threaded hole that is tapped in the other thereof. Preferably, the screw-threaded projecting stem 7 is formed as an extension of the bristle-block and integral therewith, and the screw-

threaded hole, 8, is tapped in the end of handle 1.

The bristle-block 2 is formed with the holes 5, 5, etc., into which the upper ends of the tufts of bristles are inserted, and within which the said tufts are secured by a wire or wires 6, 6, etc. Other fastening means for the tufts may be employed instead, if preferred. The bristle-block also is formed at its top with grooves or ways 9, 9, to receive the edge-portions of the backing-strip or plate 4. These grooves or ways extend lengthwise of the bristle-block, at or near the opposite sides of the latter, and the backing-strip or plate slides endwise therein, lengthwise of the bristle-block, in being slipped into place and in being removed. In the present instance, the said grooves or ways are formed in side-flanges 10, 10, rising from the back of the bristle-block. An end-flange 11 is provided on the bristle-block, at the extreme end of the latter, against which the corresponding end of the backing-strip or plate brings up when the latter has been pushed fully into place. The said end-flange is grooved to receive the said end of the backing strip or plate or is formed with a lip to overhang and conceal such end. To afford clearance between the backing-strip or plate and the back of the bristle-block, so that the latter shall not be obstructed by portions of the bristles or securing wire or wires, or other bristle-securing means, in being slipped into or out of place, the backing-strip or plate preferably is crowned or bulged upwardly, as shown. I may, and preferably do, groove the back of the bristle-block as at 12, 12, 12, the grooves intersecting the holes for the bristles. The wire or wires lie in the said grooves, between adjacent holes, which enables the backing-strip or plate to fit closer to the surface of the bristle-block than otherwise would be feasible.

I provide in convenient manner for preventing the backing strip or plate from working endwise out of place. It can not move in the direction away from the handle, because the end-flange 11 prevents. To prevent movement in the direction toward the handle, I preferably cause the proximate ends of the strip or plate and handle to engage with each other, so that the handle holds the backing-strip or plate securely in place. In the present embodiment of the

invention, the backing-strip or plate is formed with a turned down and end-portion 4^a with which the proximate end of the handle engages for the purpose just stated. To release the backing-strip or plate the handle must first be unscrewed and removed.

To facilitate the cleansing of the bristles, longitudinal slots 13, 13, are made through the bristle-block, between the rows of bristle-holes, and corresponding slots 14, 14, are made through the backing-strip or plate, the said slots 14, 14, registering with the slots 13, 13.

Removal of the backing-strip or plate uncovers the back of the bristle-block and gives access thereto and to the under side of the backing strip. Thus the thorough and complete cleansing of the backing-strip or plate, back of the bristle-block, etc., may be effected. Any particles, etc., lodged about the securing wires or inner ends of the bristles may be dislodged. All portions of the brush may therefore be exposed and subjected to cleansing and sterilizing treatment.

The bristle-block, backing-strip or plate, and handle are made of non-absorbent material, and in usual practice are made of material which is not injured by being immersed in hot water to sterilize the brush. I prefer metal. The form of bristle-block herein shown can be produced very conveniently and inexpensively by the process of die-casting, the screw-threading of the projection 7 being performed by a subsequent operation.

When the bristles wear or deteriorate as a

result of use the brush-head may be replaced, if desired, by a new one, the same handle being retained in use.

What is claimed as the invention is:

1. The combination with a bristle-block having oppositely - located longitudinal grooves or ways with an entrance at one end of the latter, bristles secured in said bristle-block, the latter having openings there- 45 through for cleansing and ventilation, a backing-strip or plate insertible at said entrance and movable lengthwise in said grooves or ways and covering the back of the bristle-block, and a handle in screw- 50 threaded engagement with the said bristle-block and engaging with the backing-strip or plate at said entrance to hold the same from longitudinal movement, the removal of the said strip or plate uncovering the back 55 of the bristle-block and its openings.

2. In a brush, in combination, a bristle-block having bristles secured therein and also having openings therethrough for cleansing and ventilation, a removable cover 60 covering the back of the bristle-block, and the said openings, and means for detachably retaining the said cover in place, the removal of the cover uncovering the back of the bristle-block and its openings. 65

In testimony whereof I affix my signature in presence of two witnesses:

EDGAR G. HUBBEL, JR.

Witnesses:

CHAS. F. RANDALL,
EDITH A. WISEMAN.