

(No Model.)

F. D. GOULD.  
TOOTH BRUSH.

No. 585,358.

Patented June 29, 1897.

Fig. 1.

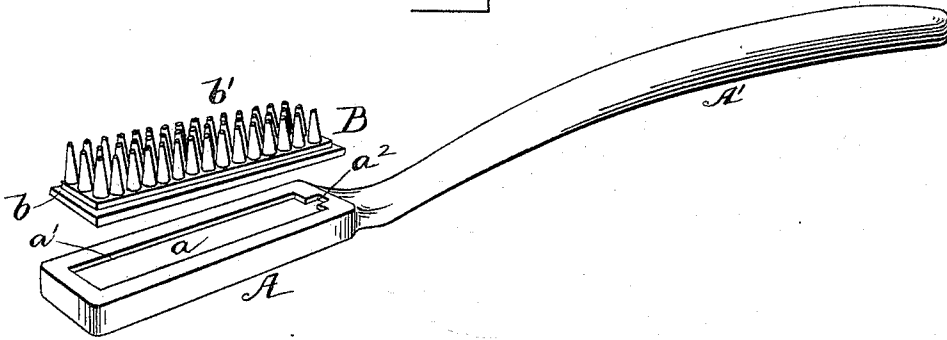


Fig. 2.

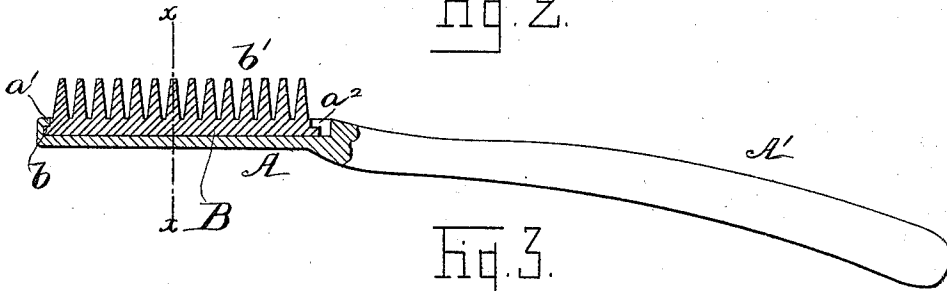


Fig. 3.

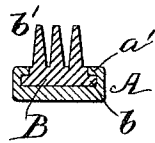
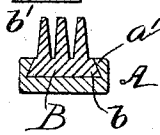


Fig. 4.



WITNESSES:

*O. C. King*  
*C. Sedgwick*

INVENTOR

*Frank D. Gould*

*Carroll Deemer*  
ATTORNEYS

# UNITED STATES PATENT OFFICE.

FRANK DOWNING GOULD, OF PORT RICHMOND, NEW YORK.

## TOOTH-BRUSH.

SPECIFICATION forming part of Letters Patent No. 585,358, dated June 29, 1897.

Application filed October 29, 1896. Serial No. 610,418. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK DOWNING GOULD, a citizen of the United States, and a resident of Port Richmond, county of Richmond, and State of New York, have invented certain new and useful Improvements in Tooth-Brushes, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to that class of tooth-brushes which are provided with a removable series of bristles or points; and it has for its object to provide a simple and improved brush of this character in which the series of bristles or points can be conveniently removed for purposes of substitution or cleansing, and which will furthermore possess advantages in point of inexpensiveness, durability, convenience, effectiveness, and general efficiency.

In the drawings, Figure 1 is a perspective view of a tooth-brush embodying my improvements, the series of bristles being shown separated from the body of the brush. Fig. 2 is a longitudinal sectional view showing the series of bristles in position. Fig. 3 is a transverse sectional view taken on the line  $x x$ , Fig. 2. Fig. 4 is a transverse sectional view illustrating a modification.

Referring to the drawings, A designates the body of my improved tooth-brush, from which projects the handle A'. The handle and body or back portion are preferably formed integral and of aluminium, but may be constructed in any suitable manner and of any adapted material.

In the face of the body A is formed a longitudinal recess  $a$ , adapted to receive and retain a corresponding detachable or removable mat carrying a series of bristles or projecting points.

The recess  $a$  is provided with an inwardly-projecting top flange  $a'$ , surrounding the mouth or opening of said recess, as shown, and the corresponding mat B is provided with a surrounding bottom flange  $b$ , which fits in the recess  $a$  under the projecting edge or flange  $a'$ .

The relative construction and arrangement of the mat B and recess  $a$  is preferably such that the former corresponds in shape to the latter and entirely fills said recess when the mat is in position.

The mat B is elastic or pliable, so that its bottom edge or flange  $b$  may be sprung into its seat under the projecting top edge or flange of the recess  $a$ . The mat carries a series of points or bristles  $b'$ , projecting from its face.

I prefer to form the detachable member B, with all its parts integral, of rubber or other elastic material; but, if desired, a series of separate bristles or projecting points may be connected with and carried by the bottom portion or mat.

At one end of the recess  $a$  its projecting top flange  $a'$  is notched or recessed, as at  $a^2$ , to provide for the insertion of the point of any suitable instrument under the elastic or pliable mat B, to spring the same from engagement with the recess when it is desired to disconnect or remove the member B from the body of the brush.

In Fig. 4 I have illustrated a modification in which the top projecting edge  $a'$  of the recess and the bottom projecting edge  $b$  of the member B are formed by correlative dovetail construction, this formation being under some circumstances more readily adapted for detachment of the member B from the recess.

It will be understood that in practice the pliable or elastic member B can be readily and conveniently sprung into position in the corresponding recess  $a$  in the body of the brush, and that the relative construction and arrangement of the retaining projecting edges or flanges will effect a secure connection of the parts during ordinary use. Whenever desired the member B may be quickly detached from the body of the brush by simply inserting the point of an instrument under the mat through the notch or recess  $a^2$ , when the member B may be readily sprung from its position in the recess.

My invention thus provides for the convenient substitution of that part of the brush which is subject to wear, so that the body and handle portion are capable of permanent use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

5 An improved tooth-brush, comprising the body or back provided with a recess having retaining beveled flanges therein and a notch in one of said flanges, in combination with a removable member carrying the series of projecting points or bristles and provided with  
10 projections adapted to engage the flanges of the recess, whereby said removable member

may be seated and retained in said recess and easily removed therefrom, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 23d day of October, 1896. 15

FRANK DOWNING GOULD.

Witnesses:

C. SEDGWICK,

O. C. WINGE.