

UNITED STATES PATENT OFFICE

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FELTING PROPERTY OF ANIMAL HAIR

No Drawing. Application filed January 2, 1929, Serial No. 329,963, and in Germany January 9, 1928.

My present invention relates to a process for improving the felting property of animal hair. More particularly, it relates to a process of treating animal hair before the felting process with a solution of a fluorine compound. ing 4 grams of ammonium fluosilicate per liter. Then they are dried at about 40°. The skins thus treated have as good a felting property as when treated with nitrate of mercury and yield according to the usual processes solid felt hats.

The natural animal hair used for manufacturing hair felts does not have sufficient felting property and must therefore be subjected to a preliminary treatment to improve this property. The mordant generally used for this purpose is nitrate of mercury. It has been used in spite of its well known poisonous action (see for instance Syrup, Handbuch des Arbeiterschutzes und der Betriebssicherheit, Vol. II, page 324) because no suitable substitute was known hitherto, as the other metallic compounds proposed for this purpose do not sufficiently improve the felting property of hair.

I have now found that hair felts in a very favorable manner and yields a good fulling when treated with a solution of a fluorine compound. Solutions of hydrofluoric acid or fluosilicic acid or of their salts may be employed as such mordants.

By my process the employment of the very poisonous and expensive nitrate of mercury can be avoided in manufacturing hats. A further very important advantage of my process is the fact that the natural shade of the hair is not changed by the fluorine compounds, whereas the mercury mordant and especially the so-called yellow mercury mordant colors the hair full yellow and prevents the possibility of dyeing it clean shades.

The hair may be subjected to my process either on the skin or already cut or also in the first stage of felting.

In order to further illustrate my invention the following examples are given, the parts being by weight and all temperatures in centigrade degrees, but it is to be understood that my invention is not limited to the particular products or reacting conditions mentioned therein.

Example 1

Skins are spread in the customary manner by means of brushes with a solution contain-

Example 2

100 parts of rabbit or hare hair are treated at 30° for 1-2 hours with 1000 parts of a solution containing 2-4 parts of potassium bifluoride. Then the goods are centrifuged and dried at a moderate temperature.

The hair thus prepared felts well, does not show the yellowish shade of hair treated with nitrate of mercury and is well suited for manufacturing solid felt hats.

I claim:

1. A process which comprises treating animal hair before the felting process with a solution of a fluorine compound.
2. A process which comprises treating animal hair before the felting process with a solution of a fluoride.

In testimony whereof, I affix my signature.

RICHARD HAYNN.

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