

United States Patent

Bonham

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[54] **METHOD OF PRODUCING A
HAIRPIECE**

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[52] **U.S. Cl.**.....**156/72**, 156/155, 156/248,
156/249, 156/246, 156/267, 156/303.1, 132/5,
132/53

[51] **Int. Cl.**.....**B32b 5/00**

[58] **Field of Search**.....156/63, 303.1, 72, 249, 248,
156/155, 246, 297, 298, 267, 250, 278; 132/5, 53

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[57] **ABSTRACT**

A method of manufacturing hairpieces which allows them to be rapidly produced but provides a product that is durable, easy to care for and natural in appearance. Hairs are temporarily positioned with a holding means, a base material is positioned around the hairs to permanently secure them in place and the holding means for temporarily positioning the hairs is removed.

8 Claims, 7 Drawing Figures

FIG 1

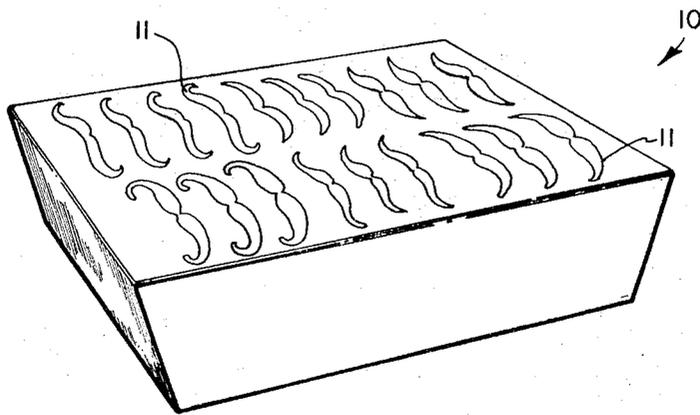


FIG 2

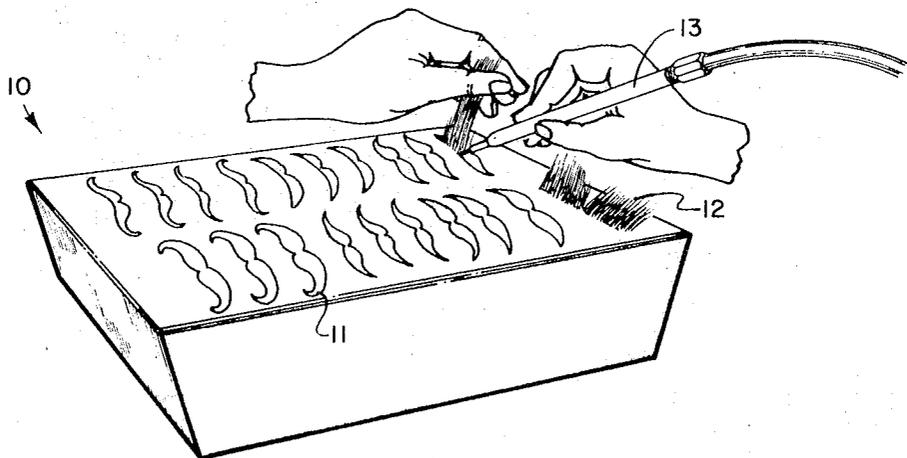
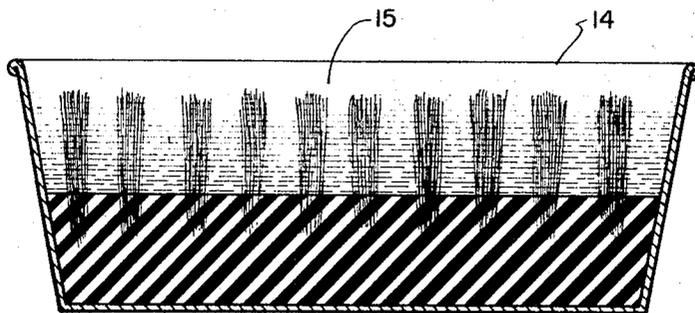


FIG 3



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FIG 4

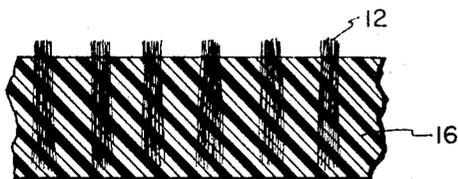


FIG 5

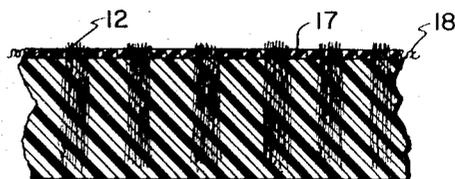


FIG 6

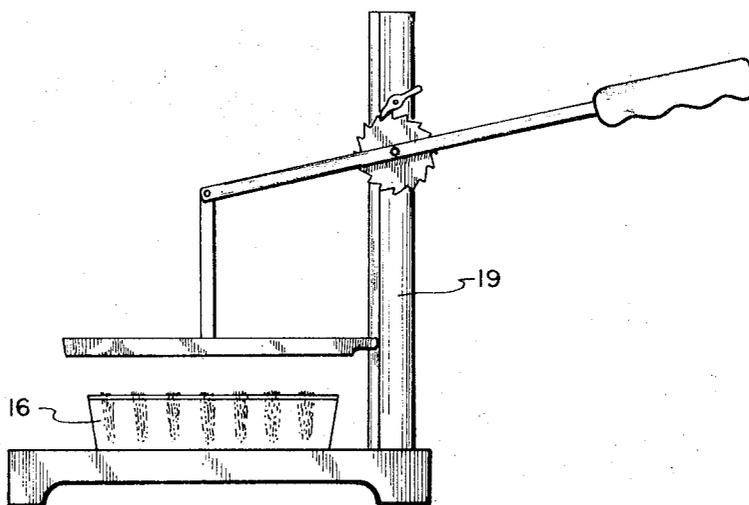
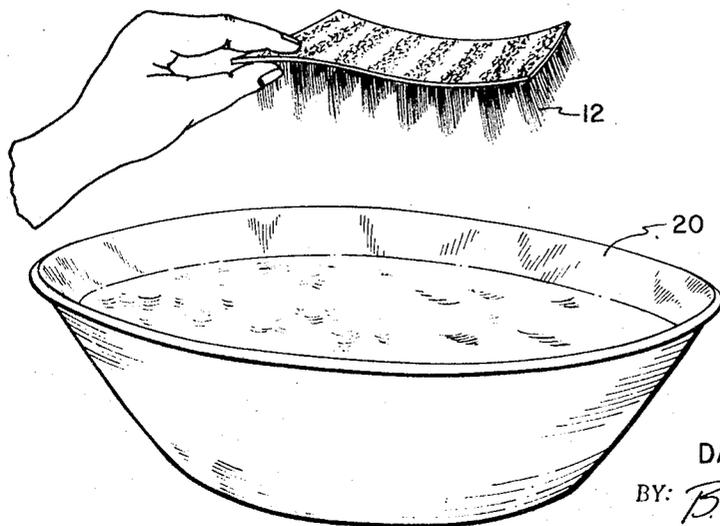


FIG 7



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METHOD OF PRODUCING A HAIRPIECE

BRIEF DESCRIPTION

In the construction of hairpieces it has long been customary to insert hairs through a mesh backing material and to then tie the hairs to hold them in place. Such hairpieces have received some acceptance, but are not used by many persons because of their high cost, which results from the large amount of hand labor and the long time required to make them, the difficulties encountered in properly caring for them, their short life span and because they frequently cannot be made to look natural. The difference in texture and coloring between the wearers skin and the mesh backing material used for the hairpiece is often very apparent and may prove embarrassing to a user.

Recently there has been an increased demand for hairpieces. Men and women are using them to enhance scalp appearance and men are using them for cosmetic purposes as sideburns, mustaches, and beards.

In my co-pending applications for patents, Ser. No. 612,851 filed Jan. 31, 1967 and Ser. No. 744,754, filed July 15, 1968, I have disclosed a hairpiece and a method of manufacture thereof wherein a silicone rubber scalp base has hairs individually inserted and thereafter adhesively anchored. The hairpiece thus produced is very light in weight, natural in appearance, durable and easily cared for. However, the cost of manufacturing this hairpiece in accordance with the process set forth in my aforesaid applications for patents, even though far less than the cost of manufacturing hairpieces having hand tied hairs, still may result in an article having a higher price than the customer may be willing to pay. This is particularly true if the hairpiece is intended to be used rather infrequently for cosmetic purposes, as aforementioned.

Principal objects of the present invention are to provide a more economical method of manufacturing a natural appearing hairpiece and to provide a method that can be readily adapted to assembly line techniques, without sacrificing any of the quality desired of such hairpieces.

Principal features of the invention include the use of elastomeric blocks to receive and hold inserted hairs in a desired pattern; the use of a removable holding material to temporarily rigidly hold the hairs in their inserted pattern as they are removed from the elastomeric blocks; the addition of a suitable backing material to the ends of the hairs that have been removed from the elastomeric block and that are then projecting through the rigid but removable holding material; the pressing of the hair ends such that they are securely anchored into the backing material and the removal of the holding material.

Other objects and features will become apparent from the following detailed description and drawings, disclosing what is presently contemplated as being the best form of the invention.

THE DRAWINGS

FIG. 1 is a perspective view showing an elastomeric block, stamped with patterns to receive hair;

FIG. 2, a perspective view, showing how hairs are inserted into the patterns stamped on an elastomeric block;

FIG. 3, a vertical, longitudinal section taken through an elastomeric block having hairs inserted in patterns stamped thereon, through a curing pan in which the elastomeric block is placed, and through a hypo-solution, holding material, placed in the pan to become solidified over the top of the block and around the individual hairs;

FIG. 4, a vertical section showing inverted hairs arranged in pattern and held in place by the solidified hypo;

FIG. 5, a view like FIG. 4, but showing a backing material applied to the stub ends of the hairs which project through the solidified hypo;

FIG. 6, a side elevation view showing a typical press arranged to anchor the ends of the hairs in the backing material; and

FIG. 7, a perspective view showing the cured backing material, and the hairs therein after the hypo has been removed by dissolving it in a tub of water.

DETAILED DESCRIPTION

Referring now to the drawings:

In accordance with the method of the invention an elastomeric block 10 is provided. An ink stamp, not shown, may be used to outline patterns 11 of hairpieces desired on the face of the block, but it should be apparent that wherever a shape or pattern is to be used it could also be applied with a stencil process, or in other ways, as well.

As shown in FIG. 1, the patterns on the elastomeric blocks 15 are all in the shape of mustaches, but other shapes could as well be used.

While the face of the elastomeric block is here shown as being flat, and this is normally what is used in the production of hairpieces to be worn for cosmetic purposes, i.e. mustaches, sideburns, and beards, it should become obvious that the process hereinafter more fully described can also be employed using an elastomeric block having a curved surface and in some instances, i.e. such as when a hairpiece to be fitted over a scalp is to be made, this may be desirable.

In any event, after the outline of the pattern desired is formed on the block, the hairs 12 are individually inserted into the elastomeric material within the borders of the pattern. This is done in accordance with the teachings of my aforementioned co-pending patent applications, by an operator grasping a handful of hairs in one hand and positioning the ends thereof to rest on the block, within the pattern being made. A reciprocating needle 13, having a blunt end, is held in the other hand and is used to push the stub ends of the hairs into the block. The needle opens a hole for the hair or hairs and pushes them into the block, which then, by virtue of its elasticity, closes as the needle is withdrawn to tightly grip the hairs therein.

When a sufficient number of hairs have been inserted into one pattern the operator moves to the next until each pattern on the block has been completed. Even a relatively untrained operator can complete the insertion of the hairs into the patterns in a rapid fashion.

After all of the patterns on the block have been completed, i.e. have had the stub ends of a sufficient number of hairs of proper length inserted within their borders, the block is placed in a curing pan 14, FIG. 3. The pan 14 conforms in shape to the periphery of the block, but it is deeper than is the block.

Thereafter a solution of suitable solidifiable material 15, FIG. 3, is flowed in its liquid state into the pan, over the surface of the block and around each of the individual hairs. The material 15 is then allowed to solidify so that it holds each hair securely in position.

After the solidifiable liquid has hardened into a solid holding mass 16, FIGS. 4 and 5, the holding mass, with the hairs, is pulled away from the block which, because of its elasticity, does not grip the hairs as tightly as does the solid holding mass.

A suitable backing material is placed over the solid holding mass and the stub ends of the hairs projecting from the mass are secured thereto.

Because of its natural feel and appearance and because it can be spread over the holding mass in liquid form to thereafter cure to a flexible solid condition, silicone rubber is ideally suited as a backing material.

As shown in FIG. 5, a thin layer 17 of silicone rubber in liquid form is flowed over the holding mass and around the hairs. In addition, if desired, a layer 18 of mesh fabric material can be placed over the rubber and, as the rubber cures, the mesh can be worked therein until the rubber moves into and through the interstices and securely holds it in place. The mesh then reinforces the rubber.

Since the rubber layer 17 is not subjected to perforation by insertion of hairs therethrough, an extremely durable hairpiece results, even without the use of the mesh.

When a thin layer of rubber is used as the backing material it is very translucent and takes on the complexion coloring of the user. It is therefore difficult to observe when worn by a user and results in a very natural appearing hairpiece.

The holding mass 16, hairs 12, silicone rubber 17 and mesh 18, if it is used, are placed in a press 19, FIG. 6, and pressure is applied until the rubber has fully cured. The application of pressure embeds the ends of the hairs in the rubber such that they do not loosen even after the hairpiece has been extensively used and even though it is repeatedly washed in water.

After being removed from the press the holding mass, hairs, mesh material and rubber are placed in a container 20 full of water and the holding mass 16 is allowed to dissolve. Thereafter, the hairs and the backing material are removed as a sheet (see FIG. 7) and are allowed to dry.

The desired hairpieces are then obtained by cutting through the backing material, around the hairs, which are already in approximately the desired pattern.

If desired, a backing paper having corresponding outline shapes can then be placed against the smooth side of the backing material and an operator can cut around the shapes on the backing papers to finally shape the hairpieces. The use of the backing sheets, with corresponding outlines is particularly advantageous in the forming of mustaches since it allows even an unskilled operator to more rapidly trim many different mustache shapes. In any event, it is anticipated that the user will provide the final trim to the hairpiece, so that it will be fully satisfactory to him.

Any suitable material may be used to solidify around the hairs and to hold them while they are removed from the elastomeric block, the mesh and rubber materials are applied, and the rubber is cured, provided that it does not damage the hairs and that it can be dissolved or re-liquified and removed. However, I have found that sodium thiosulfate, i.e. hypo, is very satisfactory. This material has no adverse effects on the hair, readily liquifies from its powder form when heated to a low temperature and thereafter solidifies as a large mass when it cools. Thereafter, it readily dissolves in water.

With the method of manufacture herein described, hairpieces can be readily produced using assembly line techniques. For example, one worker can prepare the elastomeric blocks and insert the hairs therein. Another worker can place the elastomeric blocks and hairs in the curing pans, liquify the holding material and place it in the curing pans over the elastomeric blocks therein and around the projecting hairs, and remove the contents from the curing pans. Still another worker can remove the solid holding masses and hairs from the elastomeric blocks, add the rubber and, if desired, the mesh, or other suitable materials making up the backing material, place the holding mass, hairs, and backing material in a press, remove the assembly after the backing material has cured, place it in water to dissolve the holding mass and hang the backing member with its anchored hairs to dry. Finally, a worker can cut around the hairs to give a hairpiece that is of desired shape, and that is then ready to be marketed. Obviously other work assignments can be scheduled

into such an assembly line processes or the work schedule can be varied, but it should be obvious that some form of assembly line technique can be readily utilized.

Although a preferred form of my invention has been herein disclosed, it is to be understood that the present disclosure is made by way of example and that variations are possible without departing from the subject matter coming within the scope of the following claims, which subject matter I regard as my invention.

I claim:

1. A process of making a hairpiece which comprises the steps of inserting hairs into an elastomeric block in a desired pattern;

spreading a solidifiable holding material in liquid form around the hairs and over the block;

during said holding material until it forms a solid holding mass, tightly gripping the said hairs;

removing the holding mass and hairs from the elastomeric block;

securing a backing member to the ends of the hairs at the side of the holding mass from which the block has been removed such that the ends of the hairs are embedded in the backing member; and

dissolving the holding mass such that the backing member is left with hairs projecting therefrom.

2. A process as in claim 1, wherein the holding material is sodium thiosulfate.

3. A process as in claim 1, wherein the elastomeric block and hairs are placed in a curing pan before the holding material is spread over the block and around the hairs projecting from the block.

4. A process as in claim 1, wherein the backing member is rubber, spread, while in liquid form, against the holding mass before the holding mass is removed and around the ends of the hairs removed from the elastomeric block and thereafter cured to a solid form.

5. A process as in claim 4, wherein the rubber is cured under pressure, whereby the ends of the hairs are more tightly embedded therein.

6. A process as in claim 5, further including the step of cutting away excess backing material from the hairs to obtain a desired hairpiece configuration.

7. A method of making a hairpiece comprising temporarily securing hairs in a desired pattern with a temporary holding means by inserting the ends thereof into an elastomeric block in a desired pattern and by thereafter flowing a holding mass in liquid form around the hairs, solidifying the holding mass and removing the holding mass and the hairs from the elastomeric block.

placing a base material around the hairs to permanently secure them in the desired pattern; and removing the temporary holding means.

8. The method of making a hairpiece, as in claim 7, wherein the base material is placed around the ends of the hair that have been withdrawn from the elastomeric block.

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