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SEMI-STIFF MULTI-LAYER FABRICS AND A PROCESS OF PREPARING THEM

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The present invention relates to semi-stiff multi-layer fabrics and to a process of preparing them.

Publications concerning the mercerization of cotton mixtures containing artificial silk afford the information that the artificial silk fiber may be affected thereby and that the dilution of the mercerizing liquor occurring during the washing process may cause the formation of water-soluble sodium cellulose and the swelling of the artificial silk fiber.

Now, I have found that semi-stiff fabrics may be prepared by treating viscose artificial silk fabric or cuprammonium artificial silk fabric at ordinary temperature with caustic soda solution of 12°–20° Bé, pressing it together with another fabric and then rinsing, if desired, after acidifying. The other fabric may be of the same kind as the artificial silk fabric treated with caustic sode solution or it may be prepared from cotton or linen or any other fibrous material. It may be treated, before pressing, with caustic soda solution in the manner above described for the artificial silk fabric. An improvement of the semi-stiff fabric as well as of its manufacture is obtained by adding urea or thio-urea to the caustic soda solution.

The artificial silk fabric treated with caustic soda solution is pressed together with the treated or non-treated fabric, for instance by passing the super-imposed fabrics through a squeezing device or a foulard provided with two rollers. The pressure applied upon the fabrics should not be so high as to destroy the threads of the artificial silk fabric treated with caustic soda solution. By the pressure applied the webs of fabrics are united to form a semi-stiff fabric permeable to the air which resists long boiling even in soap baths.

The following Examples serve to illustrate the invention, but they are not intended to limit it thereto:

(1) A fabric made from coarse-threaded or fine-threaded viscose artificial silk interposed between two cotton fabrics is passed together with the cotton fabrics through a caustic soda solution of 15° Bé; the whole is then squeezed on an ordinary foulard provided with two rollers, rinsed, acidified, rinsed and dried. A stiffened compressed fabric is obtained which is permeable to air and does not lose its stiffness when soaped for several hours.

(2) The fabrics referred to in Example 1 are treated with a caustic soda solution of 15° Bé to which 50–100 grams of urea or thiourea are added; there is obtained a fabric which is still stiffer and better welded together than the multi-layer fabric obtained according to Example 1 and has the same good fastness to washing and soaping.

(3) A viscose artificial silk fabric treated with a caustic soda solution of 14° Bé which may also contain urea is brought together with one or two webs of cotton material only directly before the squeezing device; a stiffened multi-layer fabric is obtained which has the same properties as the products obtainable according to Examples 1 and 2.

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