

Nov. 2, 1926.

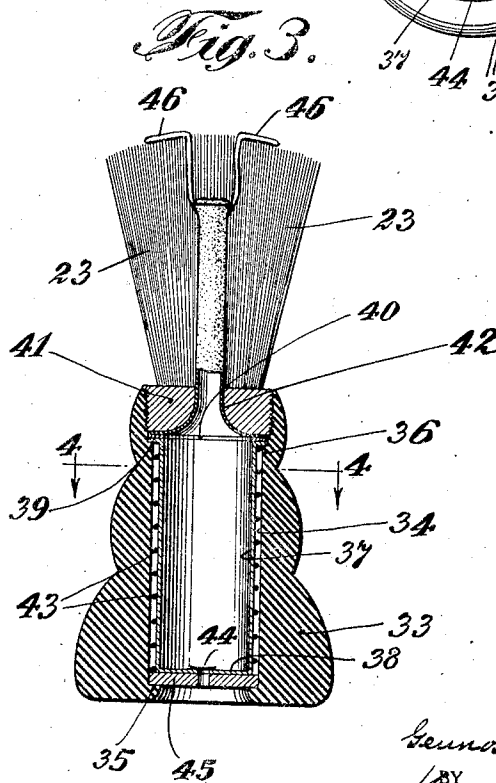
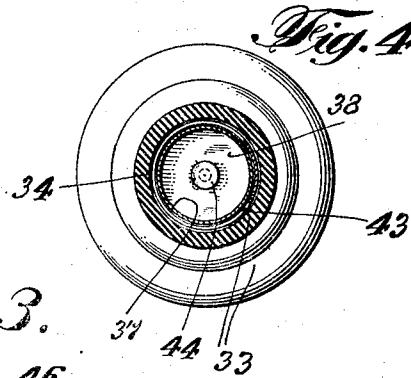
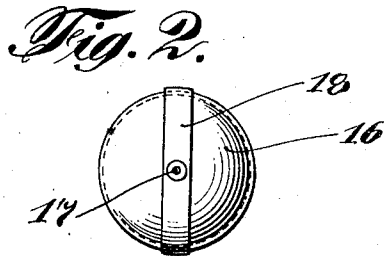
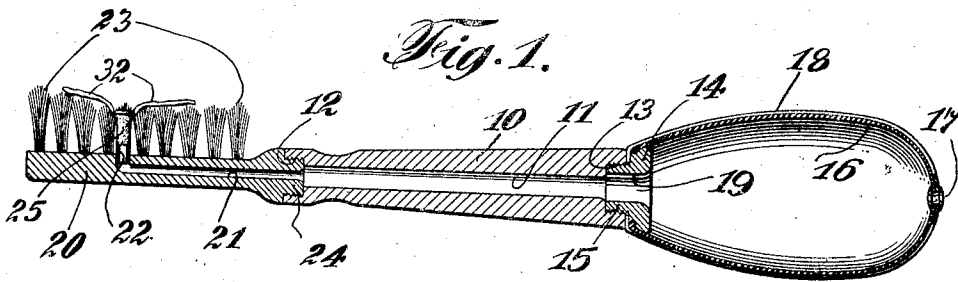
1,605,651

G. DOI

BRUSH

Filed Jan. 9, 1926

2 Sheets-Sheet 1



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Nov. 2, 1926.

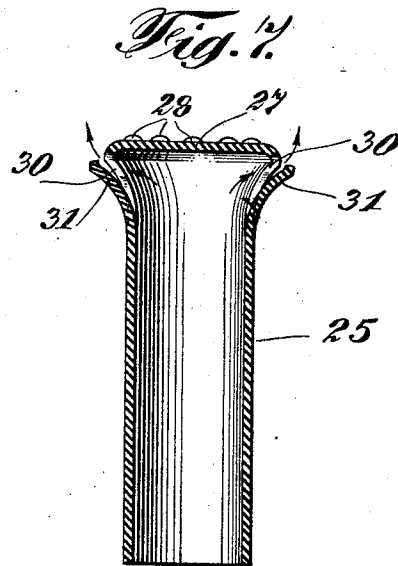
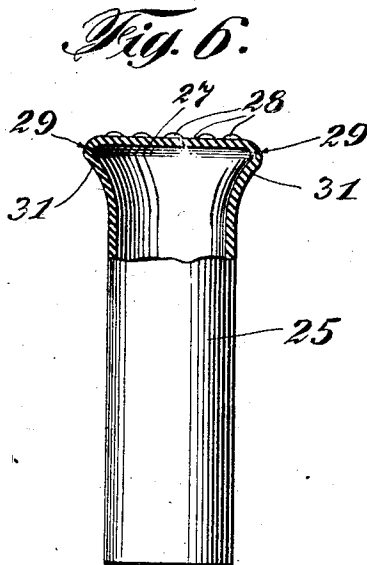
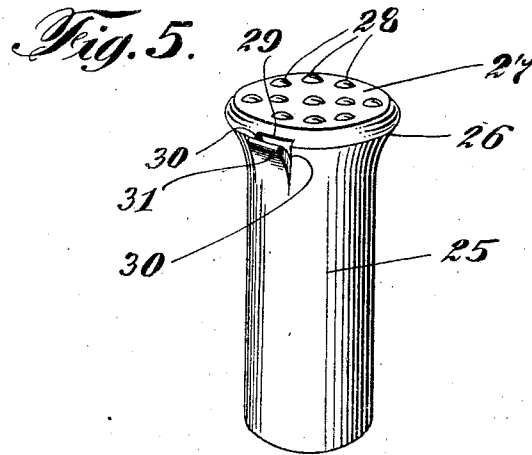
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G. DOI

BRUSH

Filed Jan. 9, 1926

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

GENNOSUKE DOI, OF NEW YORK, N. Y.

BRUSH.

Application filed January 9, 1926. Serial No. 80,176.

My invention relates to brushes and refers particularly to brushes having a massaging device incorporated within the bristles.

Among the objects of my invention, is a brush such as a tooth brush or shaving brush, within the bristles of which is positioned a distributing device closed at the top and having a downwardly directed conduit therein, the device thus acting as a distributor for a liquid or paste forced through the conduit, the exit conduit openings in the distributing device being so positioned and so constructed that a liquid or paste forced through the conduit will be ejected upwardly of the massaging device and upwardly between the upper portions of the brush bristles, the distributing device being of such a character as to present a massage surface capable of abutment upon the surface over which the brush is passed.

Another element, which may be incorporated therewith, is a compressible hollow member or receptacle, for the liquid or paste, connected by a conduit with the massaging device.

The advantages of such a distributing device with the brush bristles is evident when consideration is given to the results required in the brushing of teeth, or in the application of shaving soaps, whether in liquid or in paste form, for purposes of shaving.

These and other valuable features of the device of my invention will be evident upon a consideration of this specification and its accompanying drawings.

In the accompanying drawings illustrating modified forms of the device of my invention similar parts are designated by similar numerals.

Figure 1 is a vertical cross-section of one form of the device of my invention adapted to a tooth brush.

Figure 2 is an end view of Figure 1.

Figure 3 is a vertical cross-section of a modified form of the device of my invention adapted to a shaving brush.

Figure 4 is a cross-section through the line 4-4 of Figure 3.

Figure 5 is an enlarged perspective of one form of my distributing elements with the liquid exit in open position.

Figure 6 is a side view, partly in section of Figure 5 with the liquid exit in closed position.

Figure 7 is a vertical cross-section of the

device of Figure 5 with the liquid exit in open position.

The particular form of the device of my invention shown in Figures 1, 2, 5, 6 and 7 comprises a handle 10 having a longitudinal opening 11, one end of the handle 10 having the threaded recess 12 and the other end having the threaded recess 13.

A rubber bulb holder 14 has a reduced extended threaded portion 15, threaded with the recess 13. A rubber bulb 16 has a check valve 17. A metal protective band 18 passes around the bulb 16 and is maintained in position between the handle 10 and the bulb holder 14 and the valve 17 acts also as a rivet for connecting the bulb 16 to the band 18. The bulb 16 may be glued, or fastened to the holder 18, or it may be maintained in position by abutment contact with the lower end of the band 18 and the holder 14. The holder has a longitudinal opening 19 in alignment with the longitudinal opening 11.

The brush element comprises the bristle holder 20, having the longitudinal opening 21 which is turned upwardly at 22. The bristle holder 20 carries a plurality of bristles 23, 23 and its end has a threaded reduced extended portion 24 meshing with the threaded recess 12 of the handle 10.

Fastened to the outwardly extended portion 22 of the bristle holder opening and extending outwardly in the plurality of bristles is a distributor 25, shown particularly in Figures 5, 6 and 7.

This distributor comprises a hollow tube 25, which is flared at its upper extremity 26 and carries a cover, or top, 27, having a plurality of projections 28, 28.

At opposite sides of the upper portion of this rubber distributor, the rubber is cut horizontally 29, and then downwardly at each extremity of the horizontal cut 30, 30 producing a closure lip 31, which in its normal position is closed as shown in Figure 6, but which is capable of opening, as shown in Figures 5 and 7, by means of internal pressure. The position and formation of the lips 31, 31 are such, that a material forced upwardly through the cylindrical portion 25 will pass outwardly in an upward direction through the openings covered normally by the lips 31, 31.

The operation of the device is as follows:—

A dentifrice solution, or paste, 32 is intro-

duced into the bulb 16, the compression of which forces the solution through the conduits 19, 11 and 21, then upwardly into the massaging distributor 25, the force causing the lip valves 31, 31 to open, the solution being thus forced in an angular outward direction between and upon the adjacent bristles 23, 23. The movement of the bristles over the teeth will compress the bristles allowing the upper face of the massaging distributor to pass in abutting movement over the teeth, the dentifrice being forced outwardly between and upon the bristles and upon the teeth.

The shaving brush device shown in Figures 3 and 4 has the same mushroom shaped distributor as described above, the accompanying elements of the device being constructed for the specific purpose of a shaving brush.

The handle 33 has a central opening 34, and carries the internally directed shoulder 35 and the outwardly directed shoulder 36. Within the opening 34 is a flexible rubber bag 37 closed at the bottom 38 and open at the top, the upper lip 39 of the bag 37 being turned outwardly and abutting upon the shoulder 36. A metal washer 40 rests upon the bag lip 39. A threaded bristle holder 41 is threaded within the handle 33 and by inward pressure maintains the bag lips in position. The bristle holder, or base, 41 has an opening, or conduit, within which the tubular member 42 is placed and maintained in position by the inward pressure of the holder 41, and the distributor is integral with, or attached to the top thereof.

A spiral spring 43 retains the bag 37 in normal extended position. The bag 37 has a check valve 44 and a vertically movable plate 45 rests upon the shoulder 35.

The operation of the device is as follows:—

Shaving liquid, or cream, 46 is introduced into the bag 37 and by upward pressure upon the plate 45, the shaving material is forced outwardly similarly to the dentifrice described before, and during the application to the face, the distributor has a massaging effect upon the face and beard, thus facilitating the shaving operation.

It will thus be seen that the distributor of my device rubs or massages the surface over which the brush passes, the treating liquid being introduced to the surface through the medium of the brush bristles.

By "massaging distributor" I mean a device, closed at the top and with side openings through which a liquid may be forced outwardly in an upward direction toward the top of the device and externally thereof, the device being sufficiently rigid to allow it to perform a rubbing or massaging effect.

I do not limit myself to the particular size, shape, number, material or arrangement of parts as shown and described, as these are given simply as a means for clearly explaining my device.

What I claim is:—

In a brush, in combination, a base; a plurality of bristles carried by the base; a hollow distributor having a closed top positioned within the bristles, a plurality of check valves upon the side of the distributor capable of upwardly directing a paste forced outwardly therethrough, and means for forcing a paste through the valves.

Signed at New York city in the county of New York and State of New York this 31st day of December, 1925.

GENNOSUKE DOI,