Patented Oct. 17, 1933 1,931,355

UNITED STATES PATENT OFFICE

1,931,355

PROCESS OF TREATING FURS

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No Drawing. Application March 8, 1932, Serial No. 597,645, and in Germany March 17, 1931

8 Claims. (Cl. 149—28)

The invention relates to a process of improving furs by extending or straightening the hair by treating the skin with formic acid, acetic acid, etc.

It is true that it has previously been proposed in improving furs to use acetic acid or formic acid for enhancing the lustre, and acetic ether, to which it has been customary to add other substances, has also been employed for the same purpose. This treatment, which was intended to impart to the pelt the so-called lustre had to be carried out, however, with dilute aqueous acids in order to attain the desired object.

In contradistinction thereto, in the process according to the invention, for the purpose of attaining a fundamentally different object, namely the straightening of the hair and more particularly the under-hair, the formic acid or acetic acid (i. e. lower saturated aliphatic acid) employed in the process should be used in the technically water-free or anhydrous condition, and a dilute solution of the acid in acetic ether should not be used. On the contrary, formic acid is used for example in the form of a saturated solution of the acid, containing not more than about 5% of water, in benzine containing about 1.4 per cent of formic acid; or acetic acid in the form of a 20 per cent solution in the same solvent. The pure, water-free acids may also be used, but this, however easily leads to injury to the hide. The process should be carried out either by immersing the skins in question in the solution, or the vapour of the solution may be allowed to act upon the skins, if desired, with slight heating. In the latter case, it is preferable to heat the room, in which is situated the material to be treated, to a temperature of about 40° C.

The effect of the process differs according to whether the skins have smooth hair or whether they have naturally curly hair.

In the case of naturally smooth hair, the process will be employed to advantage for very different sorts of skin if the under-hair has become curly and tangled under the action of the dressing operation, for example on American opossum, marmot, rabbit, squirrel or the like. Such skins are preferably immersed at room temperature in a formic acid bath of the above-mentioned composition, and the desired effect is observable generally after only a quarter of an hour. A longer time, for example eight hours or more, is required in the acetic acid bath. If the vapour of the said liquids is used, the effect, if it is to be durable, requires several hours at 40° C. as a rule. The length of time required for the effect is not quite the same, depending upon the type of pelt and its previous treatment, and must be found by trial in each particular case.

Skins with curly hair, more particularly sheep skins, react to the process, irrespective of the form in which it is employed, in the case of considerable intensity, by complete straightening of the hair, such that, for example, it is possible to impart the character of a muffon to a slink. Whether this last process is economical will depend upon the fashion, that is to say, upon whether at a certain moment straight hair is prized more highly for such fur trimming than curly hair. In the case of many sheep skins however the process, if applied in the correct manner, is valuable in any case. With certain astrakhan skins, which have very close corkscrew curls, the curls loosen in a certain stage of the process until the skin acquires the character of Persian lamb. What is most important however is that with Persian lamb which has suffered by the dressing operation and above all by bleaching, the hair recovers its former Persian lamb character when the new process is carried out in a correctly controlled manner.

In addition, the hair of skins which have a dead appearance due particularly to bleaching regains its original character. The hair is lustrous as it is called in the art, and the opaque appearance of many overbleached skins is again replaced by the original optical character. The most important phenomenon of the new process, however, is at all events the straightening of the hair in contradistinction to the mere production of "lustre" which was attained by the processes known heretofore.

As compared with the old process however there is a fundamental difference not only in effect but also in the modes of procedure.

In the old process, either water or ethyl acetate (acetic ether) was employed as solvent for the acid. In the present process both these substances have a harmful effect. This effect can best be demonstrated with sheep skins, for example slink. On dipping pieces of slink in a saturated solution of formic acid in benzine, the hair straightens at room temperature within a quarter of an hour. If 5 per cent. by volume of ethyl acetate (acetic ether) is added, the straightening within the stated time is much less pronounced, and if 10 per cent. is added instead, there is no straightening at all. If ethyl

acetate (acetic ether) is employed as solvent for formic acid, there is not even a trace of the characteristic effect to be seen. Exactly the same inhibiting effect as that exerted by ethyl acetate (acetic ether) is observed on using diethyl ether, ethyl alcohol and acetone. Here again, an addition of 5 per cent. is tolerable, but a greater addition is not. Acetaldehyde is still permissible in a concentration of 10 per cent. but it also inhibits the effect when the concentration is greater.

As principal diluents for the acids, it is possible to employ hydrocarbons other than benzine, such as benzene or the like. Completely or partly chlorine-substituted hydrocarbons, such as chloroform or carbon tetrachloride may also be used.

Water should not be used for dilution, but according to what has been stated hereinbefore, oxygen-containing organic substances may be added in concentrations of less than 15 per cent. In practice, the addition of smaller quantities only, of up to 5 per cent., will come into consideration. In this dilution, they may be used if desired for retarding the process.

What is claimed,

1. The process of treating furs for extending or straightening the hair, which includes treating skins with substantially anhydrous lower aliphatic acid.

2. Process as in claim 1, in which the treating occurs with substantially anhydrous formic acid.

3. Process as in claim 1, in which the treating occurs with substantially anhydrous acetic acid.

4. Process as in claim 1, characterized in that the acid is in solution in a hydrocarbon.

5. Process as in claim 1, characterized in that the acid is in solution in a chlorine-substituted hydrocarbon.

6. Process as in claim 1, in which the treating occurs in the presence of an oxygen-containing organic substance, in a concentration of up to 15 percent, for retarding the process.

7. The process for treating furs for extending or straightening the hair, which includes treating the skins by immersion in a substantially anhydrous solution containing lower aliphatic acid.

8. The process for treating furs for extending or straightening the hair, which includes treating the skins by exposure to the vapors of substantially anhydrous lower aliphatic acid.

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