Patented Nov. 11, 1930 1,781,296

UNITED STATES PATENT OFFICE

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METHOD OF TREATING TEXTILE FABRICS

No Drawing. Application filed April 13, 1929. Serial No. 354,989.

This invention relates to improvements in methods of treating textile fabrics, and has particular reference to the production of moiré scratch patterns therein.

The art of producing moiré patterns, both of the so-called straight and scratch types, on natural silk goods and certain kinds of rayon, such as viscose, is well known. It has also been possible, to some degree, to form straight moiré designs in cellulose acetate, commercially known as celanese, but prior to the present invention and in so far as I am aware the art has not successfully accomplished the production of scratch patterns on fabrics made from cellulose acetate fibres. This apparently has been due to the fact that these fibres, under certain conditions, have insufficient elasticity to withstand the action of the scratching blades of the machine utilized to produce the moiré effect, for in numerous experiments, prior to the development of the present method, breaks in the fabric have resulted.

The present invention overcomes the above difficulty and results in the production of perfect scratch patterns in fabrics made of cellulose acetate fibres, by moistening the fabrics before they are subjected to the scratching operation, following which the fabric is dried and then subjected to heat and pressure.

The inventive idea involved is capable of receiving a variety of expressions and is not to be construed as being limited to any particular manner of moistening the fabric nor to the herein described method of scratching the patterns, except in so far as defined by the scope of the appended claims.

In carrying out the method of the present invention, the fabric, after being moistened, is run through a machine of known construction which embodies the ordinary feed and take-up rollers between which are mounted an embossed pattern roll and a scratching roll having flexible blades thereon. These rolls are positioned in opposed cooperating relation and the length of fabric is passed therebetween, the scratching roll being driven in a direction opposite to that of the travel of the fabric and the embossed roll being frictionally driven by the latter, as is customary.

In preparation for the scratching operation the fabric is moistened to a degree which will produce the best results. That is, it may be saturated in a liquid bath, or may be merely dampened either by running the same through an ordinary cloth finishing machine in which one of the rolls with which the fabric contacts is moistened, or the fabric may be sprayed. It has been found that dampening by the use of a finishing machine has produced satisfactory results and, in this instance, the length of cloth is folded either longitudinally or transversely before the dampening process so as to double the same.

After the proper amount of moisture has been applied, the fabric, still in its folded condition, is fed through the machine that is utilized to secure the moiré scratch effect. In so doing the upper layer of the folded fabric is acted upon by the blades of the scratching roll to scratch the design on said layer in accordance with that on the embossed roll and the fact that the fabric is in a moistened condition has been found to prevent the action of the scratching blades from breaking the fabric.

Following the scratching operation, the fabric is thoroughly dried in any suitable manner and then submitted to pressure and heat, preferably by passing the goods between heated calender rolls, although the result also may be accomplished by carding the length of fabric and placing it in a press. The application of heat and pressure to the folded fabric causes the design to be reproduced upon both of the inner or abutting surfaces of the layers thereof, the final result being that a characteristic moiré effect, wherein the scratched pattern has a greater luster or sheen than the remainder of the fabric, will be produced.

What is claimed is:

1. The method of producing moiré scratch patterns in fabrics made from cellulose acetate fibres, which comprises moistening the fabric while in folded condition, scratching a pattern thereon while folded and moistened, drying the fabric, and thereafter subjecting the same to heat and pressure.

2. The method of producing moiré scratch

patterns in fabrics made from cellulose acetate fibres, which comprises moistening the fabric before scratching the pattern thereon, scratching the pattern on the fabric, drying the fabric, and then applying heat and pressure thereto.

3. The method of producing moiré patterns in fabrics made of cellulose acetate fibres, which comprises moistening the fabric, forming a moiré pattern therein while moistened, drying the fabric, and thereafter applying heat and pressure thereto.

In testimony whereof I have affixed my signature.

ALEXANDER MILHOMME.