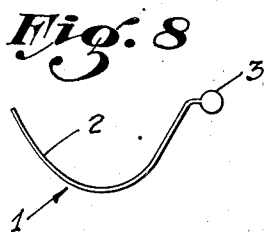
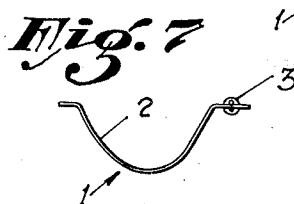
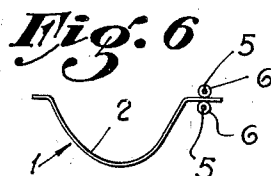
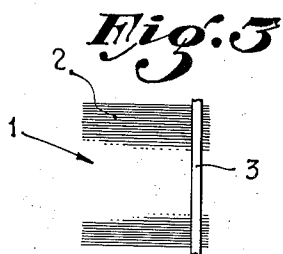
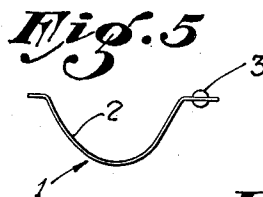
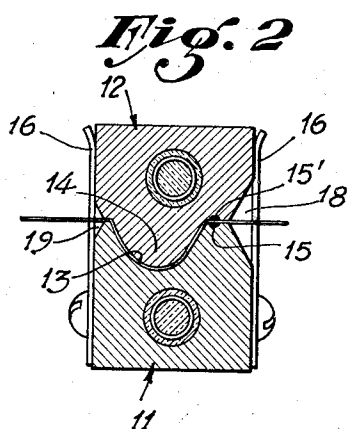
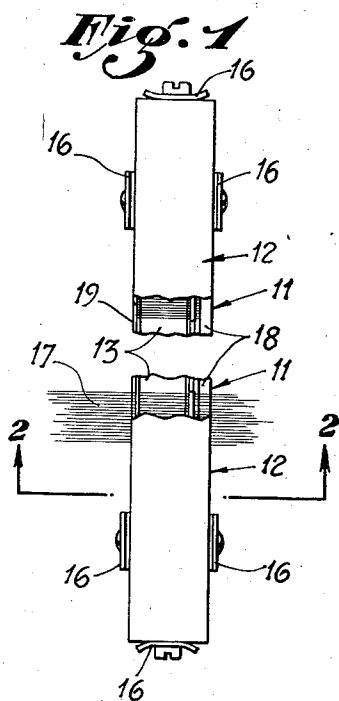


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F. B. PHILLIPS
ARTIFICIAL EYELASH
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2,421,432



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UNITED STATES PATENT OFFICE

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ARTIFICIAL EYELASH

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Application October 5, 1944, Serial No. 557,270

4 Claims. (Cl. 132-56)

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My invention relates to artificial eyelashes and to a novel method of making the same.

An object of my invention is to provide a novel artificial eyelash wherein the ends of the eyelash hairs are fixed in a predetermined and exact manner to a novel base in which the ends of the hairs are embedded and from which the eyelash hairs protrude or extend.

Another object of my invention is to provide a novel artificial eyelash having a novel base composed of a synthetic resin, resinous, resinlike or plastic substance, which is extremely small and inconspicuous, but which will firmly hold the hairs comprising the eyelash.

A further object is to provide a novel artificial eyelash having a base member of suitable characteristics that the same may be tinted to blend with the edge of the natural eyelid, or make-up, or make-up linings applied to the eyelid, or be transparent to show the natural skin there-through.

A further object is to provide a novel artificial eyelash which when applied to a person is natural in appearance, and which easily conforms to, and adheres to, the natural eyelid, and which offers a minimum of discomfort to the wearer.

A still further object is to provide a novel artificial eyelash in which the hairs thereof have a predetermined curl and spacing, and which need no retouching, and that can be easily and quickly applied by the wearer and adapted with a minimum of shaping to conform the same to the features of the wearer.

A still further object of my invention is to provide a novel base for artificial eyelashes that will adhere firmly to the hairs forming the eyelash with a minimum amount of actual contact area therewith, and which will have alcohol and aliphatic hydrocarbon resistance as well as poor light reflective power, also which has sufficient stiffness for ease of application and yet is flexible enough at body temperatures to be comfortable to the wearer.

A still further object of my invention is to provide a novel artificial eyelash base that is composed of synthetic or chemical constituents that will not set up a condition of some form of dermatitis.

A feature of my invention is in the provision of a novel artificial eyelash that has a novel base member which may be associated with hairs that extend therefrom to form the lashes, and which hairs as used in this specification may include either human, animal, fibre, vegetable, seaweed, plant (either natural, resin, resinous, or resinlike

materials) casein or synthetic resin, resinous or resinlike materials.

Other objects, advantages and features of invention may appear from the accompanying drawing, the subjoined detail description and the appended claims.

The accompanying drawing illustrates the invention in some of the forms I at present deem preferable.

Figure 1 is a plan view of a mold employed in my method of making a novel artificial eyelash, the mold being broken away at its mid-portion to show the strands of hair and associated base member.

Fig. 2 is an enlarged transverse sectional view of the mold, taken on line 2-2, Fig. 1.

Fig. 3 is an enlarged fragmentary plan view of a portion of the completed strip of artificial eyelashes made in the mold shown in Fig. 1.

Fig. 4 is a diagrammatic end view of an artificial eyelash and the base members, as they appear in the mold and before fusing.

Fig. 5 is a diagrammatic end view similar to Fig. 4, but showing the base members after fusing them together around the eyelash hair.

Fig. 6 is a diagrammatic end view, analogous to Fig. 4, but showing a modified structure for the base member.

Fig. 7 is a diagrammatic end view similar to Fig. 5, but showing the parts illustrated in Fig. 6 after fusing.

Fig. 8 is an end view, on greatly enlarged scale, of a completed artificial eyelash embodying the elements shown in Figs. 4 and 5.

Fig. 9 is an end view, on greatly enlarged scale, of a completed artificial eyelash embodying the elements shown in Figs. 6 and 7.

In the drawing, I have illustrated a simple form of mold that may be used to form my novel artificial eyelash, and have also illustrated on enlarged scale, and more or less diagrammatically, the components making the various forms of artificial eyelashes shown.

The completed eyelash, designated generally by the numeral 1, and best shown in Figs. 8 and 9, comprises a plurality of eyelash hairs 2 of proper length, and which extend, as shown in Figs. 1 and 3, substantially in parallelism with each other; and have along one side of the ends thereof, a base member 3 which is fused thereto to make a homogeneous mass. The base member 3 may be of a synthetic resin, resinous, or resinlike plastic base which when subjected to heat will fuse around the strands of hair forming the lashes 2 so as to securely hold them in assembled

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position but which will not be affected by the natural heat or warmth of body of the person using the completed eyelash.

The base member 3 as herein referred to may be designated as a "plastic" base member for want of a more technical term to identify the same.

In carrying out my invention, I form a plastic base member 3 of any synthetic resin having the requisite properties; namely, an ability to be molded in a temperature range that will not damage hair, non-toxic in nature, capable of being dyed either initially or subsequently to the desired color or tint, or to be transparent, sufficiently limp or flexible to conform readily to the eyelid, capable of being adhered to an eyelid by use of an adhesive that will not be injurious to the wearer, that will have alcohol and aliphatic hydrocarbon resistance, as well as poor light reflective power, and have sufficient stiffness for ease of application and yet be flexible enough at body temperatures to be comfortable to the wearer, and which will not set up a condition of some form of dermatitis.

A particularly satisfactory plastic for the base member 3 has been produced from the following formula, to-wit:

"Acryloid"	ounces--	4
"Rezyl #53"	do.....	4
Acetate and vinyl chloride	do.....	8
Copolymer of vinyl		
"Sipalin Aom"	ounces--	1.6
Diatomaceous earth	do.....	8
"Dioxan"	pints--	1
Methyl isobutyl ketone	quarts--	2
Toluol, to make 1 gal. of compound		

Coloring—Q. S., such as: certified cosmetic color (precipitated on aluminum base—lakes). Natural earth colors: all of any desired shade or tint.

"Acryloid," is understood to be a 30% solution of a polymerized acrylic compound in ethylene glycol monoethyl ether acetate.

"Rezyl #53," is understood to be a balsam type, non oxydizing, phthalate alkyl resin.

"Sipalin Aom," is understood to be dimethyl eyelohexyl ester of adipic acid.

"Dioxan," is understood to be 1,4, diethylene oxide.

The foregoing materials for the plastic base member, are preferably compounded as follows:

1. The "Dioxan" and methyl isobutyl ketone are mixed together.

2. Then the acetate and vinyl chloride are dissolved in the resulting solution,

3. Then the "Acryloid" and "Rezyl" are added,

4. Then the diatomaceous earth and coloring are ground into the foregoing resultant mixture.

5. Then the toluol is added.

The resultant mixture may then have the solvents therein extracted, and may then be extruded through suitable dies to form threads or strands 4 that are fused together as will more fully be hereinafter explained in connection with the type of artificial eyelash shown in Figs. 4, 5 and 8.

The foregoing mixture for the plastic base member without the solvents therein extracted may be used to form the type of base member shown in Figs. 6, 7 and 9, wherein a base thread, preferably a hair, thread or thread-like structure, such as a fine natural silk thread or what is commercially known as "nylon" is sprayed with such mixture to form a protective coating

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therearound and to enable the resultant article to be secured to the strands forming the lashes and if used for the lashes to be curled and retain its set.

Such natural silk or nylon thread 5 is preferably strung on a framework (not shown) to form parallel strands that may be sprayed with the mixture from both sides of the framework so as to build up a coating 6 therearound as shown in Figs. 6, 7 and 9. The threads are sprayed or coated several times, sometimes as many as six or eight times in order to build up the thread to the desired diameter. Each coating is dried by placing the framework in an oven before the next coating is applied, and it has been found that five or ten minutes for drying is sufficient. The thread first used before spraying is preferably about .002" in thickness and after spraying is preferably .015" in thickness.

In making an artificial eyelash as shown in Figs. 3, 4, 5 and 8 I arrange a plurality of strands of hair 17 parallel with each other as shown in Fig. 1 and arrange them between molding blocks 11 and 12. The mold 11 is provided with a longitudinal channel 13, and the mold 12 is provided with a complementary rib 14. The curvature of the channel 13 and rib 14 is such as to conform to the curvature desired to be given to the lashes when completed.

Each mold block is provided along the confronting faces thereof and adjacent the channel and rib thereof with a groove 15, 15' that are in juxtaposition with each other when the mold blocks are in cooperative relation with each other, and accommodate or receive the base members 3 which are placed therein before clamping the molds together with the hair strands 17 extending between such molds 11 and 12. Suitable guide and securing clips 16 are provided along the sides and ends of the mold blocks so that they may be readily fitted and secured together.

Before the base members 3 are placed in the grooves 15, 15' the grooves are preferably coated with a 5% solution of aluminum stearate that is cut with toluol so as to form a mold lubricant to permit free removal of the base members after the eyelashes have been formed, and the same also acts as an adhesive to retain the base members in place when the molds are positioned in mold closing cooperation with each other.

The molds with the base members positioned in the grooves 15, 15' and the hair strands extending across the same are then placed in an oven until the molds are heated to about 300 degrees F. This requires from five to ten minutes in an oven previously heated to 500 degrees F. The molds are preferably set on asbestos or other insulating material to prevent contact with metal which would have the effect of unevenly distributing the heat to the molds.

Upon heating the molds as aforesaid, the base members 3 will fuse together around the ends and over the strands forming the lashes, and the lashes will have imparted thereto a set of curl simulating natural eyelashes. The molds are then separated and the lashes trimmed and the base members cut to the desired length.

If desired the eyelashes may be made having a base member of the type shown in Figs. 6, 7 and 9; and the lashes may be made of the same base members as shown in Fig. 9.

Although I have illustrated my invention as being made with a single mold as shown, it will be apparent that several molds may be used, that is they are placed side by side along the length

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of the hair strands 17, so that a single strand of hair may extend across several molds. After the molds are heated as aforesaid the strands of hair are cut between the molds, and this is facilitated by undercutting or forming obtuse V-shaped recesses 18 and 19 along the sides of the mold blocks and with their apexes along the mold faces in close proximity to the grooves 15, 15' on one side and to the longitudinal edge of the channel 13 and rib 14 on the other side.

After the lash has been formed and trimmed to the desired length along the base member and the individual lashes have been cut to the desired shape the artificial eyelash may be secured to the eyelid of a person with a liquid adhesive or latex, or a spirit gum soluble in alcohol which may be used to remove the artificial eyelash from the wearer's eyelid.

I claim:

1. The method of making artificial eyelashes comprising arranging a plurality of hair-like strands in substantial parallelism with each other; then coating a thread-like structure with a plastic material of dissimilar characteristics than said thread-like structure and arranging the same transversely to said thread-like strands; and then fusing said plastic material into a homogeneous mass and curving said hair-like structures.

2. An artificial eyelash comprising a base member and being sufficiently flexible to readily conform to the natural eyelid and capable of being adhered thereto by an adhesive; and thread like structures extending from said base member in

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substantial parallelism with each other; a protective coating around each thread-like structure; and said protective coating and base member being fused to each other.

3. An artificial eyelash comprising a base member composed of a thread-like synthetic resinous fusible material; and a plurality of thread-like members extending from and having one end embedded in said base member and having a curvature to simulate natural eyelashes; and a protective coating around each thread-like member.

4. An artificial eyelash comprising a base member composed of a synthetic resinous fusible material; a plurality of thread-like members extending from and having one end embedded in said base member and having a curvature to simulate natural eyelashes; and a protective coating around each thread-like member, said base member and protective coating being fused to each other.

FESTUS B. PHILLIPS.

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