Aug. 17, 1965 R. SEBASTIAN 3,200,823

SHAPING DEVICE FOR ARTIFICIAL EYELASHES

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FIG. 1.

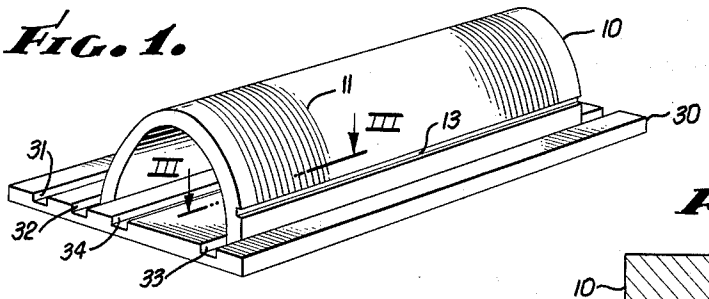

FIG. 3.

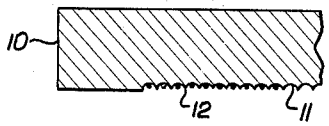

FIG. 2.

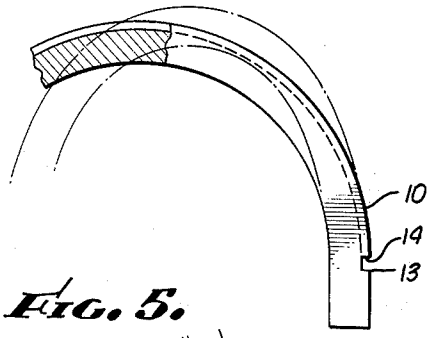

FIG. 4.

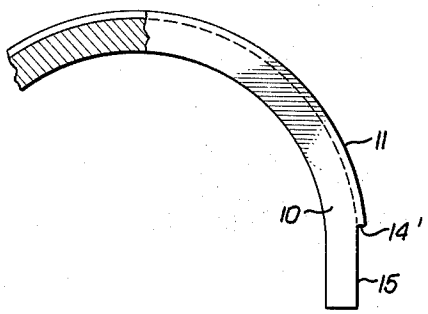

FIG. 5.

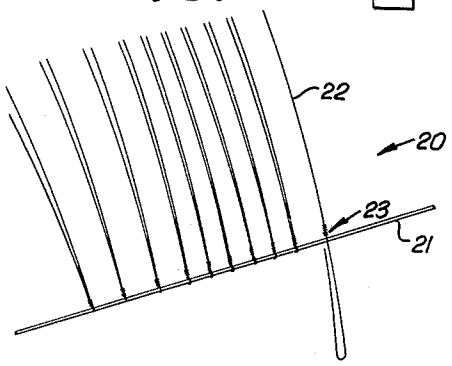

FIG. 6.

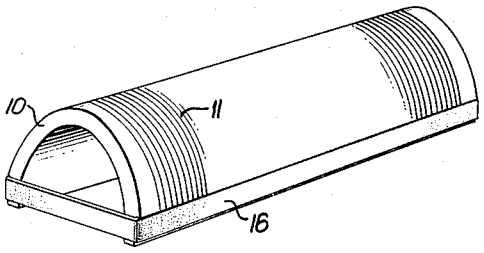

FIG. 7.

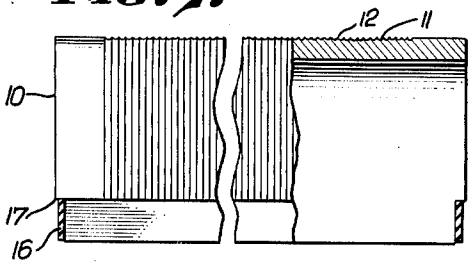

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FIG. 8.

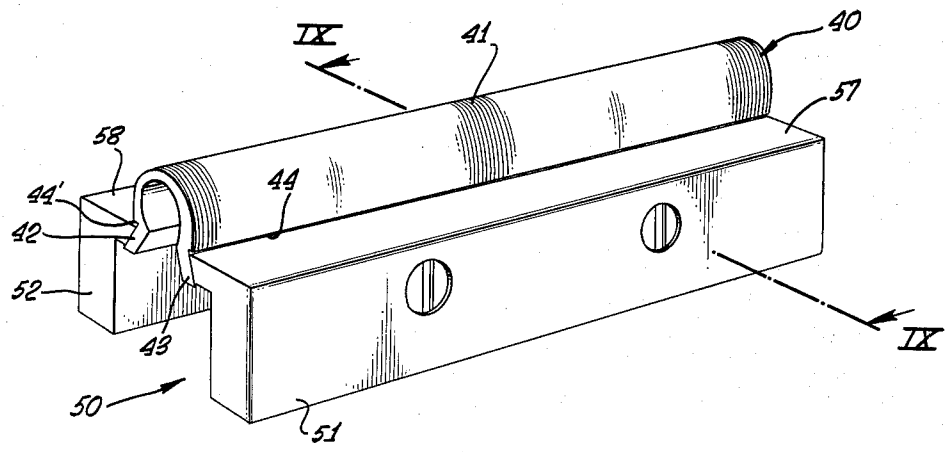


FIG. 9.

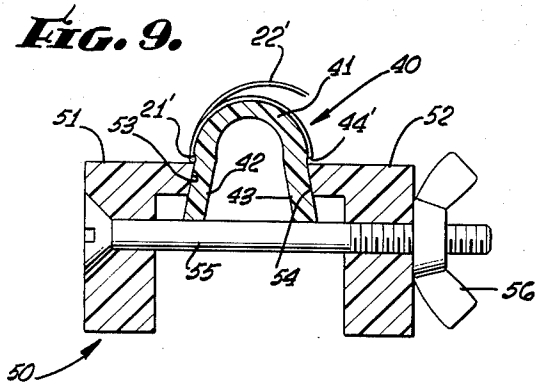


FIG. 10.

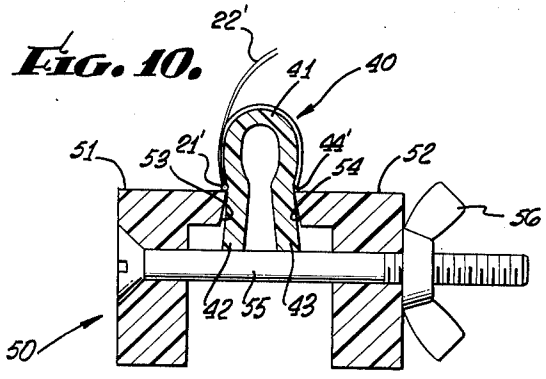
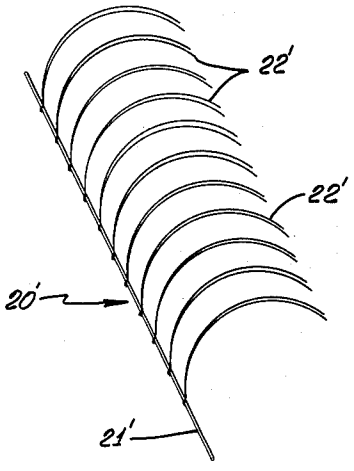


FIG. 11.



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3,200,823

SHAPING DEVICE FOR ARTIFICIAL EYELASHES

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Filed Dec. 23, 1963, Ser. No. 333,270
11 Claims. (Cl. 132—31)

This application is a continuation-in-part of my copending application Serial No. 196,393 filed May 21, 1962, now abandoned.

This invention relates in general to a shaping device or jig for holding and shaping artificial eyelashes. More particularly, the invention relates to a device for imparting a selectable curvature and uniform spacing to lash hairs of artificial eyelashes to be used in manufacturing and maintaining such artificial eyelashes.

In manufacturing artificial eyelashes, it is customary to tie individual hairs, real or artificial, to a thin longitudinally extending base member or shaft, which is to be secured to the eyelid of the user. The base member may be another hair, thread or any thin element adapted to be unnoticeably disposed upon an eyelid. The hairs secured to the base member to form lashes are tied at their mid-sections along the base member, as by simple slip knots, each providing two lashes of approximately equal length extending transversely of the base member. The lashes so formed, however, have no curvature or particular spacing; they are generally askew. In order for the eyelash to be useable, the individual lash elements must be uniformly spaced and curved to simulate real eyelashes. It is the principal object of this invention to disclose and provide a device for imparting a selectable desired curvature and uniform spacing to the lash hairs or elements to effect a natural appearing artificial eyelash simulating a real eyelash.

It is another object of the invention to disclose and provide a jig for holding and shaping an artificial eyelash which may be used in manufacturing and/or maintaining such artificial eyelashes.

It is a further object of the invention to disclose and provide a lash shaping device which may be adjusted to provide selectable desired curvatures to artificial eyelashes while maintaining a predetermined uniform spacing of individual lashes.

It is a still further object of the invention to disclose and provide a simple, inexpensive lash shaping and spacing jig readily employed by a user of artificial eyelashes to impart an initial semi-circular lash curvature or other desired curvature to artificial eyelashes wherein the base member of the eyelash is easily and unerringly received and positioned by the jig and wherein simple brushing of the lash hairs or elements over the jig imparts the desired curvature and uniform spacing of lashes to the eyelash.

Generally stated, the jig or device for shaping and spacing lashes in artificial eyelashes, according to the invention, comprises the provision of a longitudinally extending semi-cylindrical shaping and spacing element having a multiplicity of adjacent grooves formed in the outer surface thereof to receive individual lash hairs or elements. The grooves lie generally in parallel planes transverse to axis of the shaping and spacing element and are spaced by ridges which promote the separation of the lash elements or hairs into the grooves. It is preferred that the grooves be of a depth approximating the thickness of a human hair and number between about 24 and about 60 per linear inch to provide a real, natural appearing spacing to the lashes.

The ridges spacing the grooves preferably terminate along a common longitudinal plane extending along one side of the jig or lash shaping and spacing device to form a shoulder adapted to receive and position the base or

shaft of the eyelash. It is contemplated within the invention that the base hair or shaft of the eyelash with the transversely tied lash hairs or elements thereon, be received and positioned along this shoulder. Such base receiving and positioning shoulder may also be formed by a longitudinally extending groove adapted to snugly receive the base hair or shaft. Also, a longitudinally disposed, jig encircling, rubber band means may be employed with such longitudinally extending shoulder to hold the base hair or eyelash shaft to the jig. The lash hairs or elements may then be wetted and brushed over the shaping and spacing element to cause the individual lash hairs or elements to lie in and conform to the shaping and spacing element grooves. Conventional hair spray may then be employed to give a set to the lashes in their curved and spaced relation.

It is further contemplated within the invention that the lash shaping and spacing element be adapted to assume various curvatures to impart selectable lash curvatures as desired. Accordingly the lash shaping and spacing element may be made of a resilient element having transversely extending grooves separated by ridges terminating in a longitudinally extending shoulder as in the invention previously generally stated. Such resilient element may be adapted to be received in a longitudinally slotted base plate having a plurality of spaced slots adapted to receive the spaced longitudinally extending side edges of said resilient element to provide various selectable radii of curvature of the element when assembled to the slotted base. In another embodiment of the invention, the resilient lash shaping and spacing element may be removably received in an adjustable base means for selectively holding the element in an indeterminate number of positions giving an indeterminate number of selectable radii of curvature for the element.

Further objects and advantages of the present invention will become apparent and a more complete understanding of the invention will be had from a consideration of the following detailed explanation of an exemplary embodiment of a jig or lash shaping and spacing device for artificial eyelashes, according to the invention. Reference will be made to the appended sheet of drawings in which:

FIG. 1 is a perspective view of an exemplary embodiment of a device for imparting a desired curvature and uniform spacing to lash hairs of artificial eyelashes, according to the invention;

FIG. 2 is a transverse section of the device of FIG. 1 showing a deformed shape thereof in phantom line;

FIG. 3 is a horizontal section taken along the plane III—III in FIG. 1;

FIG. 4 is an exemplary alternative embodiment of the device of FIGS. 1 through 3;

FIG. 5 is a perspective view of an artificial eyelash showing individual lash hairs mounted on an eyelash shaft or base member;

FIG. 6 is an exemplary alternative embodiment of the device of FIGS. 1 through 3 employing an elastic member, according to the invention;

FIG. 7 is a side elevational view, partially broken away, of the device of FIG. 6;

FIG. 8 is a perspective view of an alternative exemplary embodiment of a device for imparting a desired curvature and uniform spacing to the lash hairs of artificial eyelashes, according to the invention;

FIG. 9 is a transverse section of the device of FIG. 8 taken therein along the plane IX—IX;

FIG. 10 is a transverse section of the device of FIGS. 8 and 9 showing a deformed shape of a flexible element thereof; and

FIG. 11 is a perspective view of an artificial eyelash provided with a desired curvature and uniform spacing

to the lash hairs after treatment on the device in accordance with the present invention.

An exemplary embodiment of the device for imparting a desired curvature and uniform spacing to lash hairs, according to the invention, shown in FIGS. 1 through 3 will now be explained in detail. Referring first to FIG. 5, a typical artificial eyelash, indicated generally at 20, includes a base member or shaft 21 and a plurality of individual lashes 22. Base member or shaft 21 may be a human hair, thread or any thin element adapted to be unnoticeably disposed upon an eyelid. Such element is preferably a mono-filament element. It is relatively thin and may be colored such that it blends well with the color of the lash hairs 22. The lash hairs or elements 22 are normally secured to the shaft or base member 21 by first forming a fisherman's slip knot at a mid portion thereof, indicated generally at 23, slipping the shaft 21 therethrough and then by grasping both ends of the hair 22, tightening the knot by pulling on the shaft 21. Thus, each lash hair or element 22 is mounted on the shaft or base member 21 with leg portions of approximately equal length having no particular curvature or definite spacing.

As particularly contemplated by the invention, means for shaping and spacing the lash hairs 22 upon the base member 21 are provided. Such means include a shaping and spacing element which, in one form of the invention, may be provided as a virtually semi-cylindrical element presenting a curved outer surface having a semi-circular curvature. When so provided, the shaping and spacing element may be formed by cutting a cylinder in half along a longitudinally extending plane bisecting its longitudinal axis.

Lash receiving grooves 11 are provided on the curved outer surface of shaping and spacing element 10 to receive and impart a curvature to the lash hairs or elements 22. Grooves 11 are preferably molded into the element 10 and lie in parallel planes virtually transverse or perpendicular to the axis of element 10. Each groove 11 is also preferably made of a depth and width approximating the thickness of a human hair. The grooves are preferably provided at between 24 and about 60 grooves per linear inch along the element measured along its longitudinal axis. It is also contemplated within the invention, that the grooves 11 may be provided in the shaping and spacing element 10 by turning element 10 upon a lath employing a suitably formed tool bit. Grooves 11 would then be actually a continuous groove as in a screw thread with individual segments lying in planes generally transverse to the longitudinal axis of element 10 but not exactly perpendicular thereto. In turning such continuous groove 11, however, the slight inclination to the longitudinal axis of each of the groove segments will not be such as to cause a noticeable defect in the shaping of the eyelash, indicated generally at 20. It is preferred, however, that grooves 11 actually lie in parallel planes virtually perpendicular to the longitudinal axis of shaping and spacing element 10 so that the individual lashes 22 are exactly perpendicular to the base member or shaft 21 after being conformed to the shaping and spacing element. Therefore, the molded form of element 10 is preferred.

Ridges 11 are provided to space adjacent grooves 11 and to promote the division of adjacent lash hairs 22 into adjacent grooves 11. As best shown in FIG. 3, each ridge 12 is provided with side surfaces extending upwardly from the adjacent grooves 11 and converging to a peak or longitudinally extending ridge line. The pointed relatively sharp edge formed by the ridge lines of ridges 12 promote the separation, splitting or division of adjacent lash hairs 22 so that they may be readily disposed in adjacent grooves 11. A flat topped ridge may be employed but the form shown is preferred.

Means for receiving and positioning a base element or shaft 21 of the artificial eyelash, indicated generally at 20 in FIG. 5, are provided on the shaping and spacing element 10 to dispose the shaft 21 transversely to the grooves 11 and ridges 12, presenting the individual lash hairs or elements 22 in generally upstanding relation to element 10 and generally adjacent the grooves and ridges. The lash hairs are thus positioned to be brushed and urged into spaced relation upon the element 10. In the preferred embodiment of FIG. 1, such means include a longitudinally extending base member or shaft receiving groove 13. As shown in FIG. 1, the shaft receiving groove 13 extends longitudinally along a lower side area or marginal portion of the element 10 and is generally perpendicular to the lash receiving grooves 11 and ridges 12. Groove 13 is preferably of a depth and width approximating the thickness of the base element or shaft 21 to snugly receive and hold such shaft or element when it is assembled thereto by merely pressing the shaft or element into the groove 13. As shown in FIG. 2, the ridges 12 and grooves 11 preferably terminate at groove 13 in a common longitudinal plane 14 which forms a shoulder adapted to engage the shaft or base member 21 of the artificial eyelash and maintain its position relative to the grooves and ridges while the lashes 22 are being brushed into the grooves 11.

As shown in FIG. 4, an exemplary alternative embodiment, an artificial eyelash base member or shaft positioning shoulder 14' may be formed by the termination of the grooves 11 and ridges 12 in a common longitudinally extending plane wherein no groove 13 is provided. Rather a flat or recessed portion 15 is provided.

A further alternative exemplary embodiment is shown in FIGS. 6 and 7. There, the grooves 11 and ridges 12 may terminate in a common plane or shoulder 14' as in FIG. 4, may be interrupted by a groove 13 as in FIGS. 1 and 2 or may be continuous to the outer edge of the outer edges of the shaping or spacing element 10. The means for receiving and positioning the base element or shaft 21 of the artificial eyelash comprises an elastic member lying along a lower side portion or marginal area of the shaping and spacing element 10. Such elastic member may comprise a rubber band 16 which surrounds the shaping and spacing element 10 at its marginal edge portions as shown. To facilitate mounting and retaining such rubber band 16 upon the element 10, the opposite ends of the element may be recessed as by recess 17, best shown in FIG. 7. In operation, the rubber band 16 need merely be separated slightly from the surface of the shaping and spacing element 10 and the base element or shaft 21 slipped in between the rubber band 16 and element 10. Since it is highly desirable to have accurate positioning of the lash hairs to the grooves 11, it is preferred in the embodiment of FIGS. 6 and 7 that a shoulder 14, as in the embodiments of FIGS. 1 and 2, or a shoulder 14', as in the embodiment of FIG. 4, be employed to position the base member or shaft 21.

As further particularly contemplated by the invention, the shaping and spacing element 10 may be made of a resilient deformable or pliant material such as a molded rubber or a molded or turned resilient plastic. Preferably, the shaping and spacing element 10 is provided with an initial virtually semi-cylindrical shape which it will normally assume when not deformed. Such resilient longitudinally extending shaping and spacing element may be employed with base means adapted to removably receive edge portions of the element in generally parallel, selectable spaced relation whereby the element is held in a desired state of curvature by the relative disposition of the element edge portions in the base.

Base means may include a base plate 30 having a plurality of longitudinally extending channels, as channel 31, formed therein. Each such channel is adapted to receive a longitudinally extending marginal edge portion of the shaping and spacing element 10, as shown in FIG. 1. Channels 32 and 33 in the base member 30 are generally parallel and spaced to receive the marginal edge portions of shaping and spacing element 10 when it is in a virtually semi-cylindrical configuration. Where the element

10 is a virtually semi-cylindrical non-resilient element it may be used with the base member 30 if desired, but is operable without it. Preferably, base means 30 is used when the element 10 is a resilient deformable element which may have a pre-set configuration in a semi-cylindrical curvature to rest in slots 32 and 33 in a non-deformed shape or it may be a resilient planar element adapted to be deformed into a virtually semi-cylindrical configuration when removably received and held in the base 30. In either event, the resilient deformable embodiment of shaping and spacing element 10 may be deform to a configuration having an outer surface curvature other than semi-circular as shown in FIG. 1 by disposing the marginal edge portion of the element 10 shown in channel 32 in either of the channels 31 or 34. Thus, the resilient element 10 may be held in any desired curvature by the disposition of said edge portions of the element 10 in the channels of base 30, depending only upon the number of channels provided and their spacing.

An alternative exemplary embodiment of the device for imparting a desired curvature and uniform spacing to lash hairs of artificial eyelashes, in accordance with the present invention, is shown in FIGS. 8 through 10. In this alternative exemplary embodiment, the last shaping and spacing element 40 is a flexible preferably molded one piece plastic element including a generally cylindrical body portion 41 with opposed depending leg portions 42 and 43. As in the prior described embodiments, the body portion 41 is provided with a plurality of lash receiving grooves separated by ridges to separate and space the lashes of an eyelash brushed over the body portion.

Means for receiving and positioning a base element or shaft 21 of the artificial eyelash, indicated generally 20' in FIG. 11, in the exemplary embodiment include a shoulder 44 or 44' formed on the body 41 at the termination of the grooves adjacent the depending legs 42 and 43, as shown in FIGS. 8 through 10.

Base means for receiving and holding the flexible lash shaping and spacing element in selectable deformed positions in the alternative exemplary embodiment are indicated generally at 50. Such base means are adapted to receive the longitudinally extending marginal edge portions of the shaping and spacing element 41 along the leg portions 42 and 43, as best shown in FIG. 9. In this alternative exemplary embodiment, such base means may comprise a pair of opposed base members or jaws 51 and 52 with opposing jaw faces or element engagement surfaces 53 and 54 respectively.

Means are provided for selectively adjusting the opposed base members or jaws 51 and 52 into an indeterminate number of selectable positions of adjustment to hold the lash shaping and spacing element 40 in a plurality of selectable deformed configurations, one such position being shown in FIG. 10. Such means, in the exemplary embodiment, include a pair of bolt and wing nut fasteners, as the bolt 55 and wing nut 56 of FIGS. 9 and 10. By rotating the wing nuts, as nut 56, the base members 51 and 52 may be moved to and held in selectable opposed positions to deform the lash shaping and spacing element 40 and thus to provide the element body portion 41 with a plurality of selectable configurations of varying radii of curvature.

The base means in this alternative exemplary embodiment are adapted to receive and hold the lash shaping and spacing element 40 with the element shoulders 44 and 44' spaced above the top surfaces 57 and 58 of the base members 51 and 52, respectively. As shown in FIGS. 9 and 10, the spacing of the shoulders 44 and 44' above the top surfaces of the base means allows the base or shaft 21' of the eyelash 20' to be received in a groove formed between the shoulder and the base means. The individual lashes 22' may then be brushed over the body portion 41 and shaped and spaced thereon. In the exemplary embodiment of FIGS. 8 through 10, the spacing of the element shoulders 44 and 44' above the top surfaces of the base means is accomplished by a disposition of bolts, as bolts 55, in the base means. As shown in FIG. 9, the leg portions 42 and 43 of the lash shaping and spacing element contact and ride on the base adjustment means, as bolt 55, to support the element shoulders 44 and 44' above the top surface of the base means a distance sufficient to receive and snugly hold the base or shaft 21' of an artificial eyelash, indicated generally at 20'

With the resilient lash shaping and spacing element 40 held in the position of FIG. 9, the lashes 22' of an artificial eyelash may be given a rather large curvature because of the relatively large radii of curvature of the body portion 41. Upon selectively adjusting the base members 51 and 52 relative to each other, as by rotating wing nuts, as nut 56, the lash shaping and spacing element may be deformed into the configuration of FIG. 10. There the lashes 22' of an artificial eyelash will be given a very tight or short radii of curvature configuration.

It may be seen from the foregoing that the lash shaping and spacing device, according to the invention, may be adjusted to provide a selectable desired curvature to artificial eyelashes while maintaining a predetermined uniform spacing of individual lashes. The device may be inexpensively manufactured and be readily employed in the manufacture of artificial eyelashes or by a user of such eyelashes to impart an initial semi-circular lash curvature or other desired curvature to the eyelashes. The base member of the eyelash is easily and unerringly received and positioned upon the device and the lash hairs or members are disposed in an upright position relative to the shaping and spacing element with the hairs generally adjacent the device. Subsequent application of a wetting material and brushing of the lash hairs over the device will impart a desired curvature and uniform spacing of the lashes.

Having thus described a preferred exemplary embodiment of the shaping device for artificial eyelashes according to the invention and exemplary alternative embodiments thereof, I wish to note that other embodiments, modifications and refinements thereof may be made which come within the scope of my invention. Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A device for imparting a desired curvature and uniform spacing to lash hairs mounted on a base element in artificial eyelashes preparatory to setting by spraying with conventional hair spray, comprising:

a resiliently deformable shaping and spacing element presenting a curved outer surface;

a plurality of lash hair receiving grooves formed in said outer surface transverse to the longitudinal axis of said element;

means for receiving and positioning an artificial eyelash on said element to present said lash hairs to said grooves; and

means for deforming and holding said resiliently deformable shaping and spacing element in selectable deformed configurations to provide selectable curvatures to said curved outer surface.

2. A device as in claim 1 wherein said means for receiving and positioning an artificial eyelash includes a longitudinally extending shoulder formed in said outer surface, each of said grooves terminating at said shoulder.

3. A device for imparting a desired curvature and uniform spacing to lash hairs of artificial eyelashes, comprising:

a virtually semi-cylindrical resiliently deformable shaping and spacing element provided with a multiplicity of adjacent grooves formed in the outer surface thereof, said grooves being spaced by ridges,

said grooves lying in parallel planes virtually transverse to the axis of said cylindrical member,

each of said grooves being of a depth approximating the thickness of a hair, there being between 24 and 60 of said grooves per linear inch of said element,

the ridges separating said grooves terminating along a common longitudinal plane to form a shoulder adapted to engage the shaft of an artificial eyelash, and

means for deforming and holding said resiliently deformable shaping and spacing element in selectable deformed configurations to provide selectable curvatures to said outer surface thereof.

4. A device for holding and shaping artificial eyelashes comprising:

a longitudinally extending resilient shaping and spacing element having a curved outer surface;

a plurality of grooves formed in said outer surface, each of said grooves being of a depth and width approximating the thickness of a human hair and lying in a plane generally perpendicular to the longitudinal axis of said element;

a plurality of ridges formed in said outer surface, each ridge separating a pair of adjacent grooves and having side surfaces upwardly convergent to a ridge line;

means for receiving and positioning a shaft of an artificial eyelash on said element to present lash hairs mounted on said shaft in upstanding relation to said element and generally adjacent said grooves; and

means for deforming and holding said resilient shaping and spacing element in selectable deformed configurations to provide selectable curvatures to said curved outer surface.

5. A device as in claim 4 wherein said means for receiving and positioning a shaft of an artificial eyelash comprises a longitudinally extending shaft receiving groove lying generally perpendicular to said grooves and ridges, said shaft receiving groove being of a depth and width approximating the thickness of said base element to snugly receive and hold said shaft.

6. A device as in claim 4 wherein said means for receiving and positioning a shaft of an artificial eyelash comprises an elastic member lying along a marginal portion of said outer surface transverse to said grooves and ridges, said elastic member being adapted to be elastically deformed to receive an eyelash shaft disposed transverse to said ridges and grooves between said shaping and spacing element and said elastic element.

7. A device for shaping and spacing lash hairs of artificial eyelashes to selectable curvatures, comprising:

a resiliently deformable longitudinally extending hollow shaping and spacing element provided with a multiplicity of adjacent grooves formed in an outer surface thereof and depending opposed marginal edge portions; and

base means for removably receiving said edge portions and for holding said resilient element in selectable deformed configurations by said edge portions to provide selectable curvatures to said outer surface of said shaping and spacing element when said element is received by said base means.

8. A device for shaping and spacing lash hairs of artificial eyelashes to selectable curvatures as in claim 7 where said base means comprises:

a base plate; and

longitudinally extending channel means in said base plate for receiving and holding said depending opposed marginal edge portions in generally parallel, selectable spaced relation.

9. A device for shaping and spacing lash hairs of artificial eyelashes to selectable curvatures as in claim 7 where said base means comprises:

a pair of opposed base members including opposed element engaging surfaces to engage and hold said depending opposed marginal edge portions between said base members; and

means for moving said opposed base members together to deform said resilient element and hold said base members in a selectable position to hold said shaping and spacing element in a desired deformed configuration by said depending opposed marginal edge portions.

10. A device for shaping and spacing lash hairs of artificial eyelashes to selectable curvatures as in claim 9 where:

said means for moving and holding said opposed base members includes a plurality of transversely extending nut bolt means, each said nut and bolt means including a bolt shank extending through said opposed base members, bolt head means on one end of said shank for holding one of said base members inwardly on said shank and nut fastening means adjustably movable on an opposite end of said shank for holding the other of said base members inwardly on said shank in adjustable spaced relation to said one base member;

said base members include longitudinally extending shoulders forming said element engaging surfaces; and

depending legs on the marginal edge portions of said shaping and spacing element, resting upon said bolts and between said shoulders to provide an eyelash base receiving groove between each said shoulder and element.

11. A device for shaping lash hairs of artificial eyelashes to selectable curvatures comprising:

an eyelash shaping mandrel including a flexible generally semi-cylindrical body portion and a pair of opposed depending leg portions, said body portion having an outer surface to receive and shape lash hairs to its surface curvature, and

means for holding said leg portions in selectable spaced relation to deform said resilient body portion to selectably provide a desired outer surface curvature to said resilient body portion.

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