

No. 677,851.

Patented July 9, 1901.

T. C. BOOTH.  
BRUSH FOR PASTE TUBES.

(Application filed Sept. 28, 1900.)

(No Model.)

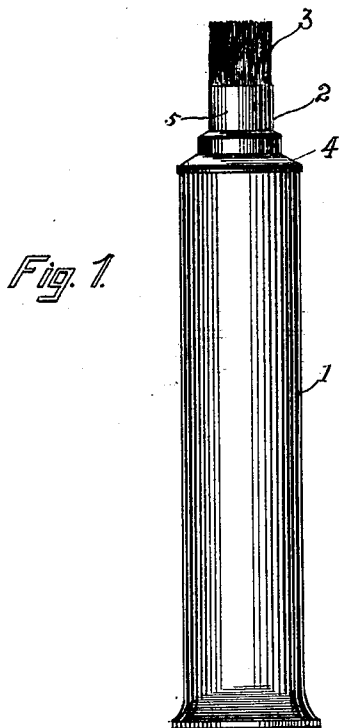


Fig. 1.

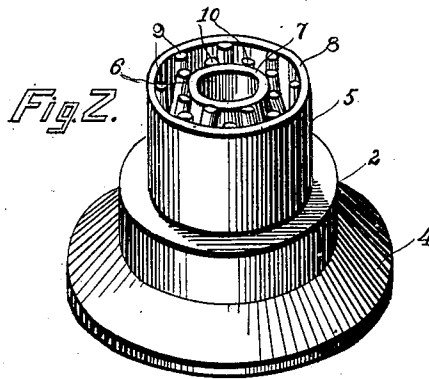


Fig. 2.

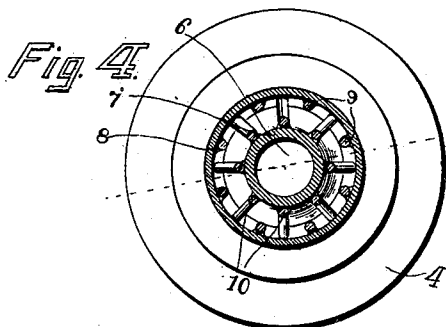


Fig. 4.

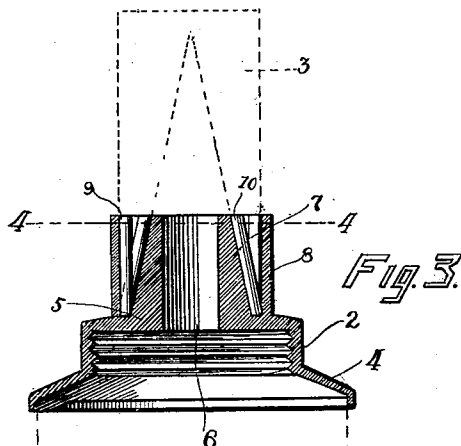


Fig. 3.

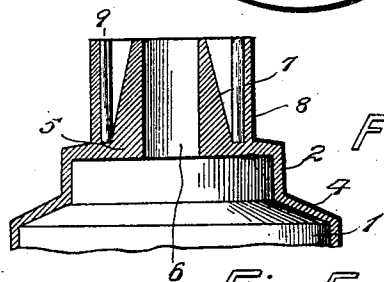


Fig. 5.

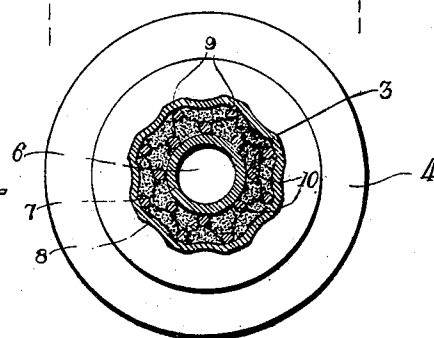


Fig. 6.

Witnesses  
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# UNITED STATES PATENT OFFICE.

THOMAS C. BOOTH, OF NEW BRUNSWICK, NEW JERSEY.

## BRUSH FOR PASTE-TUBES.

SPECIFICATION forming part of Letters Patent No. 677,851, dated July 9, 1901.

Application filed September 28, 1900. Serial No. 31,407. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS C. BOOTH, a citizen of the United States, residing at New Brunswick, in the county of Middlesex and State of New Jersey, have invented a new and useful Brush for Paste-Tubes, of which the following is a specification.

This invention relates to brushes, and has for its object to provide an improved brush for collapsible paste-tubes, and is particularly designed to improve the manner of securing the bristles to the discharge end of the tube, so that should some of the bristles become loose the remaining greater part thereof will remain intact and firmly connected to the tube.

With this object in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a side elevation of a collapsible paste-tube having the improved brush applied thereto. Fig. 2 is an enlarged detail perspective view of the cap with the brush or bristles removed. Fig. 3 is a central vertical sectional view thereof. Fig. 4 is a transverse sectional view taken on the line 4-4 of Fig. 3. Fig. 5 is a similar view with the bristles in place. Fig. 6 is a detail sectional view similar to Fig. 3, showing the improvements formed integrally with a tube and ribs upon one side only of the brush-receiving socket.

Corresponding parts are designated by like characters of reference in all of the figures of the drawings.

Referring to the drawings, 1 designates the body of an ordinary collapsible paste-tube having the usual removable cap 2, that carries the bristles 3 and forms the brush-head for the tube. The body of the cap is tubular in shape and is interiorly screw-threaded, so as to engage similar screw-threads on the mouth of the tube. At the lower edge of the cap there is an outwardly-directed and down-

wardly-inclined marginal flange 4 to snugly fit the upper end of the tube. The top of the cap is closed by means of a flat wall 5, having a central opening 6 for the escape of the paste within the collapsible tube, and from the walls of this opening there rises a tube or circular flange 7, the outer walls of which taper outwardly and form a substantially conical tube. Surrounding this conical tube and spaced a suitable distance therefrom is an inclosing tube or flange 8, which is of the same height as the inner tube and is capable of being crimped or pressed inwardly. Upon the inner side of the outer tube there is provided a plurality of regularly-spaced longitudinal ribs 9, which extend for the entire length of the tube, and similar ribs 10 are provided upon the exterior of the inner tube and arranged in the intervals between the ribs of the outer tube. The bristles of the brush are arranged in bunches or sections, as clearly indicated in Fig. 5 of the drawings, and placed in the compartments or pockets formed by two ribs upon one of the tubes and the adjacent intermediate rib upon the other tube, after which the outer tube is crimped or compressed, so as to tightly bind the bunches or sections of bristles between the walls of the concentric tubes and the ribs thereof. It will be understood that the outer tube is crimped longitudinally between the ribs thereof, as best shown in Fig. 5 of the drawings.

The purpose of having the outer sides of the inner tube converge outwardly is to permit of some of the bristles converging inwardly, so as to cover the central opening of the cap and prevent the paste from being discharged in a stream, and thereby insure the gathering of the paste by the brush.

By having the bristles arranged in bunches or sections and individually clamped between the respective ribs one section may become loose and removed from the cap without loosening the other bristles and without rendering the brush useless.

Although the invention has been shown in the drawings and also described as applied to a removable cap, it will of course be understood that the concentric tubes 7 and 8 may be formed directly upon the integral end of the tube, or, in other words, the end wall 5

may be the upper or discharge end of the tube. Also instead of having the ribs 9 and 10 upon opposite inner sides of the walls of the brush-receiving socket or recess formed by the concentric tubes either one of the walls may be provided with ribs, while the other wall is free from projections.

What is claimed is—

1. A collapsible tube, having a discharge-opening, outer and inner tubes surrounding the opening and forming a brush-socket, longitudinal ribs upon the inner wall of the socket and dividing the same into pockets, and bunches of bristles within the respective pockets, the outer tube being crimped longitudinally between the ribs and into the respective pockets, whereby the bunches of bristles are independently clamped to the tube.
2. A collapsible tube, having a discharge-opening, outer and inner concentric tubes surrounding the opening and forming a brush-socket, longitudinal ribs upon the inner side of the outer tube and dividing the socket into pockets, and bunches of bristles within the

respective pockets, the outer tube being crimped longitudinally between the ribs and into the respective pockets, whereby the bunches of bristles are independently clamped to the tube.

3. A collapsible tube, having a discharge-opening in one end thereof, a pair of inner and outer concentric tubes surrounding the opening and forming an annular brush-socket, longitudinal ribs upon the opposite inner sides of the socket and arranged in alternation and dividing the socket into a plurality of pockets, and bunches of bristles within the respective pockets, the outer tube being crimped longitudinally between the ribs thereof and into the respective pockets, whereby the bunches of bristles are independently clamped to the tube.

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

THOMAS C. BOOTH.

Witnesses:

GEO. S. SIZER,  
FREDERICK WEIGEL.