# United States Patent [19]

**Spatz**

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[54] **COSMETIC APPLICATOR**


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[73] Assignee: **Spatz Corporation,** Venice, Calif.



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[52] **U.S. Cl.** ..... **132/88.7;** 132/85

[51] **Int. Cl.** ..... **A45d 40/26**

[58] **Field of Search** ..... 132/85, 79, 75, 73, 88.7, 132/88.5



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[57] **ABSTRACT**

Applicators for coloring eyelashes, in which an applicator member, wand or dipper is disposed in a container for a cosmetic, such as mascara, and is pulled outwardly through an elastomer wiper in the container when it is to be used, the wiper removing excess mascara from the applicator member. The inner portion of the applicator member comprises longitudinally spaced tines, with the wiper contacting the entire perimeter or periphery of the applicator member, including its tine portion, to remove substantially all excess mascara from the perimeter of the applicator member, including the entire perimeter of its tines, as the member is pulled from the container. Mascara remains in the spaces between the tines only for application to the eyelashes. The tine portion is generally elliptical or oval in shape, effecting deformation of the wiper when the tine portion is moved therethrough with the deformed or stretched wiper remaining in contact with the entire convex surface of the generally elliptical tine portion.


**14 Claims, 6 Drawing Figures**

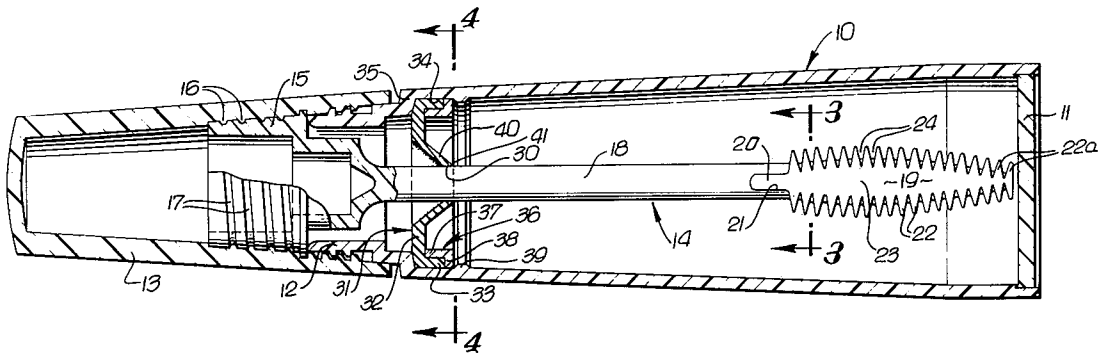


FIG. 2.

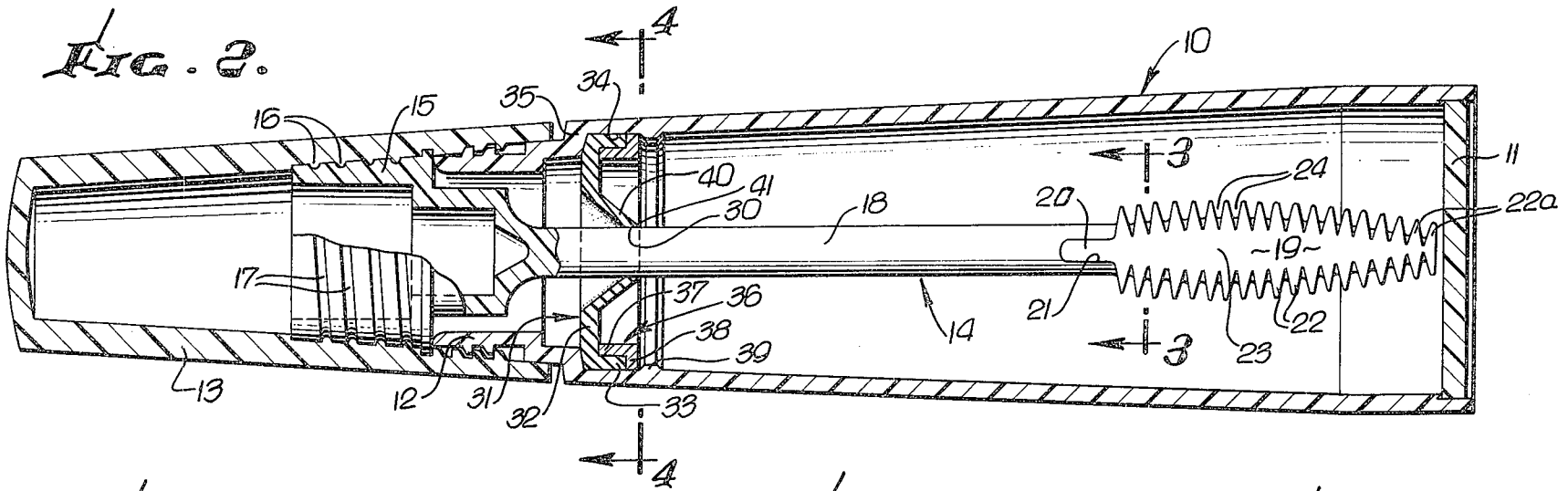



FIG. 1.

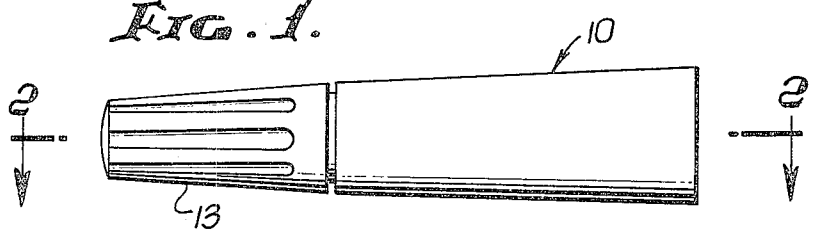



FIG. 3.

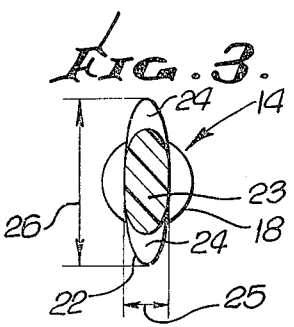



FIG. 4.

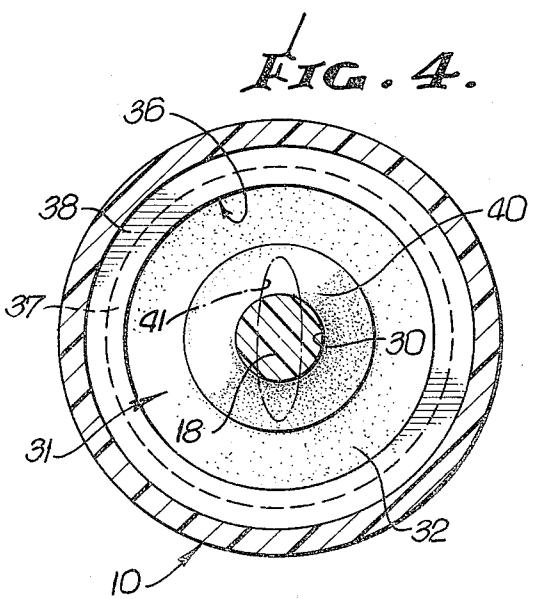



FIG. 5.

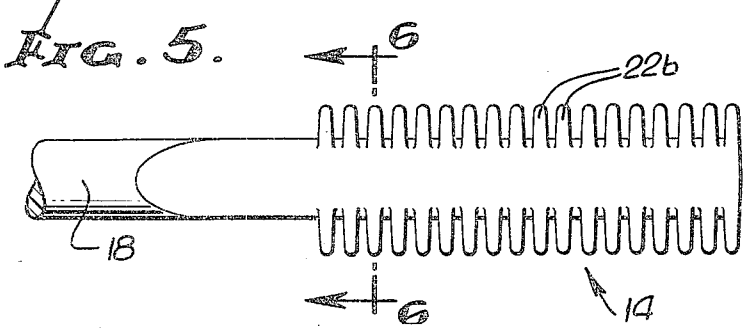
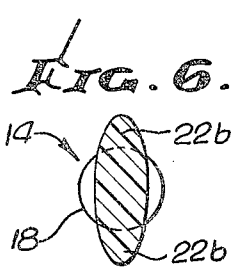



FIG. 6.



# COSMETIC APPLICATOR

The present invention relates to cosmetic applicators, and more particularly to applicators for applying coloring or other material to eyelashes.

Mascara applicators have included a threaded rod, helical brush, or small comb as applicator members, the applicator members normally being disposed in a cosmetic or mascara mass within a container. Pulling the member from the container forces it through an elastic wiper to remove excess cosmetic, some cosmetic still remaining between the threads, brush hairs, or comb teeth for application to the eyelashes. With the comb type of applicator member, its pulling through a rather small opening in the wiper greatly enlarges such opening at the peaks or crests of the comb teeth. However, the stretched or deformed wiper leaves straight sides of the comb relatively unwiped, resulting in the applicator member attaining a rather messy state. In addition, the comb teeth are very deep, containing too much cosmetic.

In accordance with the present invention, a tine applicator member is provided in which the entire surface of its periphery is wiped clean as a result of its being pulled through an elastic wiper during withdrawal from the mascara or cosmetic container. The tine portion of the applicator member is of oval or generally elliptical cross-section, being convex around its entire perimeter, so that the wiper remains in wiping engagement with the full perimeter of the tine portion during movement of the applicator member through the wiper, insuring removal of all excess cosmetic from the tine portion, with the cosmetic remaining between the teeth or tines only for application to the eyelashes.

More specifically, the applicator member comprises a generally cylindrical rod portion and a tine portion of oval cross-section, the minor axis of the tine portion being smaller than the diameter of the rod portion, and its major axis much larger. As a result, the pulling of the applicator member through the wiper opening, which is less in diameter than the diameter of the rod portion, insures the cleaning of the rod portion, the wiper stretching or enlarging considerably along the major axis of the tine portion and contracting along its minor axis, remaining in full engagement with the entire convex surface of the tine portion, to insure full removal of cosmetic from the convex surface.

This invention possesses many other advantages, and has other purposes which may be made more clearly apparent from a consideration of several forms in which it may be embodied. Such forms are shown in the drawings accompanying and forming part of the present specification. These forms will now be described in detail for the purpose of illustrating the general principles of the invention; but it is to be understood that such detailed description is not to be taken in a limiting sense.

Referring to the drawings:

FIG. 1 is a side elevational view of an applicator embodying the invention;

FIG. 2 is an enlarged longitudinal section through the applicator, parts being shown in elevation;

FIG. 3 is an enlarged cross-section taken along the line 3—3 on FIG. 2;

FIG. 4 is an enlarged cross-section taken along the line 4—4 on FIG. 2;



FIG. 5 is a side elevation of the inner portion of a modified form of applicator member; and

FIG. 6 is a cross-section taken along the line 6—6 on FIG. 5.

As specifically illustrated in the drawings, a cosmetic applicator is provided, particularly designed for use in applying coloring material to eyelashes. The applicator includes a container **10** of suitable shape, having a rear end wall **11** welded or cemented to the adjacent portion of the container. If desired, the container and its end wall could be made integral with one another. The forward portion of the container has an externally threaded neck **12** on which a companion internally threaded cap **13** can be disposed for opening and closing the container. Secured to the cap is a wand or dipper **14** adapted to be disposed within the container and having a forward head **15** suitably secured to the cap, as by means of circumferential ribs **16** in the cap received within companion circumferential grooves **17** in the head. The wand or dipper includes a forward cylindrical rod portion **18** extending from the head **15** into the container, and a rearward cosmetic applicator or tine portion **19** secured to the rod portion, as by press-fitting a stud **20** of the tine portion within a companion socket **21** in the rod portion. If desired, the forward and rearward portions **18, 19** could be made integral with one another.

As disclosed in the drawings, the tines or teeth **22** extend transversely of the axis of the wand or dipper in opposite directions from the central body **23** of the tine portion, being longitudinally spaced from one another to provide spaces **24** into which the cosmetic or mascara can enter. The tine portion (which includes the tines **22** and body **23**) is of generally oval or elliptical cross-section, being convex around its entire periphery, as shown most clearly in FIG. **3.** The minor axis **25** of the tine portion is smaller than the diameter of the elliptical rod portion **18,** while its major axis **26** is much larger, projecting radially in opposite directions radially beyond the periphery of the cylindrical rod portion. It is further to be noted that the tine portion tapers toward its end, so that the tines **22***a* at such end portion are smaller in transverse dimension, to facilitate application of mascara to the eyelashes located at the outer canthus at each side of the eye.

The applicator member **14** is movable through a circular opening **30** in an elastic wiper **31** secured within the forward portion of the container. This elastic or elastomer wiper may be made of synthetic rubber (such as Buna-N rubber of 70 Shore hardness), including a base portion **32** terminating in a skirt **33,** the base portion and skirt being located within a circumferential recess **34** within the container with the base portion abutting a transverse shoulder **35** in the container. A generally L-shaped retainer ring **36** has a skirt **37** located within the wiper skirt **33** and an outwardly directed flange **38** disposed across the end of the skirt **33** and retained in place by an internal circumferential rib **39** of the container.

The inner portion **40** of the wiper is frusto-conical, tapering in a rearward direction toward the container axis. The unrestrained diameter of its opening **30** is smaller than the diameter of the cylindrical rod portion **18.** The inner portion **40** terminates in a wiper lip **41** adapted to engage the cylindrical rod portion **18** and also the full periphery or perimeter of the tine portion **19.**

As illustrated in the drawings, the cap **13** has been threaded onto the neck **12** of the container, with the wand or dipper **14** disposed within a cosmetic mass in the container, and with the circumferential wiper lip **41** in wiping engagement with the periphery of the rod portion **18.** When the applicator member is to be used for coloring or otherwise coating the eyelashes, the cap **13** is unthreaded from the container and pulled in an outward direction, the cylindrical rod portion **18** sliding through the wiper opening **30,** followed by the tine portion **19,** which also slides through the wiper opening, to completely remove the applicator member **14** from the container **10.** During such outward movement, the wiper **31** removes the excess cosmetic from the cylindrical rod portion **18.** When the oval or elliptical tine portion **19** moves through the opening **30,** it stretches the wiper considerably in the direction of the major axis **26** of the tines **22,** the wiper contracting in the direction of the minor axis **25** of the tines, the wiper lip **41** remaining in full wiping engagement with the entire periphery or perimeter of the tines as the tine portion is moved through the wiper. As a result, the deformed wiper lip (see broken line in FIG. **4**), which has conformed to the shape of the oval or elliptical periphery of the tine portion, wipes the entire periphery or perimeter of the tine portion **19,** the wiper and its lip automatically conforming to the progressively smaller tine portion **22***a* present in the direction of its end.

The applicator member **14,** after having been removed from the container, will have the cosmetic material in the spaces **24** between the tines **22** only, and not on the perimeter of the tine portion, whereupon the cosmetic material can be applied to the eyelashes in a known manner, the smaller eyelashes at the canthus of the eye being readily colored without danger of contacting the eyelid or the eye itself.

Following use of the applicator member, its wand or dipper portion **14** is reinserted through the wiper **31** and to the position illustrated in the drawings, the cap **13** being rethreaded on the threaded neck **12** of the container.

As disclosed in FIG. **5,** in lieu of the tine portion of the applicator member being tapered, as illustrated in FIG. **2,** the tines **22***b* can all be of uniform transverse dimension. Regardless of the tapering or non-tapering configuration of the tine portion **19,** the latter is non-circular, but convex, around the entire periphery of the tines **22** and body **23,** and at each and all of its cross-section, to insure effective wiping action around its entire periphery at each and all of its cross-sections.

It is, accordingly, apparent that a cosmetic applicator has been provided for coating eyelashes in which the cosmetic material, which ordinarily has cream or gelatinous characteristics, will fill the spaces **24** between the tines **22** and which will also coat the cylindrical rod portion **18** and the periphery of the tine portion **19** as well. However, upon removal of the wand or dipper **14** from the container **10,** the wiper **31** will remove the cosmetic from the entire periphery or perimeter of the cylindrical rod portion **18** and also from the entire convex or oval periphery of the tine portion **19,** leaving the cosmetic remaining in the spaces **24** between the tines **22** only for application to the eyelashes, the remainder of the applicator member being in an effectively wiped state. Although oppositely directed tines are illustrated in the drawings, such tines may, if desired, be disposed on one side only of the applicator member. However, the tine portion of such member is still non-circular, but convex, around its entire periphery and each and all of its cross-sections, to insure the full wiping action by the wiper on its entire periphery.

If desired, the tines **22** at one side of the dipper **14** can be spaced from one another a different distance than the tines at the opposite dipper side.

I claim:

**1.** A cosmetic applicator: comprising a container for cosmetic material; an elastic deformable wiper having an opening; an applicator member movable through said opening into and from said container, said member including an inner portion adapted to be coated by the cosmetic material and having longitudinally spaced tines, said inner portion and its tines being of oval shape in cross-section and convex around their entire perimeter, whereby said wiper engages and wipes the entire perimeter of said inner portion and its tines as said inner portion is moved longitudinally through said wiper opening.

**2.** A cosmetic applicator as defined in claim **1**; said opening being generally circular, the major axis of said oval shaped inner portion being substantially greater than the diameter of said opening.

**3.** A cosmetic applicator as defined in claim **1**; said opening being generally circular, the major axis of said oval shaped inner portion being substantially greater than the diameter of said opening, the minor axis of said oval shaped inner portion being smaller than the diameter of said opening.

**4.** A cosmetic applicator as defined in claim **1**; said member including an outer rod portion from which said inner portion extends, said rod portion being movable through said wiper opening to be wiped around its entire periphery by said wiper.

**5.** A cosmetic applicator as defined in claim **1**; said member including an outer rod portion from which said inner portion extends, said rod portion being movable through said wiper opening to be wiped around its entire periphery by said wiper, said opening being generally circular in shape and smaller in diameter than the diameter of said outer rod portion.

**6.** A cosmetic applicator as defined in claim **1**; said member including an outer rod portion from which said inner portion extends, said rod portion being movable through said wiper opening to be wiped around its entire periphery by said wiper, said opening being generally circular in shape and smaller in diameter than the diameter of said outer rod portion, the major axis of said oval shaped inner portion being substantially greater than the diameter of said outer rod portion.

**7.** A cosmetic applicator as defined in claim **1**; said member including an outer rod portion from which said inner portion extends, said rod portion being movable through said wiper opening to be wiped around its entire periphery by said wiper, said opening being generally circular in shape and smaller in diameter than the diameter of said outer rod portion, the major axis of said oval shaped inner portion being substantially greater than the diameter of said outer rod portion, the minor axis of said oval shaped inner portion being smaller than the diameter of said outer rod portion.

**8.** A cosmetic applicator as defined in claim **1**; said oval shape in cross-section of said inner portion extending throughout substantially the entire length of said inner portion.

9. A cosmetic applicator as defined in claim 1; said longitudinally spaced tines extending in opposite directions transversely of said inner portion.

10. A cosmetic applicator as defined in claim 1; said longitudinally spaced tines extending in opposite directions transversely of said inner portion; said opening being generally circular, the major axis of said oval shaped inner portion being substantially greater than the diameter of said opening, the minor axis of said oval shaped inner portion being smaller than the diameter of said opening.

11. A cosmetic applicator as defined in claim 1; said longitudinally spaced tines extending in opposite directions transversely of said inner portion; said member including an outer rod portion from which said inner portion extends movable through said wiper opening to be wiped around its entire perimeter by said wiper.

12. A cosmetic applicator as defined in claim 1; said longitudinally spaced tines extending in opposite directions transversely of said inner portion; said member including an outer rod portion from which said inner portion extends movable through said wiper opening to be wiped around its entire perimeter by said wiper, said opening being generally circular in shape and smaller in diameter than the diameter of said outer rod portion.

13. A cosmetic applicator as defined in claim 1; said longitudinally spaced tines extending in opposite directions transversely of said inner portion; said member including an outer rod portion from which said inner portion extends movable through said wiper opening to be wiped around its entire perimeter by said wiper, said opening being generally circular in shape and smaller in diameter than the diameter of said outer rod portion, the major axis of said oval shaped inner portion being substantially greater than the diameter of said outer rod portion, the minor axis of said oval shaped inner portion being smaller than the diameter of said outer rod portion.

14. A cosmetic applicator as defined in claim 1; said longitudinally spaced tines extending in opposite directions transversely of said inner portion; said member including an outer rod portion from which said inner portion extends movable through said wiper opening to be wiped around its entire perimeter by said wiper, said opening being generally circular in shape and smaller in diameter than the diameter of said outer rod portion, the major axis of said oval shaped inner portion being substantially greater than the diameter of said outer rod portion, the minor axis of said oval shaped inner portion being smaller than the diameter of said outer rod portion; said oval shape in cross-section of said inner portion extending throughout substantially the entire length of said inner portion.

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