June 3, 1969

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COMBINATION EYELINER AND FALSE EYELASH

Filed May 3, 1968

FIG. 1a

FIG. 1b

FIG. 2

FIG. 4a

FIG. 4b

FIG. 3

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It is a feature of this invention that the liner is cut into an arcuate shape and bonded to the false eyelash on a mold which gives the combination a flexible permanent set, facilitating the application and wearing of the liner-lash combination.

The above mentioned and other features and objects of this invention and the manner of attaining them will become more apparent and the invention and the manner in which the invention may be understood by reference to the following description of embodiments of the invention taken in conjunction with the accompanying drawing, the description of which follows.

Description of figures

FIGS. 1a and 1b are front and back views, respectively, of the liner-lash combination of the invention.

FIG. 2 illustrates a conventional arrangement for forming false eyelashes.

FIG. 3 illustrates the method of die-cutting the eyeliners according to the invention.

FIGS. 4a and 4b illustrate the liner-lash bonding method according to the invention.

Detailed description of the invention

After a great deal of investigation it has been learned that the numerous proposed synthetic materials all have one or more disadvantages which preclude their use as an eyeliner. Quite unexpectedly, however, it has been found, that can be shaved to a thickness possessing most if not all the attributes generally desired for the eyeliner. It is extremely flexible, strong, capable of taking and holding color as well as glue, and is nontoxic and durable. Further, leather of the preferred thickness (to be described) has been found to withstand tension without tearing and compression without bulging or folding.

To prepare the liner the finest quality cabretta skins (also known as hair sheep) are given a combination glove tannage employing dyes that have a nontoxic effect. The dye may be of any color selected for aesthetic reasons. The softest and most pliable skins are selected and strips are taken lengthwise of the hide. The heavier center-back sections and the stiff inflexible flanks have been generally found to be unsuitable. All imperfections are cut away and the skins cut into narrow strips, approximately one-and-one-half inches wide. The ends of the strips are then "scarfed" or bevelled and joined together with a vinyl based glue to make a continuous length.

The leather web is then subjected to a skiving process where it is thinned or shaved to a desired thickness. The precise thickness must be determined empirically and depends upon the softness of the leather. Preferably the final product will have the thickness of between 5 and 40 thousandths of an inch. By joining the strips prior to skiving it has been found that the thickness tolerance may be closely maintained and is not subject to as much variation as when individual strips are processed.

Referring to FIG. 3 this paper-thin leather web 12 is then coiled on a roll 14 along with a backing 16 of impregnated paper for a purpose to be described. The coiled leather web and paper back is run across a bed 15 and projected onto a takeup spool or reel 18. Jig 17 contains a plurality of dies (not shown) and is reciprocated to the bed 15 with sufficient pressure for each die to penetrate the juxtaposed leather portion up to but not through the paper back to form the arcuate shaped liners 13.

It has been found that by employing a material having a hardness much greater than that of the leather (such as heavy paper), the dies cut through the leather cleanly leaving no fuzzy edges. Moreover, the cut eyeliners therefore retain their position on the web to be transported to the takeup spool where they may be stored, without injury, for later use.
As may be seen from FIG. 3, and as will be discussed further hereinafter, the individual eyeliners are, according to one embodiment of the invention, of arcuate shape. Although not necessarily circular (they may more nearly approximate a hyperbola or horseshoe) the arc segment may be roughly defined as having a radius preferably between one quarter of an inch and one inch.

The eyelash 10 is formed in the conventional manner as shown in FIG. 2. A plurality of hairs or hair-like fibers 19 are tied or hand knotted to a central thread 23 of silk, nylon or cotton which is maintained taut between a pair of binding posts 20 and 22. In the example shown the lash is of the so called "wing" type with the hairs longer at one end. Once formed the lash ends are given an upward curl in the conventional manner.

The lash 10 is now removably mounted on the mesa slope at the cone portion 42 adjacent the top surface 40. Since the lash central thread tends to be linear this may be accomplished by applying the lash to the mesa with any weak quick setting nontoxic glue; the lashes of course curling outwardly. Next a liner 12 is lifted from the take-up spool, coated with glue (of a type to be explained) and is overlayed on the lash where it is allowed to remain until the linerlash bond is secured. By using the intersection of the upper mesa surface 40 and slope 42 as a guide the application of liner to lash is easily accomplished and any excess glue may be forced to the top where it is easily wiped off.

The adhesive bonding the lash to the liner must be nontoxic, nonsoluble in water, and nonsoluble in the conventional glue which will have repeated applications to the lash side of the liner for adhering the combination to the eyelid. Further, the adhesive must make a lasting and flexible bond between the liner and eyelash. For this purpose pressure sensitive glues are too weak, and stronger glues such as used to affix ornaments or metals dry stiff causing a lash-liner pop-up or break at the corners. Adding a plasticizer to the rigid glues has the effect of weakening the bond. It has been found that a glue employing a copolymer vinyl acetate base together with another vinyl material such as vinyl chloride, vinyl maleate or vinyl acrylate meets the described functional requisites. This glue has no organic solvents and when dry is nontoxic, water resistant, and the bond between leather and lash is extremely strong and flexible.

Alternatively, to coating the liner with glue the lash 10 may have its central thread glue coated or both the liner and lash may be coated for the permanent bond. In any event once the glue is dry the combined liner-lash may be peeled from the mesa breaking the bond of the weak glue which merely held the lash in position. The combination of liner, glue and lash is now prestressed or "preset" to roughly conform to the mesa slope as shown on the exaggerated detail of FIG. 4b.

The angle θ of the conical portion of the mesa may vary between 45° and 90° and is dependent upon the liner's radius of arc. Generally the smaller the liner radius, the smaller the angle θ. At the end limit, for a straight liner (infinite radius), θ could be approximately 90° and the mesa would be defined by a section of a cylinder rather than a cone. A typical construction would be as follows:

Mesa radius $R = 3/8$ inch, liner radius $= 1/2$ inch, θ = 75°. Variation in the mesa radius naturally requires changes in θ, the liner radius, or both as will be apparent from the geometry involved.

In its finished state as shown in FIGS. 1a and 1b the lash lies totally on the eyeliner with the latter extending on either side of the lash preferably from .05 to .1 inch. The extension (which may even include oppositely directed arcs) may then be trimmed by the wearer to suit her individual taste. The liner width is likewise an aesthetic consideration and may vary between 2/5 to 3/4 of an inch.

Where it is desired that the extensions (or even arcuate positions) be given a different orientation or direction, for example to assume a downward orientation at the eye corners, the cone angle θ may be varied about the circumference. This will result in a twist being imparted to the liner and a prestressing in the desired configuration.

When affixed to the eyelid in the manner conventionally employed in affixing false eyelashes alone, the inventive liner-lash easily curves to the shape of the eyelid and will retain that curve resting lightly and comfortably and flexing with the movement of the eyelid. The hugging of the eyelid is facilitated when the eyelash and liner are prestressed in an arcuate shape which slopes gently in the manner described.

While the principles of the invention have been described in connection with specific apparatus, it is to be clearly understood that this description is made only by way of example and not as a limitation to the scope of the invention as set forth in the objects thereof and in the accompanying claims.

What is claimed is:

1. A combination eyeliner and false eyelash comprising:
   - an elongated flexible leather eyeliner having an inner and outer surface of a thickness between 5 to 40 thousandths of an inch;
   - a false eyelash permanently and flexibly bonded to the inner surface of said eyeliner with the lashes substantially perpendicular to the eyeliner length.

2. The combination claimed in claim 1 wherein said eyeliner is of arcuate shape.

3. The combination claimed in claim 1 wherein the bonded eyeliner and eyelash is set in the shape of a portion of a cone frustum.

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