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TREATMENT OF TEXTILE MATERIALS

Edwin Holroyd Sharples, Coventry, England, assignor to Courtaulds, Limited, London, England, a British company

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3 Claims. (Cl. 91—68)

This invention relates to the manufacture and production of textile materials with improved water-resistant properties. It is particularly concerned with cellulosic materials such as artificial threads made from viscose or materials consisting of or containing such threads.

It has already been proposed to improve the water-resistant properties of textile materials by treating them with various substances such as oils, waxes and metallic salts. It has also been proposed in the British patent specification No. 213,765 to render cellulose more resistant to the wetting action of water by subjecting it to the action of dry chlorine whilst avoiding the presence of moisture; the so treated material may also, if desired, be treated either simultaneously with or subsequent to the treatment with chlorine with wax in order to increase still further the water-resistant properties and in this case the quantity of wax required to give the requisite resistance is considerably less than that necessary when the material is not subjected to the action of dry chlorine.

According to the present invention the process of treating textile materials comprises subjecting the material which has been dried until it is practically free from moisture but which contains a small proportion of a fatty substance to the action of dry chlorine, alone or in admixture with air, and thereafter forming in the material an insoluble metallic compound of a fatty acid or fatty acid derivative. In the case of natural fibres there may be sufficient fatty substances normally present in them or even remaining in them after any preliminary treatment, but in the case of artificial fibres the necessary substances of a fatty nature such as fatty acids or their derivatives should be added. This may be done, for example, by addition to the solution from which the threads are made or by an after-treatment. The process is particularly valuable when the insoluble compound formed in the material is in such small proportions as would have substantially no effect on the water-resistant properties of the material without the pretreatment with chlorine.

The following example will further illustrate how the said invention may be carried out in practice but the invention is not restricted to this example.

Example

A piece of fabric woven from viscose yarn and treated with a solution containing sodium oleate is dried by heating at 60° centigrade for 6 hours. It is then placed in an atmosphere containing about 0.3 per cent of chlorine for 60 minutes at a temperature of 60° centigrade. It is then removed, immersed in a solution of ordinary soap, for example sodium oleate, and after removing excess of this solution by centrifuging, is rinsed in hard water containing from 10 to 30 parts of calcium and magnesium compounds per 100,000 parts of water. A deposit of the insoluble soaps formed from the sodium oleate and the metals in the hard water is thus formed in the chlorinated material.

The material so treated has improved water-resistant properties compared with the untreated material, or that treated with dry chlorine alone.

What I claim is:

1. A process of treating textile material which comprises subjecting the material free from moisture but containing a small percentage of a soluble soap of a higher fatty acid to the action of dry chlorine and thereafter insolubilizing said soap in situ by treating the material with an insolubilizing agent.

2. A process of treating textile material which comprises subjecting the material free from moisture but containing a small percentage of an alkali soap of a higher fatty acid to the action of dry chlorine, and thereafter insolubilizing said soap in situ by treating the material with hard water.

3. A process of treating textile material which comprises subjecting the material free from moisture but containing a small percentage of a soluble alkali soap of a higher fatty acid to the action of dry chlorine, and thereafter subjecting the textile material to successive washings with an aqueous solution of a soluble soap of a higher fatty acid and with hard water, respectively.

EDWIN HOLROYD SHARPLES.