

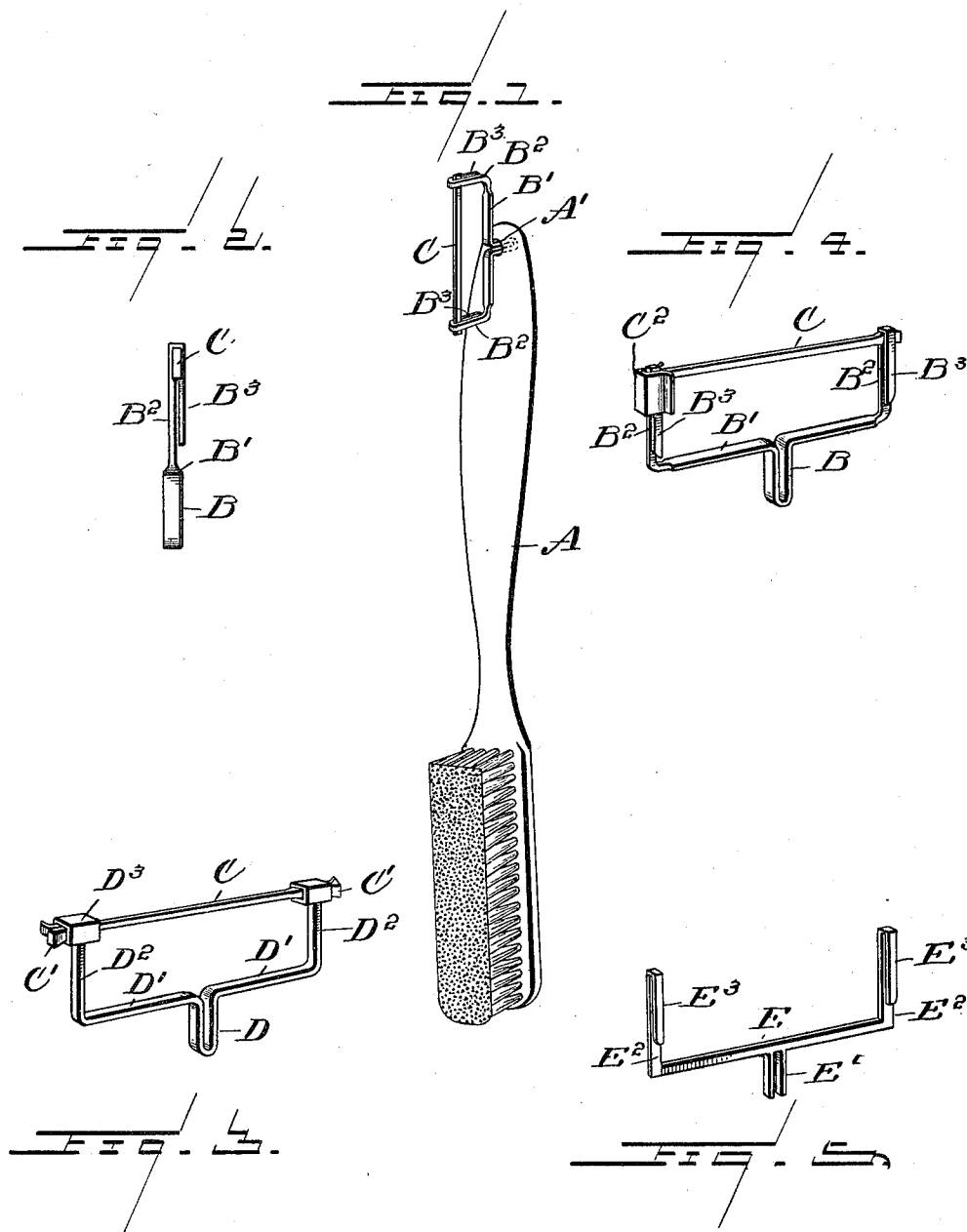
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J. E. STORMS, JR.
TOOTH CLEANING APPLIANCE.

APPLICATION FILED APR. 2, 1903.

NO MODEL.



WITNESSES

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UNITED STATES PATENT OFFICE.

JORDAN E. STORMS, JR., OF YONKERS, NEW YORK.

TOOTH-CLEANING APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 736,650, dated August 18, 1903.

Application filed April 2, 1903. Serial No. 150,837. (No model.)

To all whom it may concern:

Be it known that I, JORDAN E. STORMS, JR., a citizen of the United States, residing at Yonkers, in the county of Westchester, State of New York, have invented certain new and useful Improvements in Tooth-Cleaning Appliances, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a tooth-cleaning appliance, and particularly to a frame or holder for the cleaning material.

The invention has for an object to provide an improved construction of frame having a spring-shank to hold it in any of its adjusted positions relative to its handle and also spring-arms to retain the cleaning material under tension when in use.

A further object of the invention is to provide improved means for attaching and holding under tension a strip or band of rubber to be inserted between adjacent teeth for removing food or collected matter therefrom and preventing the decay and injury to the teeth resulting from the presence of such foreign matter.

Other and further objects of the invention will be hereinafter set forth, and the novel features thereof set forth by the appended claims.

In the drawings, Figure 1 is a perspective of the invention applied to a tooth-brush. Fig. 2 is an end view of the frame shown in Fig. 1. Fig. 3 is a perspective of a modified form of the invention. Fig. 4 is a similar view showing the application of a holding-clip, and Fig. 5 is a perspective of a modified form of frame adapted to be stamped from a single piece of material.

Like letters of reference refer to like parts in the several figures of the drawings.

The letter A designates a tooth-brush, the handle of which is provided with an aperture or recess A', adapted to receive the shank B of the frame of the appliance. This forms a convenient and desirable form of support for the invention, but other forms of handle may be used when found preferable. The frame is also preferably formed from a single piece of material bent at its center to form the spring-shank B. Extending at a right angle to this shank are horizontally-disposed base

portions B', having at their ends vertical arms B², while depending parallel to their arms are clamping-fingers B³, between which and the arms the cleaning material C is adapted to be held under tension. The frame is formed of elastic or spring material, so that it may be slightly compressed to place the cleaning material under tension and by its elasticity retain the strip or band under tension. This strip or band is preferably formed of rubber or similar elastic material, which I have discovered produces the most desirable cleaning function when reciprocated between the teeth. The fingers of the frame being also of spring material firmly hold the elastic material under tension to form a thin strip or band of a yielding nature, best adapted to contact with the side walls of the teeth and yet not liable to injure or cut the gums when brought into contact therewith.

In the modified form of the invention (shown in Fig. 3) the spring-shank D is provided with horizontal base portions D', extending laterally therefrom, which at their ends are provided with vertical arms D², having sleeves or boxes D³ at the free ends thereof. The cleaning material C is extended through these sleeves and secured therein by wedges C', thus retaining said material under any desired tension.

As shown in Fig. 4, a clip C² may be provided to embrace the arms B² and fingers B³ of the frame shown in Figs. 1 and 2 whenever it may be desired to exert greater tension upon these parts in holding the cleaning material C under tension.

In Fig. 5 a modified form is shown adapted to be stamped or cut from sheet material. In this form the base E is provided with parallel laterally-extending lugs E' to form a spring-shank, while each end of the base is formed with vertical arms E² and depending parallel spring-fingers E³, adapted to hold the cleaning material between the same and the arms.

In the operation of the invention the elastic strip or band is placed under tension in the frame and then inserted between the teeth, where it is reciprocated to remove all foreign substances which cannot be removed by the ordinary tooth-brush. The spring-shank upon the frame permits the latter to be

adjusted in the aperture of the handle at any desired angle to the handle found most convenient in reaching the teeth at each side of the mouth, while the elastic arms at the end
5 of the frame retain the cleaning material under tension.

It will be obvious that changes may be made in the details of construction and configuration without departing from the spirit of invention as defined by the appended claims.
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Having defined my invention and set forth its merits, what I claim, and desire to secure by Letters Patent, is—

1. In a tooth-cleaning appliance, a frame
15 comprising a base having a shank composed of parallel spring members extending at an angle therefrom, a handle having a recess adapted to receive said shank and adjustably hold said frame, holding-arms extending at
20 each end of said base in a direction opposite to the shank, and a cleaning-strip carried by said arms.

2. In a tooth-cleaning appliance, a frame having a shank depending at an angle from
25 the base thereof, holding-arms at opposite ends of said base, depending fingers extending downward parallel and adjacent to said arms to form clamps between the fingers and arms, and a cleaning-strip held at its opposite ends by said clamps.
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3. In a tooth-cleaning appliance, a frame comprising a base having parallel spring

members to form an elastic shank extending in one direction therefrom, holding-arms extending in the opposite direction from the shank at the ends of said base, a handle having a recess to receive said shank, a band of cleaning material extending between said arms, clamping-fingers carried by said arms parallel therewith and adjacent thereto, and a clip adapted to embrace one of said arms and fingers.
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4. In a tooth-cleaning appliance, a frame comprising a base having an elastic shank extending in one direction therefrom and arms extending in the opposite direction at the ends of said base, a handle having a recess adapted to receive said shank and adjustably hold said frame, and a band of elastic cleaning material extending between said arms.
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5. In a tooth-cleaning appliance, a frame having a base provided with a depending centrally-disposed spring-shank composed of parallel members, a spring-arm at each end of said base, a handle having a recess adapted to receive said shank and adjustably hold said frame, and a band of cleaning material extending between said arms.
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In testimony whereof I affix my signature in presence of two witnesses.

JORDAN E. STORMS, JR.

Witnesses:

JOHN C. FRANCIS,
FRED H. TUMBER.