

UNITED STATES PATENT OFFICE.

ADOLPH S. LANDAU, OF BOSTON, MASSACHUSETTS.

PROCESS OF TREATING FURS.

984,940.

Specification of Letters Patent.

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No Drawing.

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To all whom it may concern:

Be it known that I, ADOLPH S. LANDAU, a subject of the Emperor of Austria-Hungary, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Processes of Treating Furs, of which the following is a full, clear, and exact description.

This invention is a process for transferring natural fur or hair from the skin or pelt on which it grew to another skin, base or backing of the same or different material, while incidentally, if desired, making the final product of a different size or shape from that in which it originally existed as a natural fur skin. A process of this character obviously affords many advantages. In the first place, it permits of the substitution of an inferior skin or backing for the original skin which is oftentimes valuable as leather. In the second place, it permits of changing the shape of the original skin or a portion thereof to adapt it for certain purposes or to fit into certain places in a garment. In the third place, it renders it possible to distribute the normally thick fur of a natural skin over a larger area of a substituted skin or base, thereby increasing the size of a piece of fur at the often negligible expense of thinning the fur. In the fourth place, it permits of the contraction or reduction of the size of a piece of natural fur, so as to produce a piece of smaller size, but thicker quality. In the fifth place, it permits of the shifting of the hairs of a body of fur from one position to another, so as to improve or change the markings of the natural fur. In the sixth place, it permits of piecing together the fur of a number of skins onto a continuous backing or base of indefinite size, without any seams in said backing. Other advantages also flow from the use of this invention, which it is not necessary to enumerate herein.

In carrying out my improved process, I proceed as follows: I prepare a compound of the following materials and proportions:

Lime	15% by weight
Sodium sulfid	20% " "
Sodium hyposulfite	65% " "

Heating this compound reduces it to a pasty mass in which condition it is to be used. I then take a natural fur bearing skin

before it has been tanned or cured and I wash or otherwise remove all grease and dirt from the hair. I then thoroughly impregnate the hair or fur with the above described compound, being careful to saturate the mass of hair from the roots to the tips and bringing the compound into contact with the surface of the skin in which the hair is rooted. The compound is preferably applied by means of a syringe with which it can be driven into all the interstices of the fur. The skin is then set aside and the liquid compound allowed to dry and harden, when the fur is found to be closely cemented and matted together, the hairs being anchored or held to each other in the original position they occupied upon the skin when the liquid application was made. This liquid compound not only serves to mat the hair together, but also to affect the skin in such a way as to loosen the roots of the hair. Then I strip the skin from the body or mat of hair by merely grasping one edge of the skin and forcibly drawing upon it while firmly holding the mat of hair. The skin is thus readily removed by the exercise of but little force. When the hair is thus removed from the skin it retains its former matted condition and can be handled as a whole quite easily, without disarranging the hairs or separating them from one another, but the root of each hair is free and uncovered. The mat of hair or fur thus obtained is obviously of the same shape and size as it originally existed in.

If now it is desired merely to apply the mat of hair or fur to a backing or base so as to permit of the use of the separated and more valuable skin for leather purposes, a backing of textile fabric of any character, such as cloth, silk or felt, or a cheap quality of leather can be applied to that side of the mat of hair from which the original skin has been removed. This application can be made by the simple process of gluing the backing thereto, and any efficient glue or cement will serve the purpose. A heavy coat of the glue should be applied both to the backing and to the root side of the mat before the two portions are pressed together. The glue thus interposed between the backing and the surface of the mat takes hold of the root end of each hair in the mat, and anchors it to the base or backing. A suitable glue for this purpose is made of the

following ingredients which, however, I do not confine myself to:

5	Asphalt -----	1	pound
	Rubber -----	8.5	pounds
	Sulfur -----	2.2	"
	Tar and black pitch ---	2	"

These ingredients to be dissolved to a suitable consistency in naphtha. When the glue is thoroughly dried, the compound with which the mat is impregnated is removed by heating and washing, in which operation a large part of the materials may be saved for subsequent use on other furs. This leaves the final product consisting of natural fur with an artificial or substituted backing.

If in transferring the fur to a different backing, it is at the same time desired to alter the shape of the piece of fur, it is accomplished by gluing an elastic backing to the mat, such for instance, as a piece of knitted fabric which is capable of being laterally stretched to a considerable extent. The glue is applied to the surface of this fabric, and also to the surface of the mat as before described, and the two parts pressed together. When the glue is dry the compound with which the mat is impregnated is removed, thus freeing the hairs from each other, but leaving them still attached to the elastic backing. Then the elastic backing is stretched or contracted in any desired direction to alter the shape of the mat, and while held in this altered shape, the compound is again applied to the hair or fur and after drying the flexible backing may be removed by simply tearing it away from the mat. Then while the hairs are still confined in the new form by the compound, the final backing of cloth or leather is glued to the mat, after which the compound is removed and the product is completed in its new shape.

If it is desired to produce a piece of natural fur which is larger than that of the original skin, a temporary elastic backing of the same character as above described is used in exactly the same manner as before, except that instead of merely altering the shape by slightly contracting and stretching the backing in different places, the entire backing is to be stretched in all directions. This obviously separates the hairs or fur to some extent and produces a finished fur of thinner quality or texture, but with the same markings, coloration and shape as the original fur.

If instead of increasing the size of the fur, it is desired to decrease it, as may be the case when the original fur is thin and a thicker or better quality is desired, this operation is performed with the intermediary elastic backing as before. But instead of gluing the backing to the mat before the backing is stretched, the backing is first stretched and

then glued to the mat, after which the hairs of the mat are loosened by removing the compound, whereupon the elasticity of the backing draws the structure together and contracts the hairs or fur into more intimate or closer relation, the mat as a whole then being reduced in size to the extent of the elasticity of the temporary backing. When the fur has again been anchored by means of a fresh application of the compound, the temporary backing may be stripped off and the final backing applied, after which the compound is removed leaving a piece of natural fur of much finer quality, but of smaller size than the original. In any event, whether the backing be contracted or stretched, or otherwise altered in shape or size, I may define such action broadly by stating that relative distances between points in said backing are altered.

If it is desired to piece together the fur from a number of skins on to a single continuous backing, such as a strip or sheet of cloth or felt, so that a comparatively large area of fur can be obtained without any seams in the backing, all that is necessary to do is to apply the glue to the strip or sheet of backing and successively to the various mats of hair or fur which have been removed from their natural skins, and then secure said mats one after another to the continuous strip or sheet, fitting them close together, edge to edge, so as to render the joint as nearly invisible as possible. When this operation is completed, the compound can be removed from the various mats, leaving a large sheet or strip of practically continuous fur without any seams in the backing. Out of such a strip the various gores, forms, or other pieces necessary to make up a garment may be cut to advantage and without the necessity of resorting to piecing.

My invention obviously is not confined to the use of any particular compound for anchoring the hairs of the fur in their natural position before the skin is removed, as any compound which will serve the purpose, or other means, mechanical or otherwise, which may be devised to thus temporarily hold the hairs in place will serve all of the purposes of my invention. It is likewise obvious that my invention is not limited to the removal of the fur or hair from the skin by pulling it out by the roots, since after the hair has been matted together it may be severed from the skin by cutting, shearing, burning, or in any other manner, but I prefer to remove it in the manner herein described, that is, by weakening the anchorage of the roots of the hair in the skin, and then forcibly drawing the two apart. It is likewise obvious that the temporary elastic backing may be of any other construction that that of a knitted fabric. Some forms of elastic webbing containing

rubber might be used, and in fact plain sheet rubber will serve very well for this purpose.

It will be observed that in transferring the natural fur from its original skin to a different backing, the relation of the individual hairs is not altered, so that the stripes, spots, and other variety of colorings or "markings" of the original skin need not be disturbed. But in cases where the markings are unsymmetrical or imperfect, alterations of their configurations may be made by stretching or contracting the temporary backing locally. Thus a crooked stripe can be made straight, or a straight stripe can be made curved or crooked, or in an irregular field of color can be made regular or given any desired shape. Any such changes which are permitted by the elasticity of the temporary backing can readily be made.

What I claim, is:

1. The process herein described consisting in removing the fur from the skin on which it grew while maintaining the hairs of the fur in their original relation to each other, then securing the body of fur while thus held to an elastic base or backing, then releasing the hairs from each other, then altering the shape of the elastic backing, then again securing the hairs in their new relation to each other, then removing the elastic backing and applying a permanent

backing to the body of hairs, and finally releasing the hairs from each other.

2. The process described consisting in separating fur from the skin on which it grew without altering the relative arrangement of the hairs of the fur, then opening up or separating the individual hairs to increase the total area of the fur and finally securing the hairs thus rearranged to a suitable base or backing.

3. The process described consisting in securing fur hairs to a suitable backing, then altering the relative distances between points in said backing, then removing the backing without altering the relative positions of the hairs and finally securing a substantially inelastic backing to the hairs, substantially as described.

4. The process described consisting in separating fur from the skin on which it grew without altering the relative arrangement of the hairs of the fur, then securing a substitute elastic backing to the fur, then stretching said backing to open up or separate the hairs of the fur and finally fixing the hairs in their separated condition.

In witness whereof, I subscribe my signature, in the presence of two witnesses.

ADOLPH S. LANDAU.

Witnesses:

WALDO M. CHAPIN,
JAMES D'ANTONIO.