

R. LUDINGTON.
TOOTH BRUSH.
APPLICATION FILED APR. 21, 1909.

949,587.

Patented Feb. 15, 1910.

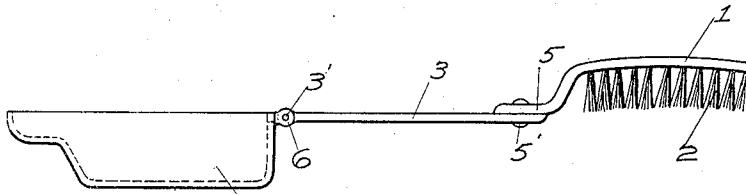


Fig. 1.



Fig. 7.

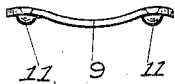


Fig. 8.

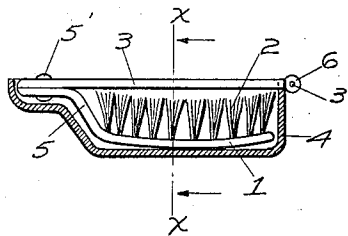


Fig. 2.

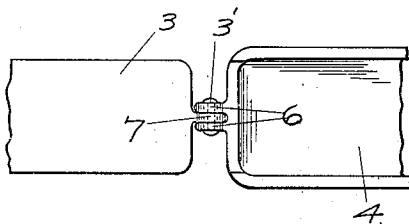


Fig. 4.

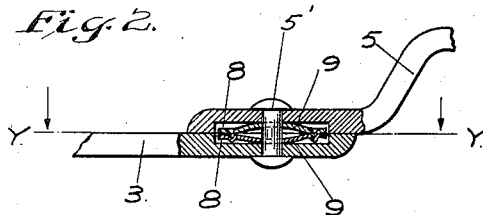


Fig. 5.

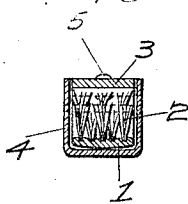


Fig. 3.

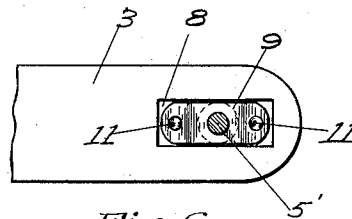


Fig. 6.

Witnesses:
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UNITED STATES PATENT OFFICE.

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TOOTH-BRUSH.

949,587.

Specification of Letters Patent.

Patented Feb. 15, 1910.

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To all whom it may concern:

Be it known that I, RAYMOND LUDINGTON, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Tooth-Brushes, of which the following is a specification.

My invention relates to tooth brushes and more specifically to that class thereof designed to be folded together, when not in use, so that the same may be readily carried in the pocket.

The object of my invention is to provide a tooth brush of the character mentioned, and in connection therewith a housing or casing therefor, said housing being adapted to entirely and completely incase the brush, when in folded position, so as to prevent contamination thereof while resting in the pocket or dampening of the latter because of moisture contained in the brush.

A further object of my invention is to provide a brush of such character which will be efficient, durable, and simple of construction, hence of low cost to manufacture.

Other objects will appear hereinafter.

With these objects in view my invention consists in a folding tooth brush and housing therefor characterized as above mentioned and in certain details of construction and arrangement of parts all as will be hereinafter fully described and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a side elevation of the preferred form of my brush showing the same in extended position, Fig. 2 illustrates the brush in folded position, the housing being shown in section, Fig. 3 is a transverse section taken on the line *x x* of Fig. 2, Fig. 4 is an enlarged detail top plan view illustrating the hinge connection between the tooth brush handle and the housing, Fig. 5 is an enlarged sectional detail illustrating the pivotal connection between the shank of the tooth brush back and the tooth brush handle, illustrating also the spring means employed therein for insuring a positive positioning of the handle with reference to the tooth brush back when said parts are in alinement with each other, Fig. 6 is a sec-

tional detail taken on the line *y y* of Fig. 5, and Figs. 7 and 8 are side elevations of the spring means embodied in the pivotal connection shown in Fig. 5.

Referring now to the drawings the tooth brush proper shown therein is comprised of the back 1, the bristles 2 secured in said back, and a handle 3 the forward end portion of which is pivotally secured by a pin 5' to the rearward end portion of the shank 5 of the back 1. Said shank is preferably so formed that the handle 3, when in folded position, will rest just beyond the outward extremities of the brush bristles 2, as clearly shown in Figs. 2 and 3, said handle being of such dimensions as to be adapted, when in such position to entirely cover or shield said bristle extremities. Hingedly connected to the rearward extremity of the handle 3 is the housing or casing 4, said connection between said parts being effected preferably by a pin 3' which extends through a pair of lugs 6 formed at the extremity of the member 4 and an interjacently lying lug 7 formed at and projecting from the rearward extremity of the handle 3. Said housing is of such form that, when the tooth brush is in folded position, the same is adapted to entirely incase said brush, the handle of said brush, when the latter is positioned in said housing, acting as a cover or closure for the latter.

In order to effect a rigid yielding retention of the brush shank and handle in alining position, I provide the contacting surfaces of said parts with centrally positioned longitudinally extending elongate slots or recesses 8 so arranged therein that, when said parts are positioned in alinement as stated, said slots will be in registering position with each other. Provided in said recesses are curved leaf springs 9 so arranged therein that the extremities of one thereof are adapted to forcibly engage the extremities of the other, when the brush shank and handle are in alinement with each other. The contacting end surfaces of one of said springs being provided with projections 10 and the contacting end surfaces of the other with depressions 11 adapted to snugly receive said projections, it is evident that when said projections are in engagement with said depressions, the brush shank and handle will be held in alinement with

each other against all force such as is ordinarily applied to the brush during the manipulation thereof.

While I have shown what I deem to be the preferable form of my invention, I do not wish to be limited thereto, as there might be many changes made in the details of construction and arrangement of parts without departing from the spirit of my invention comprehended within the scope of the appended claims. And although in my preferable form I wish to employ a housing for the brush, it is understood that I may, if desired, dispense therewith and employ the brush only.

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

1. In a device of the class described, the combination of a tooth brush, a handle pivoted to said brush, and a housing hingedly connected to said handle adapted to incase said brush and handle when the latter are in folded position, substantially as described.

2. In a device of the class described, the combination of a tooth brush, a curved shank rearwardly extending from the back of said brush, a handle in pivotal connection with said shank, and spring means interposed between the contacting surfaces of said shank and handle for yieldingly holding said brush and handle in operative posi-

tion relative to each other, said means comprising similar leaf springs provided in their contacting surfaces with co-acting projections and depressions adapted to interlock when said parts are arranged in operative position, substantially as described.

3. In a device of the class described, the combination of a tooth brush, a curved shank rearwardly extending from the back of said brush, a handle one end of which is in pivotal connection with said shank, and spring means interposed between the contacting surfaces of said shank and handle for yieldingly holding said brush and handle in alining position, said means comprising co-acting leaf springs seated in slots provided in said contacting surfaces, the contacting surfaces of said springs being provided with registering perforations and depressions adapted to interlock when said parts are arranged in operative position, and a housing hingedly connected to the opposite end of said handle adapted to incase said brush and handle when the latter are in folded position, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

RAYMOND LUDINGTON.

Witnesses:

JOSHUA R. H. POTTS,
JANET E. HOGAN.