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ARTIFICIAL EYELASHES AND METHOD OF MAKING SAME

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Inventor

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By his Attorney

Willa Crother
To all whom it may concern:

Be it known that I, CHARLES NESSLER, a citizen of the United States, and resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Artificial Eyelashes and Methods of Making Same, of which the following is a specification.

My invention relates to artificial eyelashes and the like, and the method of making the same, and some of the objects of my invention are to provide a neat and durable article that can be readily and repeatedly applied to and removed from the eyelid of the person using the same, and which in use has all the appearances of a natural eyelash in the disposition, shape and color of the hairs of the natural eyelash, so that its artificial character cannot be easily detected by an observer; and further to provide an expeditious and economical method of making the eyelashes, whereby they may be easily produced in quantities and which permits of the eyelash-blanks being formed in multiple from a relatively small number of operations. With these and other objects in view, my invention consists in the novel and peculiar construction and arrangement of the several elements of the invention, as well as the novel and peculiar steps in the method of forming the eyelashes, all as hereinafter fully set forth and then pointed out in the claims.

I have illustrated types of my novel eyelash and a preferred manner of carrying out a method of making the same, in the accompanying drawings, wherein—

Fig. 1, is a perspective view of a subject to the lid of whose left-eye, which is open, one of the artificial eyelashes has been secured in operative position, and to whose right eye-lid, which is closed, another of the eyelashes which she holds in her hand, is about to be applied.

Figs. 2 and 3, respectively, are side views of two different forms of my novel eyelash, completed and finished with a permanent set or curve to the hairs.

Fig. 4, is a perspective view of a machine for making the eyelashes, with a bunch or mass of hair or fibre shown in place in the machine and a stack of strips or sections of the flexible material held down across the hair in position for the hooked-needle to pass the hairs through the material, in a row, part of which is shown as being formed, the hooked-needle being shown as mounted on a vertically reciprocating carrier, which is broken away.

Fig. 5, is a cross-sectional view of the mechanism shown in Fig. 4.

Figs. 6 to 15, inclusive, are views showing the different progressive steps in the herein described method of forming the eyelashes, each view including the two elements of the hairs or fibre and section of flexible material forming the base or foundation for sustaining the hairs in proper disposition to form an eyelash.

Fig. 16, is a view in cross-section of an electric heater having an ironing-bar over which the hairs of the completed eyelash are brushed or pressed to give them a permanent natural curved shape.

Figs. 17 and 18, show respectively modifications of the strips of flexible material, the former showing single strips through which the hairs or fibre is passed, and the latter a plaited piece of flexible material, having multiple folds and from which several blanks are made.

Fig. 19, shows one of the eyelashes in which the set of hairs are disposed substantially in two rows or lines.

Figs. 20 and 21, are views showing a modified arrangement of the hairs and flexible material in forming the eyelash.

Referring to the drawings, in which like numerals of reference designate like parts throughout, the eyelashes may be made by placing across a vertically-yielding worktable 1, which is mounted on suitable springs 2, in a sliding frame 3, a mass or bunch of suitable hair or fibre or any suitable filamentous substance 4, representing hair, and which has been previously combed straight in order to arrange the hairs substantially parallel and facilitate the cooperation of the same with the hooked-needle 5. The needle is mounted in a vertically reciprocating carrier 6, and is actuated like an
ordinary sewing-machine needle, the workable or frame 5, being slid under the needle on a suitable guide or way 3.

The flexible material which forms what may be termed the base or foundation member for supporting the hairs, is cut into strips or sections of suitable length and width and when a single strip is used the same is stretched across the bunch of hair and held taut thereon, while the needle is operated to pass a set of hairs through the strip, to form the eyelash blank. In making the eyelash-blanks in multiple or gauges, I arrange two or more strips in a stack and stretch the same across the bunch of hair, and clamp the ends of the strips down upon the hair by means of movable jaws or members 8, pivoted at 9, to the work-table 3, and taking into grooves 10, in the table, so as to grip the ends of the strips securely and thereby hold the strips in place as they are moved beneath the reciprocating needle 5, and acted upon by the needle. As the needle passes the hairs through the strip or strips, the same are moved beneath the needle in substantially the same manner as in an ordinary sewing-machine.

In a preferred form of method which I have herein set forth for the sake of illustrating the invention, I employ pieces or strips 7, of flexible material, which are doubled or folded longitudinally at 11, and I show a stack of two such folded strips arranged transversely of the bunch of hair in position for the needle to pierce the strips along a longitudinal line or path lying intermediate the long edges of the strips. At each upward stroke of the needle it serves to draw up through the flexible material, one or more hairs from the bunch 4, the number so drawn up depending upon the size of the hook of the needle. The hairs thus passed through the strips are in the form of loops 12, and this operation is continued until the desired series is established in a row or path along the strips, whereupon the operator removes the sliding frame together with the bunch of hair and threaded strips thereon, then disengages the stack of strips from the bunch of hairs, as shown in Fig. 6, and with a comb or other suitable instrument proceeds to pull out the loops 12, formed on the strips, and thereby straighten out the hairs 12, so that the ends thereof point in opposite directions, as shown in Fig. 7. The pair of strips 7, which are now strong or threaded on the hairs 12, are separated and slid on the hairs away from each other a substantial distance, as shown in Fig. 8, with the respective strips in planes substantially normal to the series of hairs. Then the free ends 7, of each of the strips, are spread out and the strip somewhat flattened so that the fold 11 disappears, as indicated in Fig. 9, and in this position the series of hairs 12, pierce the strip in two parallel longitudinal lines 13, 13, intermediate the lateral edges of the strip, with a substantial stretch of the series of hairs lying along the central zone of the strip intermediate the pierced lines 13. A suitable gum or paste is now applied substantially to this central zone of the strip and hairs stretching across the same, and the flaps 7, are folded on lines 13, over upon this area and thus permanently secured against the body of the strip with said hairs interposed and glued in position, as shown in Fig. 10, so that both sides of the series of hairs have the flexible material secured thereto, thereby firmly holding the hairs in place and covering and concealing the interposed parts of the hairs and leaving the protruding parts passing out through the flexible material substantially and leaving the line fold 13. The set of hairs 12, is then severed on the line a—a, and also near each end at b—b, leaving two separated strips with the hairs projecting in opposite directions from the opposite folded edges of each strip, and each strip then forms what may be termed an eyelash-blank from each edge of which eyelashes are formed, the number thereof depending upon the length of the original piece of flexible material used. For example, if the strip be made say twice the length of the required length of finished eyelash, the blank just described will contain two pair of eyelashes, and assuming this to be the case with the blank here referred to, the said blank may then be cut cross-wise in two to produce two parts like that shown in Fig. 12, and from which a pair of eyelashes may be made. The blank shown in Fig. 12, is then inserted between the jaws 14, of a suitable pattern or form 15, preferably made of suitable transparent material so that the inserted blank may be clearly visible therein and thereby enable the operator to properly position the blank in trimming the hairs with a pair of scissors which are guided in cutting by the curved edge 16, of the form, and which is substantially the curve taken by the line containing the ends of the hairs in a natural eyelash. The form 15, is provided with gage notches 17, and the folded edge of the blank is brought about with one side of each gage notch in order to give the proper length to the protruding hairs when trimmed. When one of the ends of the blank has been trimmed in this way, the blank is removed and reversed in the form and the hairs at the other edge are trimmed to form in the manner just described; Fig. 13, showing how the first end is trimmed, and Fig. 14, showing the blank after both ends have been trimmed. The trimmed blank is then divided on the two lines c—c, and d—d, as indicated in Fig. 14, in dotted lines, to form two eyelashes like...
that shown in Fig. 15. In cutting the blank on these lines, the distance from the cut to the doubled edge from where the hairs protrude, may be varied as desired in order to make the base part of greater or less width, and the line of the cut may be parallel with said edge, as shown in Figs. 2 and 15, or it may be curved or peaked as at 18, Fig. 3, this larger form being used for certain special effects, such as for the facial make-up of persons on the theatrical stage.

Instead of arranging the hairs 12, substantially on a line, I may have other hairs 122, arranged nearby in staggered or other desired relation, as shown in Fig. 19, wherein 12 indicates the group like that in the figures already referred to and 122, the additional hairs adjacent thereto, the two series making an elongated group or set. These hairs 122, may be incorporated in the eyelash by passing another lot of hairs through the strip of flexible material to one side of the line of hairs 12, as shown at 122, in Fig. 17, so that by folding the flexible material substantially on the line where the hairs 12, pierce the material, the result will be an extra or enlarged series of hairs, as shown in Fig. 19.

In Fig. 17 I show a modification in which the strips of flexible material 7, are single plies, without folds 11, and they are stacked together in the same way as shown in Figs. 4 and 5, and are held down against the bunch of hair 4, while the reciprocating needle passes the hairs through them. The strips are then separated and folded on the line where the hairs pierce the material and the process proceeded with as hereinbefore described.

In the modification shown in Fig. 18, a comparatively long piece of flexible material is first plaited or formed in a series of folds like an accordion plait, each fold representing a folded strip like strip 7, in the other figures. This piece of material is folded on parallel lines, 111, and forms a series of strips 7, the piece being subsequently cut on alternate folds to divide it into separate folded strips which are then slid apart on the piercing hairs, in the same way as shown in Fig. 5, and the same method is then proceeded with. These multiple strips may be sufficient in number to use up the entire length of the hair in the bunch and in this way a substantial saving of the hair is provided for.

In the modification shown in Figs. 20 and 21, the hairs 122, are passed through a single layer of flexible material 7, and on the underside are glued at 25, while on the upper side at 26, the projecting hairs may be free or may be held to the narrow area of surface by glue and project free beyond such edge to form the eyelash. In this form the fold in the material is dispensed with and the ledge 26, being very narrow serves the purpose and looks very trim and natural as will be seen from Fig. 21.

By drawing or passing the hairs through the material forming the strip, I provide a superior structure in which each hair is securely held in its place against displacement, and where a machine is used to sew or draw the hairs in place, they are practically uniformly spaced apart giving regularity of arrangement, though the spacing may be non-uniform if desired, but in each case the operator has full control of the disposition and arrangement of the inserted hairs as they are mounted in the material.

In order to give the hairs of the eyelash the appearance of the natural eyelash, I give the hairs an upward permanent curve, by holding the flexible material in a suitable clamp 19, and placing the hairs across the curved or cylindrical ironing-iron 21, which is heated by a suitable electric-heater 22, and then press or rub the hairs down on the bar when heated, and thereby give the hairs a permanent curved set, as indicated in Figs. 2, 3, 16 and 19.

In some instances, I coat or daub the hairs 12, of the eyelash with a suitable material or paint-like substance in order to thicken the filament, as indicated more particularly in Fig. 3, and the tips of the hairs are often formed with globular or bead-like bodies 92, as shown in Fig. 3, to give the eyelash a full and heavy appearance and either of these arrangements or the two together, have the effect of a heavy or bushy growth. For this purpose I have used ordinary grease paint, also solutions containing collodion and coloring matter which will not run, and the hairs as well as the flexible material may be colored as desired, for example, by being made black, or brown, or a very dark blue or purple in order to suit particular requirements and to produce certain desired effects.

This eyelash may be secured in operative position on the skin of the eyelid just back of the line of the natural eyelash, by applying to the under surface of the flexible material, any suitable adhesive substance which will cause the flexible material to adhere to the skin of the eyelid, such for example, as the various well known harmless pastes, gums, glues and oils and the like. The adhesive known as spirit-gum, and also ordinary mucilage made of gum-arabic will serve the purpose, and the eyelash may be readily removed, by taking hold of one end and gradually stripping the flexible material from the eyelid and this is made easy by the moisture of the skin softening the adhesive. I have used adhesives having collodion therein and find the same effective.

It will be observed that my method of
making the eyelashes requires but a comparatively few steps, is expeditious and results in producing the articles in large quantities. In making my improved eyelash, any suitable substance may be employed for the hair part, such as natural hair, mohair, any of the various substances used for artificial hair, and in fact any suitable fibrous or filamentous material may be used. The flexible material may be made from any well known membranous material or skins, or fish-skin, which are preferably transparent, so as to give an invisible character to the article and to make it light in weight by its thinness.

When the eyelash is in place on the eyelid, the hairs project forwardly and upwardly and mingle with the natural hairs on the eyelid, so that the artificial character of the device cannot be easily detected, the frequent movement of the eyelid preventing this. In the use of my improved eyelash by persons appearing on the theatrical stage, it is found that much time and trouble is saved at each performance in making up the face for stage effect as is the invariable custom. With my device the person may in a moment apply the eyelashes and not have to paint or daub the natural eyelash with certain materials heretofore used, and when the make up is to be removed there is no trouble or delay in stripping off the artificial eyelash and thereby save the annoyance of considerable difficult washing of the eyelash and lash made necessary by the painting processes.

I wish to be understood as not limiting my invention to the particular constructions and arrangements of the several different parts herewith shown, as various modifications may be made in the same, without, however, departing from the spirit of the invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. An artificial eyelash comprising a strip of flexible material having a series of hairs passing through said material and secured to said strip and projecting from a margin of the strip, to form an eyelash.

2. An artificial eyelash comprising a piece of flexible material having a set of hairs projecting therethrough and secured to one face of said piece and the portion of the hairs lying upon the other face of said piece projecting beyond the lateral edge thereof to form the eyelash.

3. An artificial eyelash comprising a strip of flexible material having a group of hairs projecting therethrough and said strip folded in such a way that some of the said hairs will project through the line of the fold.

4. An artificial eyelash comprising a strip of flexible material having a set of hairs extending through the material and said material folded in such a way that some of the said hairs project through the line of the fold and the remaining hairs project through said material adjacent to the said line of the fold.

5. An artificial eyelash comprising a group of hairs and flexible material secured upon opposite sides thereof with the said hairs projecting therefrom.

6. An artificial eyelash comprising folded flexible material having the fold at the front edge and a set of hairs interposed between the folded material and secured therebetween and projecting from the said material.

7. An artificial eyelash comprising folded flexible material and a series of hairs secured thereto and projecting therefrom substantially on the line of fold.

8. An artificial eyelash comprising a strip of flexible material having a series of hairs passing through said material and secured thereto and projecting from said strip, said hairs being set or formed with a permanent curve.

9. An artificial eyelash comprising flexible material and a set of hairs secured thereto and projecting therefrom and having their ends provided with bead-like bodies.

10. The method of forming artificial eyelashes which consists in passing a series of hairs through a strip of flexible material, securing said hairs to said strip and arranging said hairs to project from a margin of said strip, to form an eyelash.

11. The method of forming artificial eyelashes which consists in passing a set of hairs through a strip of flexible material, securing a portion of said hairs and said strip together upon one side of said strip and causing another portion of said hairs to lie upon the other side of said strip and project from a lateral edge thereof to form an eyelash.

12. The method of forming artificial eyelashes which consists in passing a group of hairs through a strip of flexible material, then folding said strip in such manner that some of the hairs of said group project substantially through the line of fold to form an eyelash.

13. The method of forming artificial eyelashes which consists in passing a group of hairs through a strip of flexible material, then folding said strip in such way that certain of the hairs of said group project substantially through the line of fold of said material and the remaining hairs of said group project through said material adjacent those on the line of said fold.

14. The method of forming artificial eyelashes which consists in securing strips of flexible material to the opposite sides of a series of hairs with the hairs projecting substantially from a lateral edge of said material to form an eyelash.
15. The method of forming artificial eyelashes which consists in securing flexible material to the opposite sides of one end of a group of hairs arranged in the form of an eyelash.

16. The method of forming artificial eyelashes which consists in passing hairs through a strip of flexible material along a path intermediate the lateral edges thereof, then folding said strip to bring the plies of the fold against opposite sides of the hairs, and then securing the plies in folded position with the hairs protruding from one lateral edge thereof.

17. The method of forming artificial eyelashes which consists in securing flexible strips to the opposite sides of a series of hairs with the hairs projecting from opposite lateral margins of said strips, and in severing said strips intermediate their edges to form a plurality of eyelashes.

18. The method of forming artificial eyelashes which consists in folding a section of flexible material, then in passing substantially a row of hairs through the plies of the fold along a path spaced from the said line of fold, then in unfolding the plies, then in folding the lateral edges of said section substantially along the path where the section is pierced by the hairs and against the exposed side of said series of hairs, and then severing the said section of material along a line intermediate the turned margins thereof to form a plurality of eyelashes.

19. The method of forming artificial eyelashes which consists in passing hairs through a strip of flexible material along a defined path between opposite edges, then in folding said material on a line along said path and securing one end of said hairs between the plies of said folded material while the other ends project free therefrom.

20. The method of forming artificial eyelashes which consists in passing hairs through a stack of strips of flexible material along a path intermediate the lateral edges thereof, then in separating said strips from each other by moving them along the piercing hairs, and then in folding each strip to bring the plies of the folded material against opposite sides of the series of hairs, and then securing the plies in folded position.

21. The method of forming artificial eyelashes which consists in passing hairs through a set of folded strips of flexible material along a path intermediate the lateral edges thereof, then in spacing the folded strips from each other by moving them along said hairs, then unfolding each strip and turning the lateral edges of the same over upon one side of the series of hairs and severing the hairs between the separated strips, and then in severing the strips longitudinally between the turned over edges to form a plurality of eyelashes.

22. An artificial eyelash comprising a strip of flexible material having a series of hairs passing through said material at substantially uniformly spaced intervals and permanently held so spaced and secured to said material and projecting from a margin of said strip, to form an eyelash.

Signed at New York city in the county of New York, and State of New York, this 27th day of June A. D. 1921.

CHARLES NESSLER.