

UNITED STATES PATENT OFFICE

2,399,559

TREATMENT OF MIXED TEXTILE FIBERS

John Hunter McKeown, Kilderry, Gibbet Hill,
Kenilworth, and William Penn, Sapcote, Eng-
land, assignors to Courtaulds Limited, London,
England, a British company

No Drawing. Application September 8, 1942,
Serial No. 457,687. In Great Britain October
27, 1941

6 Claims. (Cl. 8—130.1)

This invention relates to the treatment of mixed textile fabrics and in particular to fabrics containing both animal fibers and fibers of regenerated cellulose. It has already been proposed to subject a fabric comprising both animal and artificial fibers to treatment whereby the proportion of animal fibers in the surface of the fabric is increased at the expense of the proportion of animal fibers in the body of the fabric.

We have now found that mixed fabrics containing both wool and fibers of regenerated cellulose can be improved in respect of their handle and appearance if they be treated at or near the boiling point with a dilute solution of a sulphonated higher fatty alcohol, or sulphonated higher fatty acid or an ester of either of these compounds in the presence of an ammonium salt under such conditions that the treatment commences in weakly alkaline solution but, owing to the loss of ammonia during the treatment, finishes in weakly acid solution. By the treatment according to this invention, the material, consisting for instance of equal parts of wool and viscose staple fiber, assumes a more woolly appearance and a warmer handle. The invention is particularly applicable to woven or knitted mixtures of wool and viscose staple fiber which are intended for use in the preparation of garments for underwear.

The following example will illustrate the nature of the present invention although the invention is not restricted to the example.

Example

Circular knitted fabric containing a yarn in which equal parts of wool and viscose staple fiber have been blended is treated on a winch, for one hour at the boil, in a bath containing in each litre 2 grams of Lissapol A paste as sold by Imperial Chemical Industries, and consisting of sulphuric acid esters of higher fatty alcohols, such as cetyl, palmityl, oleyl and other types, and 1.5 grams of ammonium acetate, the ratio of the material treated to the liquor being 1 to 30. The pH of the liquor at the start is 7.2 and at the end 6.8. After treatment the material is washed in cold water and dried, and then possesses a wool-like appearance and a warm handle.

What we claim is:

1. A process for improving the handle and appearance of mixed fabrics containing wool and fibers of regenerated cellulose which comprises treating the said fabrics at substantially the boiling point with a dilute weakly alkaline solution of an ammonium salt of an acid which is non-gaseous at the ordinary and boiling temperature and at least one compound selected from the group consisting of sulphonated higher fatty alcohols, sulphonated higher fatty acids and sulphonated higher fatty acid esters and continuing

the treatment until the treating solution has become weakly acid.

2. A process for imparting a warm handle and wool-like appearance to a mixed fabric containing approximately equal parts of wool and viscose staple fiber which comprises treating the said fabric at about the boiling point with a dilute weakly alkaline solution of an ammonium salt of an acid which is non-gaseous at the ordinary and boiling temperature and a compound selected from the group consisting of sulphonated higher fatty alcohols, sulphonated higher fatty acids and sulphonated higher fatty acid esters and continuing the treatment until the treating solution has become weakly acid.

3. A process for imparting a warm handle and wool-like appearance to a circular knitted fabric containing approximately equal parts of wool and viscose staple fiber which comprises treating the said fabric for one hour at the boil with a dilute solution containing initially per litre 2 grams of a sulphuric acid ester of a higher fatty alcohol and 1.5 grams of ammonium acetate, the pH of the liquor at the beginning of the treatment being 7.2 and at the end of the treatment about 6.8.

4. A process for improving the handle and appearance of mixed fabrics containing wool and fibers of regenerated cellulose which comprises treating the said fabrics at substantially the boiling point with a dilute weakly alkaline solution of an ammonium salt of an acid which is non-gaseous at the ordinary and boiling temperature and a sulphuric acid ester of a higher fatty alcohol and continuing the treatment until the treating solution has become weakly acid.

5. A process for imparting a warm handle and wool-like appearance to a mixed fabric containing approximately equal parts of wool and viscose staple fiber which comprises treating the said fabric at about the boiling point with a dilute weakly alkaline solution of an ammonium salt of an acid which is non-gaseous at the ordinary and boiling temperature and a sulphuric acid ester of a higher fatty alcohol and continuing the treatment until the treating solution has become weakly acid.

6. A process for imparting a warm handle and wool-like appearance to a fabric containing approximately equal parts of wool and viscose staple fiber which comprises treating the said fabric for one hour at the boil with a dilute solution containing initially per litre 2 grams of a sulphuric acid ester of a higher fatty alcohol and 1.5 grams of ammonium acetate, the pH of the liquor at the beginning of the treatment being 7.2 and at the end of the treatment about 6.8.

JOHN HUNTER MCKEOWN.
WILLIAM PENN.