Feb. 27, 1962 T. RALLIS ET AL 3,022,789

INJECTOR TYPE TOOTHBRUSH FOR RECEIVING TOOTHPASTE FROM AEROSOL BOMB

Filed March 11, 1959

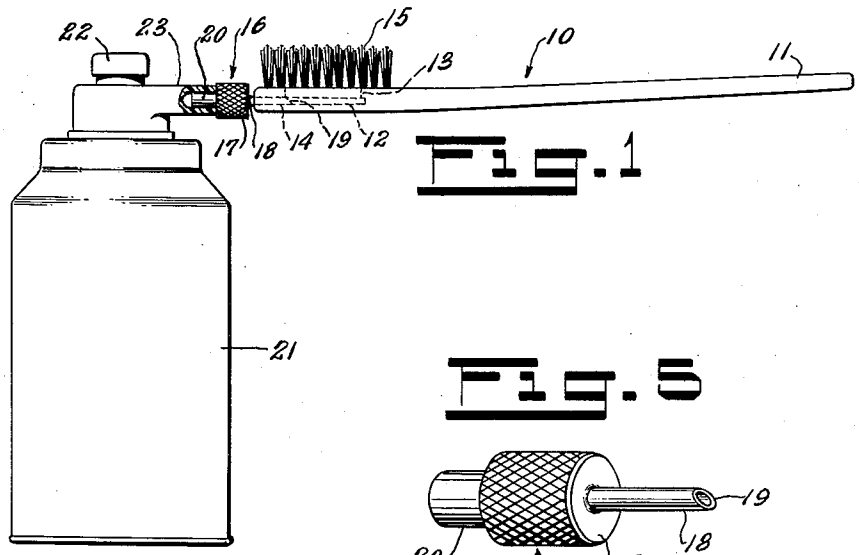


Fig. 1

Fig. 5

Fig. 2

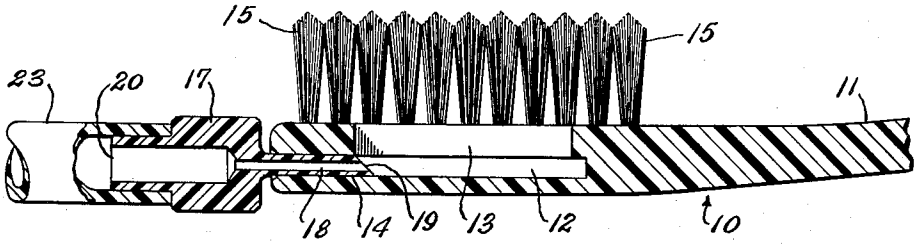


Fig. 4

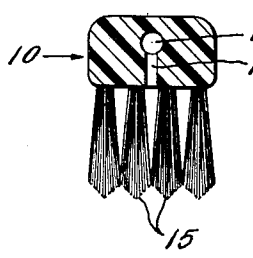
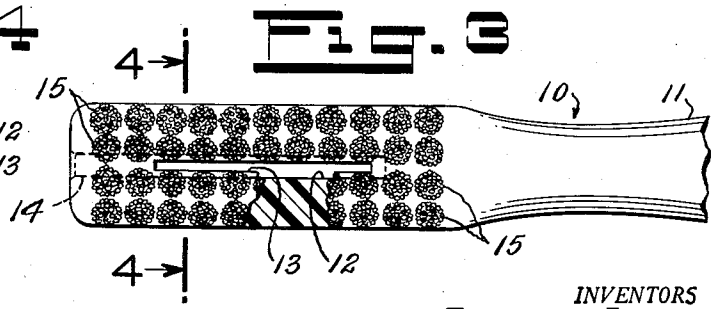


Fig. 3



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INJECTOR TYPE TOOTHBRUSH FOR RECEIVING TOOTHPASTE FROM AEROSOL BOMB

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1 Claim. (Cl. 132—34)

This invention relates to toothbrushes, and more particularly to a hollow toothbrush having a chamber in its forward end for receiving toothpaste from a detachable injector connected to an aerosol bomb.

One object of the present invention is to provide a hollow toothbrush of the above nature in which toothpaste received in the chamber will be forced out through a slot into the tuft of bristles.

A further object of the invention is to provide a device of the above nature which will be simple in construction, inexpensive to manufacture, easy to manipulate, compact, ornamental in appearance, and very efficient and durable in use.

With these and other objects in view, there has been illustrated on the accompanying drawing, one form in which the invention may conveniently be embodied in practice.

In the drawings,

FIG. 1 represents a side view, on a reduced scale and partly in section of the hollow toothbrush, the detachable injector, and the aerosol bomb as it appears during use.

FIG. 2 is an enlarged side view, partly in section, of the nozzle of the aerosol bomb, the injector, and the bristle end of the hollow toothbrush.

FIG. 3 is a top plan view of the forward end of the toothbrush showing the slot which opens into the bristle section thereof.

FIG. 4 is a cross-sectional view of the same, taken along the line 4—4 of FIG. 3.

FIG. 5 is a perspective view of the detachable injector, shown separately.

Referring now to the drawings, in which like reference numerals denote corresponding parts throughout the several views, the numeral 10 indicates a toothbrush of standard form, having an elongated handle 11 and a tuft of bristles 15 at the forward end thereof.

The toothbrush is provided at its forward end with a hollow chamber 12 having a slot 13 in one side thereof to permit the toothpaste to flow into the middle of the tuft of bristles 15.

The forward end of the toothbrush 10 is also provided with a cylindrical end opening 14 for receiving toothpaste from a detachable injector 16, having a central enlarged knurled handle 17 and provided at its rear end with a hollow needle 18, having a pointed beveled tip 19.

The injector 16 is also provided with a hollow reduced front end 20 which is larger in diameter than the needle 18 and is adapted to fit within the discharge nozzle 23 of an aerosol bomb 21. The bomb is provided at its top with a depressible button 22 for causing the toothpaste to be dispensed under gas pressure from the bomb 21, whenever desired.

Operation

In operation, when it is desired to dispense the toothpaste from the aerosol bomb 21 into the tuft of bristles 15 of the toothbrush 10, it will merely be necessary to insert the reduced forward end 20 of the injector 16 within the nozzle 23 of the bomb 21, and the hollow rear needle 18 into the round opening 14 of the forward end of the toothbrush.

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When the top button 22 of the bomb 21 is depressed, toothpaste will be forced by gas pressure from said bomb through the nozzle 23 into the injector 16 and caused to flow through the needle 18 into the chamber 12 of the hollow toothbrush. It then passes through the open slot 12 into the middle of the tuft of bristles 15.

One advantage of the present invention is that the toothpaste may be injected into the bristles of the toothbrush very expeditiously without the trouble of unscrewing a cap from a toothpaste tube. It will be understood that instead of the pressured aerosol bomb 21, a collapsible bottle or other toothpaste containers may be substituted therefor.

While there has been disclosed in this specification one form in which the invention may be embodied, it is to be understood that this form is shown for the purpose of illustration only, and that the invention is not limited to the specific disclosure, but may be modified and embodied in various other equivalent forms without departing from its spirit.

In short, the invention includes all the modifications and embodiments coming within the scope of the following claim.

Having thus fully described the invention, what is claimed as new and for which it is desired to secure Letters Patent is:

In a device of the class described, the combination comprising a toothbrush having an elongated handle provided with a plurality of tufts of bristles at one end thereof, and also provided with a chamber near the end of said handle having a side opening leading into said tufts of bristles, said handle also having a small cylindrical aperture in its end leading into said chamber, an injector having a small hollow tube provided with a sharp beveled end shaped to tightly fit within said aperture and serving to scrape out said aperture and a portion of said chamber each time it is inserted therein, said tube being adapted to be held in said aperture by friction, said injector having an enlarged central knurled manipulating section and also provided with a tubular section extending in the opposite direction from said tube for insertion into the nozzle of an aerosol bomb containing fluent tooth cleaning material or the like, whereby after scraping said cylindrical aperture, said fluent material may be forced from said bomb through said injector, said aperture, and said chamber, into said tufts of bristles, said injector being detachable from said toothbrush and from said bomb.

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