M. E. GATES.

TOOTH BRUSH.

APPLICATION FILED APR. 8, 1913.

1,091,209. Patented Mar. 24, 1914.

Fig. 1.

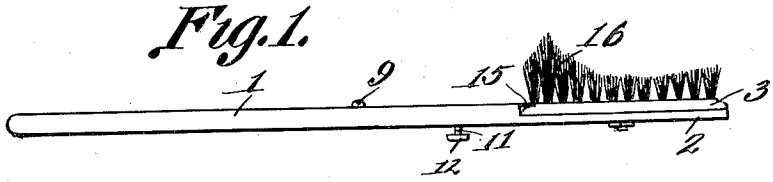


Fig. 2.

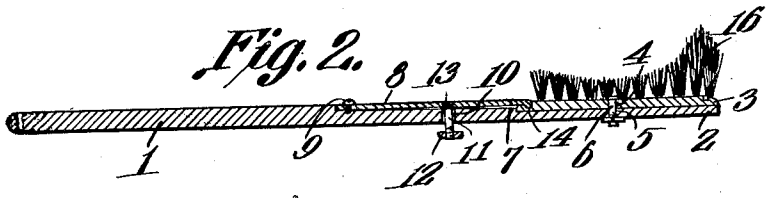


Fig. 3.

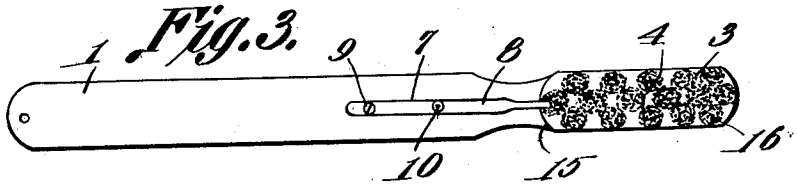


Fig. 4.

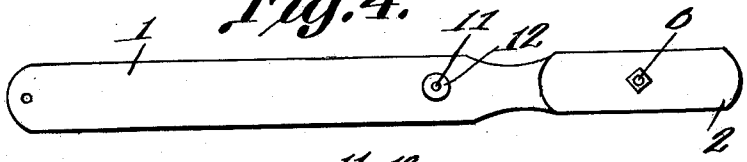
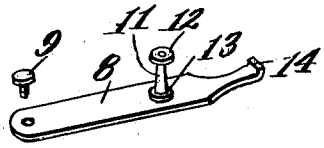


Fig. 5.



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UNITED STATES PATENT OFFICE.

MARSHALL EDISON GATES, OF HELENA, MONTANA.

TOOTH-BRUSH.

1,091,209. Specification of Letters Patent. Patented Mar. 24, 1914.

Application filed April 8, 1913. Serial No. 759,813.

To all whom it may concern:

Be it known that I, MARSHALL E. GATES, a citizen of the United States, residing at Helena, in the county of Lewis and Clark and State of Montana, have invented a new and useful Tooth-Brush, of which the following is a specification.

This invention relates to improvements in tooth brushes and more particularly to that class of tooth brushes in which the bristles at one end are elongated.

An object of the present invention is to provide a tooth brush with the bristle holder mounted to turn so that the elongated bristles may come at the front or rear portion of the bristle holder with respect to the tooth brush to thereby bring the bristles into a position to clean the outer surfaces of the teeth and to rotate the said bristle holder to bring the same into a position to more effectually clean the inner and chewing surfaces of the teeth.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the drawings accompanying this specification and forming a part thereof, the preferable form of my invention is illustrated, in which:—

Figure 1 is a side view in elevation of my improved tooth brush. Fig. 2 is a vertical longitudinal sectional view thereof. Fig. 3 is a bottom plan view of the brush. Fig. 4 is a top plan view. Fig. 5 is a detail view showing in perspective, the latch or fastening means for holding the bristle holder in one of its two positions.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 is a handle with the brush back 2 extending therefrom, the back and handle comprising what is termed the body portion of the tooth brush. The back 2 is relatively thinner than the handle 1 in order that the bristle holder 3 may lie flush with the inner or bottom surface of the handle.

The bristle holder 3 is of a length substantially equal to the back 2 and is provided with an aperture 4 extending centrally therethrough and the same is adapted to register with the opening 5 formed in the brush back. A pivot 6 extends through the alined openings of the back and bristle holder and pivotally engages the same so as to mount the said bristle holder in a rotatable or reversible manner. The pivot 6 is illustrated as being in the nature of a rivet but it will be readily apparent that the same may lie flush with the surfaces of the bristle holder and the back and may be secured thereto by any suitable means.

The bottom surface of the handle 1 is provided with a longitudinal groove 7 in which is positioned a latch member comprising a resilient strip 8 which is in the nature of a spring and is rigidly secured within the said groove by a set screw 9 or other equivalent means. An aperture 10 extends through the brush handle 1 and communicates with the groove 7 whereby a latch releasing member 11 extends through the said aperture 10 and engages the resilient spring 8. The releasing member 11 comprises a head 12 which extends above the top surface of the brush handle and formed integral with which is a shank 13, the latter extending downwardly through the aperture 10 and rigidly engaging the said spring 8 whereby the same may be depressed. The front end of the spring member 8 extends over what is termed the back of the brush and is provided with a downwardly extending hook 14, the same being adapted to engage suitable slots 15 formed at each end of the bristle holder.

As clearly illustrated in Figs. 1 and 2 of the drawings, the bristles secured to the bristle holder 3 are not of a uniform length but are considerably elongated at one end as at 16 to provide for a more effectual and efficient cleaning of the teeth. It has been found in practice however, that the elongated bristles as at 16 are, when positioned at the front end of the brush, not adapted to clean the outer surface of the teeth as there is not sufficient room for the bristles. However, the elongated bristles render the tooth brush much more effective in the cleaning of the inner and chewing surfaces of the teeth and in order to provide a tooth brush wherein the desirable properties of the elon-

gated bristles will be obtained and at the same time to do away with the disadvantages thereof, the reversible bristle holder such as I have described is provided whereby the said elongated portion of the bristles may be brought to the front portion of the brush or rotated to assume rearward position.

As illustrated in Fig. 1 of the drawings, the elongated portion of the bristles is positioned at the rear portion of the brush back and the tooth brush is then adapted to contact with the outer surfaces of the teeth and to effectually clean the same without hindrance from the elongated bristles 16. When it is desired to clean the inner and chewing surfaces of the teeth the latch releasing member 11 is pushed downward with the result that the bristle holder will be released and may then be rotated about the vertical axis defined by the pivot member 6, to thereby bring the elongated portions 16 of the bristles to the front of the brush.

From the foregoing it will be apparent that I have devised an improved form of tooth brush whereby the bristles which are of a varying length may be brought to either the front or rear portion of the brush and have accomplished the same in a simple and expeditious manner.

Having thus described the invention what I claim to be new and original with me is:—

A tooth brush comprising a handle, a brush back extending therefrom and relatively thinner than the same, a bristle holder rotatably secured to said brush back and lying flush with the brush handle, said bristle holder adapted to rotate about a central axis extending therethrough, said bristle holder provided with bristles extending therefrom, the tufts at one end being elongated, a latch secured to the under portion of said handle adapted to engage slots formed in the ends of said bristle holder to thereby hold said bristle holder in adjusted position, and an actuating knob extending through a suitable aperture formed in said handle, engaging said latch and adapted to force the same out of contact with said bristle holder slots.

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

MARSHALL EDISON GATES.

Witnesses:

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B. H. ELLIS.