

[54] **COSMETIC BRUSH DEVICE**

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[51] Int. Cl..... **A46b 9/10**

[58] Field of Search **15/184, 185, 169, 168; 401/82, 273**

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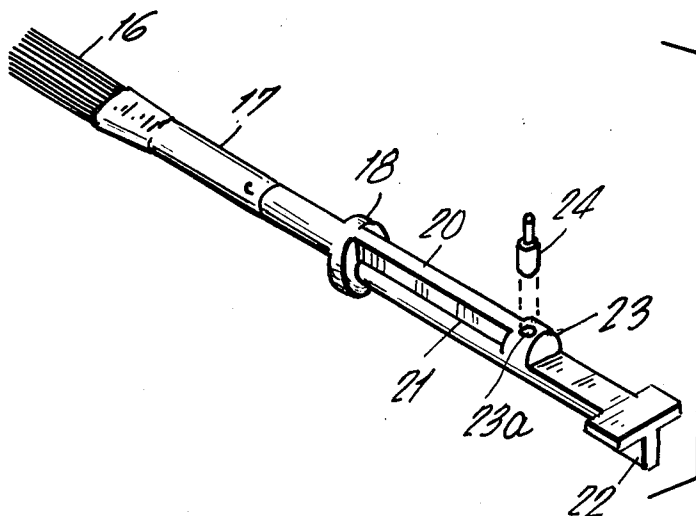
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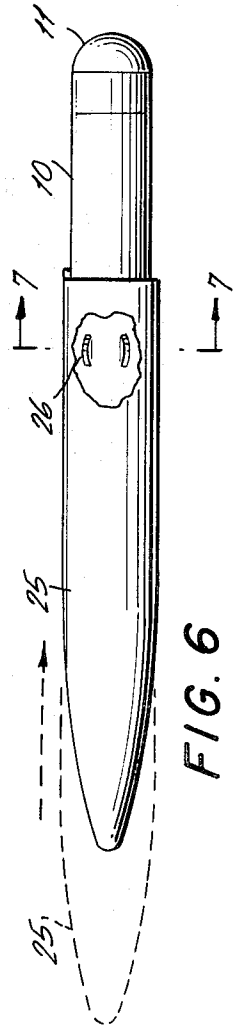
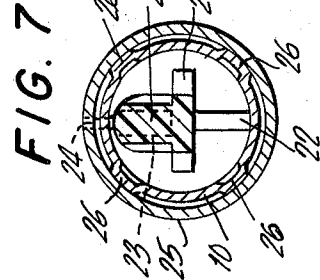
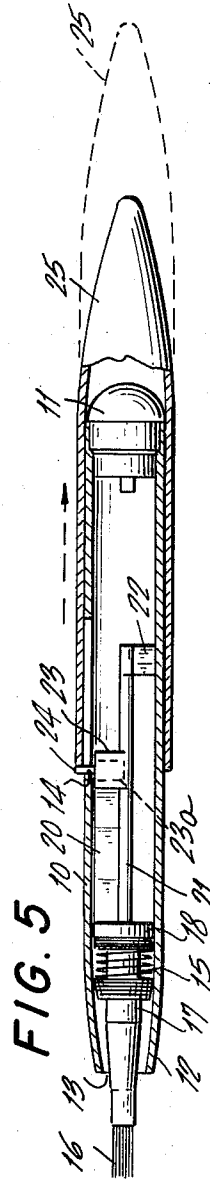
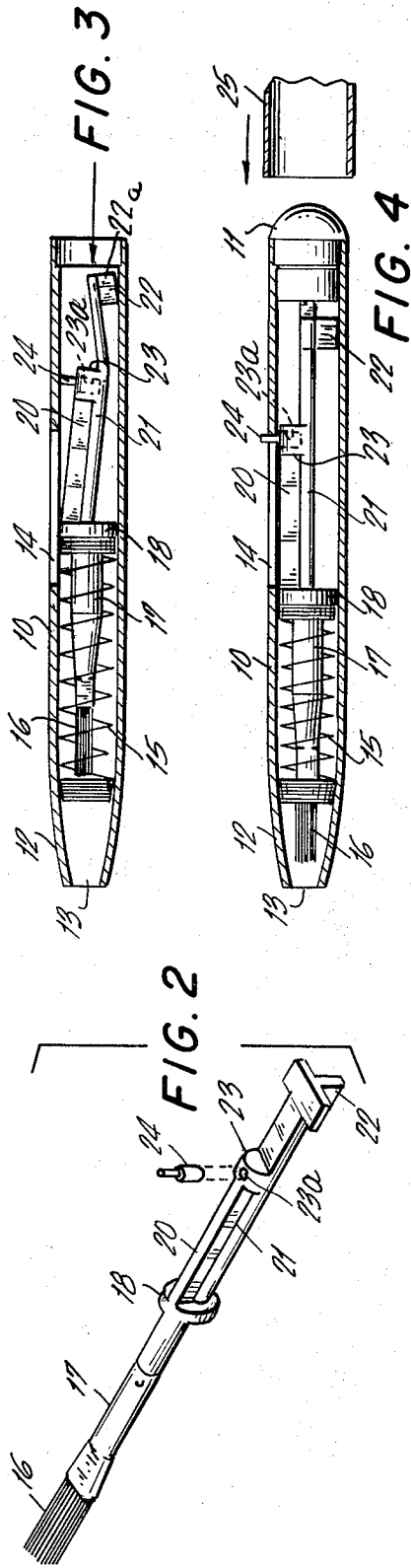
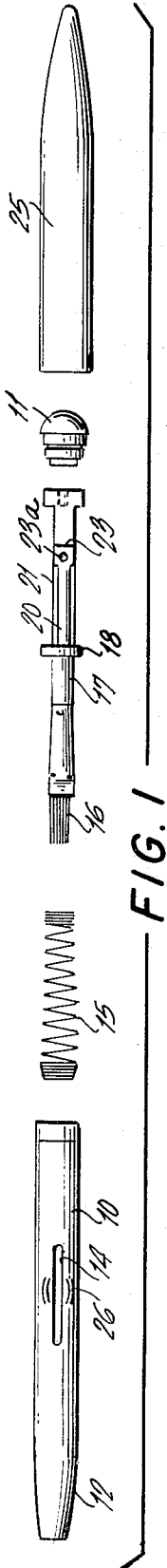
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[57] **ABSTRACT**

A brush holder for the application of cosmetics in which the brush is carried upon a one piece stem in a hollow cylindrical housing and is urged to a retracted position by a helical spring. A resilient leaf forms part of the stem and aids in the assembly and operation of the device. A cap fits over the brush end of the housing when not in use. The brush is made available for use by removing the cap and slipping it over the other end of the housing. When the cap is pushed into place, its leading edge engages a small metal projection carried by the stem and extending through the housing. The cap thus pushes the brush into the desired position for use.

2 Claims, 7 Drawing Figures





COSMETIC BRUSH DEVICE

BACKGROUND OF THE INVENTION

This patent application relates to an improvement over the cosmetic device shown and described in U.S. Pat. No. 3,268,939, issued Aug. 30, 1966.

This invention relates to cosmic devices in general and more particularly to brush applicators such as eyebrow brushes and lipstick brushes.

Many prior art brushes for cosmetic applicators have been supplied without adequate protection against the wet brush. Other arrangements have included a brush secured to each supply container, sometimes fastened to a cork or screw closure cap. The present invention provides a convenient brush holder with cap which can be put into operation in a very short time, used, and then put away in a pocket or handbag without fear of wetting or soiling adjoining articles.

A feature of the invention is the positive positioning of a cosmetics brush during and after using.

Another feature is the ease with which the brush device can be assembled.

Another feature of the invention is the automatic positioning of the brush when first put into use.

SUMMARY

The invention includes a cosmetic brush applicator comprising a hollow cylindrical housing open at one end and having a diminishing tapering portion at the other end terminating in a small opening. A longitudinal slot is cut in the housing at its central portion to receive a pin to limit the motion of the brush. An elongated stem is positioned within the housing supporting a brush at one end. The other end of the stem is in the form of a T-shaped cross-sectional portion for aligning the stem within the housing. An upstanding pin is secured to the stem and projects outwardly through the slot in the housing for limiting the travel of the stem. The pin is engaged by the edge of the cap when the cap is used as a closure means, or when the cap is secured to the housing at the end opposite the brush.

Additional details of the invention will be disclosed in the following description, taken in connection with the accompanying drawings.

BRIEF DESCRIPTION OF THE FIGURES

FIG. 1 shows all the parts of the cosmetic applicator in exploded form.

FIG. 2 is a perspective view of the brush stem showing the location of the pin.

FIG. 3 is a partial cross sectional view of the device when it is being assembled.

FIG. 4 is a cross sectional view similar to FIG. 3 in the assembled condition.

FIG. 5 is a cross sectional view similar to FIG. 4 but showing the cap pushing the pin to advance the brush into operating position.

FIG. 6 is a side view of the device after the cap has been placed on the brush end of the housing and pushed so as to retract the brush.

FIG. 7 is a cross sectional view of the device shown in FIG. 6 and is taken along line 7-7 of that figure.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the figures, the cosmetic applicator device includes a hollow metal housing 10 open at one

end to receive a plug 11. The plug 11 acts as a closure means. The other end of housing 10 is formed with a diminishing tapered section 12 and a small opening 13 to receive a brush 16. The median portion of housing 10 is formed with a longitudinal slot 14. A helical spring 15 is carried within the housing adjacent the tapered section 12 for aiding in retracting the brush and its stem.

The brush 16 is secured in the end of a stem 17. The brush 16 may be used to apply any suitable cosmetic such as mascara, lip rouge, eye shadow, etc. The stem 17 is formed with a boss 18 which is close-fitting within the inside surface of the housing. Boss 18 supports one end of spring 15, the other end of the spring 15 being wedged against the inside tapered surface of section 12.

The portion of the stem 17 opposite the brush is in the form of longitudinally disposed integral flat webs 20, 21, and 22, best shown in FIG. 2. Webs 20, 21 are disposed normal to each other with web 20 terminating in a short block 23, inwardly spaced from the outer end 22a of web 22. The webs 20, 22 bear against the inside surface of the housing 10 and extend diametrically thereof. A small bore 23a is formed in the block 23 for holding a pin 24. The pin 24 which may be of any rigid material, projects through slot 14 in the housing 11 after assembly. The remainder of the web 21 forms a resilient flat spring-like member, having a short depending web 22, at the end thereof, as best shown in FIGS. 2 and 7.

A cap 25, closed at one end, is received upon the housing 10. The cap 25 forms a closure means when the device is not in use. The cap 25 is also used to urge the brush 16 through the opening 13 when it is desired to apply cosmetics with the brush.

When the cosmetic brush device is first assembled, the helical spring 15 is dropped into the larger of the open ends of the housing 10. The brush and stem assembly 16, 17 is then inserted into the housing after placing the pin 24 into its bore 23. During the first part of the assembly operation, the flat web portion 21 of the stem 17 must be bent in the manner shown in FIG. 3, in order to slip webs 20, 22 into the housing. Stem 17 is preferably made of a semi-rigid plastic, such as polypropylene, nylon, or polyvinyl chloride, so that this part of the assembly lends itself to automated production. When the end of pin 24 reaches slot 14, the pin is urged through the slot by the resilient stem, whereupon the stem straightens out to its original shape. The plug 11 is next pushed into place, and the device is assembled as shown FIG. 4. The cap 25 may now be added and the assembly is complete.

When it is desired to use the brush, the cap 25 is removed from the housing end 12 and slipped over the plugged end. As the cap 25 is pushed into place, its leading edge engages the portion of pin 24 above the outer surface of housing 10 and, when pushed farther, the entire stem 20, 17 and 18 is axially moved, against the resilient action of spring 15, so that the brush 15 emerges through opening 13. When the cap is firmly seated, the device is ready for use.

After use, the cap 25 is removed from the plugged end of the device releasing spring 15, which returns the brush 15 and stem 17 to their normal positions. Cap 25 is again placed over the conical portion of the housing and the device can be stored, ready for another operation.

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To prevent the edge of the cap 25 from damaging the pin 24 as the device is used repeatedly, a metal pin may be inserted in the bore 23a rather than a pin made of softer material.

In order to produce a resilient fit, the casing 10 may be formed with a plurality of outwardly extending bulges 26 (see FIGS. 1, 6 and 7).

Having thus fully described the invention, what is claimed as new and desired to be secured by Letters Patent of the United States is:

1. A cosmetic brush applicator comprising: a cylindrical housing having a first opening at one end and having a diminished portion at the other end terminating in a second smaller opening; said housing formed with a longitudinal slot in its wall; an elongated stem within said casing supporting a brush at one end and terminating in a flexible T-shaped cross sectional por-

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tion at the other end formed by a depending tab normal to said flexible T-shaped portion for aligning the stem within the housing; a pin secured to the elongated stem adjacent the flexible portion of said stem and projecting outwardly through the slot in the housing for limiting the travel of the stem and brush; and a hollow cap slidably received upon the housing for engaging the pin to extend the brush through the second opening.

2. An applicator according to claim 1 in which the portion of the stem opposite the brush is formed of a first elongated web, a shorter second elongated web normal thereto extending outwardly thereof and a third short web extending outwardly of said first web on the side opposite the second web, said second and third webs bearing against the inside surface of the housing.

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