METHOD FOR FIXING A LINING

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Filed: July 19, 1971
Appl. No.: 163,694

Foreign Application Priority Data
July 20, 1970 France 7026609

U.S. Cl. 156/57, 156/60, 156/324, 156/338, 156/550, 156/551, 161/88, 161/67
Int. Cl. C09J 3/12
Field of Search 2/272; 117/163; 156/57, 68, 72, 310, 314, 315, 324, 338, 307, 550, 551; 161/66, 67, 82, 88, 144, 156

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ABSTRACT
Method for fixing a lining to a surface of a fur, leather, hide, skin or animal fibre article, comprising bringing the surface of the lining and the surface of the article in face-to-face relation, spraying an adhesive latex on at least one of these surfaces at room temperature and pressing the two surfaces together.

10 Claims, 1 Drawing Figure
METHOD FOR FIXING A LINING

The present invention relates to the fixing of linings on natural materials and more particularly to a method for fixing linings on fur, leather, hide or skin by adhesion.

A fur, for example, is usually lined by adhering a canvas or reinforcing fabric on the flesh side thereof. According to known methods, this adhesion is carried out at a relatively high temperature, which deteriorates the treated fur, and by using adhesive products which are soluble in conventional cleaning products so that this precludes the subsequent cleaning of a fur or skin lined in this way.

The present invention has for object to remedy these drawbacks. The invention provides a method for fixing a lining on a surface to be lined, comprising bringing the surface to be lined and a surface of the lining in face-to-face relation, spraying an adhesive latex on at least one of the surfaces at room temperature and pressing the two surfaces together.

Advantageously about 40-50 g of prevulcanized natural latex per square metre are employed.

A surprising result is obtained in that an excellent adhesion is achieved, which imparts a remarkable tear resistance to the assembly, by operating at room temperature, owing to the specified adhesion agent. The fur, leather or other material is therefore no longer deteriorated by a hot treatment. Moreover, the latex resists the action of conventional cleaning solvents.

The method according to the invention will now be described in more detail.

The facing surfaces of the lining and material to be lined have the adhesive applied thereon, preferably at the same time, by spraying of a latex.

Immediately after this application of latex, the two surfaces are put in contact with each other by means of a pressing roller. The time during which the roller is applied can vary over a wide range. Good results have been obtained with a time of about 8-20 seconds.

As already mentioned, the method is carried out at room temperature, for example about 20°C.

There may be added zinc oxide latex (1-5 percent) and an antioxidant agent (0.1-1 percent).

It is possible in this way to line all kinds of furs and even leathers, hides or skins or natural fibres by means of the method according to the invention. It will be understood that it is advisable to adapt the reinforcing lining to the type of material treated. This lining can be a canvas, a percale or any other fabric or cotton fibre or even wool fibre.

The ensuing description of an apparatus for carrying out the method according to the invention will bring out the features and advantages thereof. This apparatus is shown in diagrammatic side elevation in the single FIGURE of the accompanying drawing.

This FIGURE shows an apparatus having a frame 1 fixed to a preferably vertical fixed support 2. An adjustable member 3, secured to a part of the frame remote from the support 2, supports a spindle 4 on which a roller 6 is freely rotatable. An endless conveyor belt 8 extends around the roller 6 and around a second roller 10 having a shaft which is connected to a drive motor (not shown). The second roller 10 is supported by the frame 1 through brackets 14 having apertures 15 through which fixing bolts 16 extend for fixing the brackets to the frame. Thus the tension of the belt 8 can be easily adjusted by modifying the position of either of the rollers 10 and 6, that is, by shifting the brackets 14 or the member 3 with respect to the frame 1.

The apparatus further comprises other rollers of smaller diameter, namely a roller 18 mounted on the end of arms 19 secured to the upper part of the frame 1, and a roller 20 supported on posts 21 which extend upwardly adjacent each end of the roller 10. A curved pressing member 12, whose curvature is in the neighbourhood of that of the roller 10, is mounted between the latter and the roller 10.

When a lining is to be fixed, for example to a fur, this fur 22 is placed on the belt 8 with the flesh side uppermost and gradually fed from the roller 6 to the roller 10. The lining 24, which is stored on a reel (not shown), is unrolled around the roller 18 and the roller 20 and inserted under the pressing member 12. Thus the lining and the fur arrive simultaneously in the region of the pressing member. Their facing surfaces are then sprayed with an atomized stream of latex by means of a hand spraying device 25 or the like.

The lining and the flesh side of the fur are thus simultaneously provided with an adhesive in the same way and at room temperature. As the spraying is being carried out, the roller 10 continues to rotate and drives along the fur and adhering lining and the pressure member 12 applies them against each other.

The operating speed and the dimension of the pressing member 12 are so chosen as to achieve a sufficient adhesion and a suitable duration of passage under the pressure member 12.

The following examples illustrate the invention, it being understood that the scope of the invention is not intended to be limited thereby.

EXAMPLE 1

There is applied on a fur composed of pieces of rat fur assembled by numerous stitchings, a percale having the following characteristics:

Cotton warp thread 24
Weft thread 15
Thickness of the warp thread 56
Thickness of the weft thread 74
Weight/linear metre at a width of 85 cm 54/55 g
by means of a natural latex having 62 percent solid materials and 0.5 percent anti-oxidizing agent and 3 percent zinc oxide in ammoniated water. 45 g of latex per square metre of fur and percale are applied.

After passage of the adhered assembly under a pressure roller for 10 seconds, the assembly is allowed to dry for 2 hours.

A very strong fur is obtained which resists the action of trichlorethylene, alcohol and gasoline.

EXAMPLES 2 to 4

The example 1 is repeated, but the rat fur is replaced by respectively furs from astrakan paws, mink pieces, kid paws, leathers or skins of goats or sheep. Comparable results were obtained.

EXAMPLE 5

There is applied on sheets of kid skins, assembled into a skin, a percale having the following characteristics:

Cotton warp thread 24
Weft thread 18
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Warp thread thickness 56
Weft thread thickness 74
Weight per linear metre for a width of 65cm 50 g
by means of a latex having 65 percent of solid materials
as in example 1.
A fur is obtained which has a good resistance to tearing and to the action of solvents.

EXAMPLES 6 AND 7
There is applied to two elongate furs of mink and beaver a Nansouk percaline having the following characteristics:
Warp thread 30
Weft thread 34
Warp thread thickness 120
Weft thread thickness 120
Weight per linear metre for a width of 85cm 48 g
The flesh sides of the furs and one of the surfaces of the percaline have an adhesive respectively applied thereon in an amount of 50 g per square metre by a spraying operation.
The assembly is passed under a pressure roller for 12 seconds. The fur is ready for use.
The method is preferably carried out on an already nailed fur but a lined fur can be once again wetted and renailed after repairs.
Although this method is of particular interest in the case of furs and the examples given concern furs, it must be understood that as the treatment is carried out on the flesh side it can employed in the same way for fixing linings on other skins or on leather. Thus it is possible to obtain skins and furs having great strength and at the same time high flexibility and lightness.
Further, it is easy to give them a clean, neat and pleasant appearance on both the skin and lining side and thus render them practically reversible. The adhesive latex is indeed solely sprayed on the two surfaces to be adhered to each other and leaves the other faces perfectly unaffected.
In some cases, the method of the invention can also be employed for lining natural fibres, such as wool or cotton, with a lining of cotton or wool and thus form a reversible fabric which resists the action of cleaning solvents.

Having now described my invention what I claim and desire to secure by Letters Patent is:
1. A method for fixing a lining or percaline on a fur or other animal skin, comprising bringing the flesh side of the fur and the surface of the percaline in face-to-face relation, spraying an adhesive latex on at least one of the surfaces, at room temperature, and pressing immediately the two surfaces together.
2. A method as claimed in claim 13, comprising spraying the latex simultaneously on the surface to be lined and on the lining.
3. A method as claimed in claim 13, comprising spraying 40 to 60 g of latex per square metre of surface.
4. A method as claimed in claim 13, wherein there are at least 60 percent solid materials in the latex.
5. A method as claimed in claim 13, wherein the latex is a natural latex.
6. A method as claimed in claim 4, wherein the serum of the latex is ammoniated water.
7. A method as claimed in claim 3, wherein the latex is prevulcanized.
8. A method as claimed in claim 13, wherein the lining is a cotton fabric.
9. A method as claimed in claim 13, wherein the lining is a wool fabric.
10. A method as claimed in claim 13, comprising, after pressing the two surfaces together allowing them to dry during a lapse of time between a few seconds and a plurality of hours.

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