

(No Model.)

F. M. OSBORN.
TOOTH BRUSH.

No. 457,007.

Patented Aug. 4, 1891.

Fig. 1

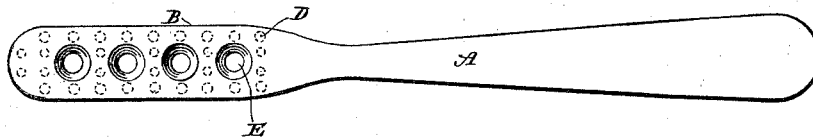
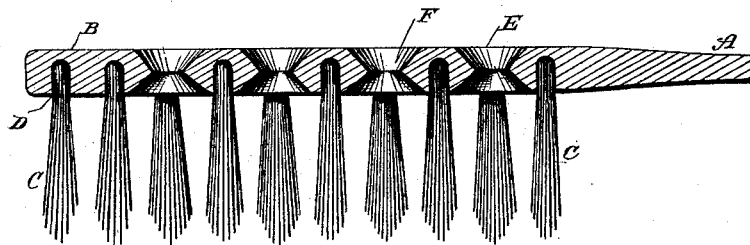


Fig. 2



Witnesses:
Raphael Netter
Ernest Hopkinson

Inventor
Francis M. Osborn
by Duncan Page
Attorneys.

UNITED STATES PATENT OFFICE.

FRANCIS M. OSBORN, OF PORT CHESTER, NEW YORK.

TOOTH-BRUSH.

SPECIFICATION forming part of Letters Patent No. 457,007, dated August 4, 1891.

Application filed November 22, 1890. Serial No. 372,321. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS M. OSBORN, of Port Chester, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Tooth-Brushes, of which the following is a description, reference being had to the accompanying drawings.

The present invention relates to the bristle-carrying backs of tooth-brushes, and has for its object to construct such backs so that the bristles can be readily cleaned and also be thoroughly ventilated and quickly dried.

The invention consists in a tooth-brush the back of which has interspersed among the bristles coned or beveled apertures.

In the drawings, Figure 1 is a plan view of the back of a brush embodying my improvement, the positions of the tufts of bristles being shown by broken circles. Fig. 2 is an enlarged central section of the bristle end of the brush, the section being taken irregularly through the line of perforations shown in Fig. 1 and through a line of bristle-tufts.

A indicates the handle of the brush, and B the back of the same.

C indicates the tufts of bristles, which are held in sockets D by wiring, or in any other suitable way.

Through the back of the brush are made the apertures or holes E, the form and arrangement of which are important—that is, these holes are located midway between the side and cross rows of bristle-tufts. The middle portion F of these apertures is of such size as will leave between such portions and the tuft-sockets the requisite amount of stock to form walls of suitable strength and thickness for such sockets. From this middle portion F of each aperture the surrounding wall is beveled off or coned to the bristle-tufts. Preferably the walls of the apertures where they open through the top of the brush are similar in form, though here the extent of the bevel is

not limited by the bristle-tufts. The particular function of these beveled openings, particularly on the under side of the back from which the bristles project, is to prevent the accumulation of dentifrice or other matter around the roots of the bristles and to permit the easy removal of whatever may even temporarily adhere to the bristles. This is essential to a clean and sweet brush, for such collections, if left around the bristles, soon sour or decompose and render the brush unpleasant to the taste. It is also essential to the quick drying, and therefore preservation, of the bristles.

Heretofore brushes have been provided with holes through their backs placed similarly to the apertures E, but such holes were cylindrical, and became, therefore, easily clogged. Furthermore, the walls necessary to be left between such holes and the bristle-sockets formed shoulders around each tuft, upon which, and around the tufts, collections of dentifrice or tooth-powder easily accrued. With the construction here shown, however, there is no surface between the tufts of bristles upon which collections can find lodgment. So, too, it is practically impossible for these beveled apertures to become clogged. The washing of the bristles is easily and thoroughly effected, and perfect ventilation and quick drying of the bristles after use are insured.

What is claimed as new is—

A tooth-brush formed with apertures through its bristle-carrying back, which apertures are interspersed among the bristle-tufts and have walls beveled or coned away to the tufts, whereby collections about the bristles are prevented and the bristles are readily cleaned and thoroughly ventilated.

FRANCIS M. OSBORN.

Witnesses:

ROBT. F. GAYLORD,
ERNEST HOPKINSON.