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E. M. LOVEMAN

TEXTILE FABRIC AND METHOD OF PRODUCING THE SAME

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Fig. 1.



Fig. 2.

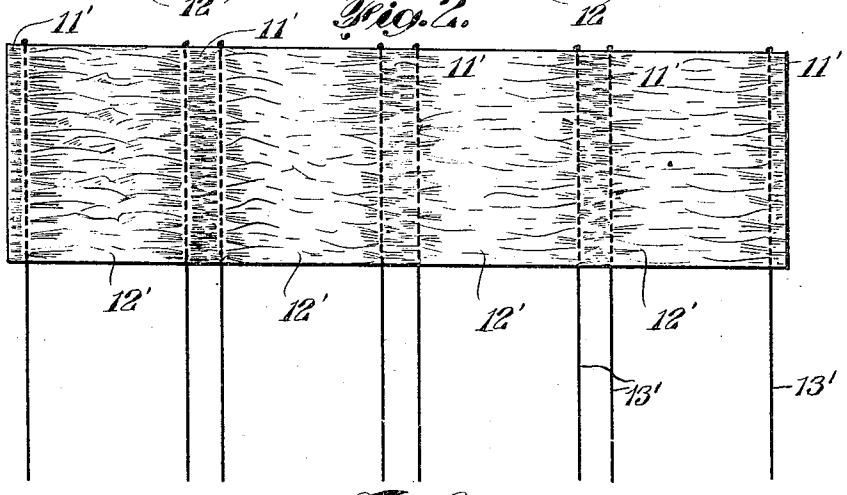
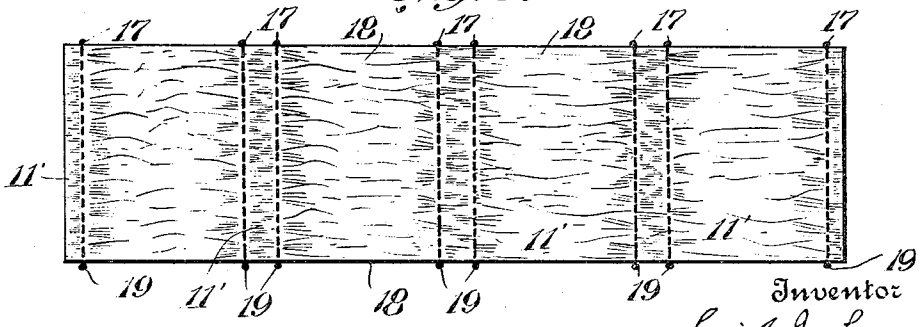


Fig. 3.



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UNITED STATES PATENT OFFICE.

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TEXTILE FABRIC AND METHOD OF PRODUCING THE SAME.

Application filed January 7, 1927. Serial No. 159,613.

My present invention relates to textile fabrics and the like, and aims to devise methods of fabricating textile fabrics and the like which are simple, convenient and economical to practice and by means of which novel types of fabrics may be produced, such fabrics being likewise a part of the present invention and being characterized by their neat and attractive appearance and by their embodying certain novel features which may be readily and conveniently obtained by means of the present invention. Other objects and advantages of the present invention will in part be pointed out in detail hereinafter and will in part be obvious to those skilled in the art to which the present invention relates.

In the accompanying specification I shall describe an illustrative embodiment of the method of the present invention. In the accompanying specification I shall likewise describe, and in the annexed drawing more or less diagrammatically illustrate, several illustrative embodiments of the products of the present invention, comprising particularly the initial and final fabrics made in accordance with the principles of the present invention. It is, however, to be clearly understood that my invention is not limited to the specific forms thereof herein shown and described for purposes of illustration only. It is further understood that the products are not necessarily limited to their fabrication by the aforesaid illustrative embodiment of the method of the present invention nor is the method limited to its production of the aforesaid illustrative embodiments of the products of the present invention.

Referring to the drawing, wherein I have more or less diagrammatically illustrated the aforesaid illustrative embodiments of the products of the present invention and also the aforesaid illustrative embodiment of the method of the present invention:

Fig. 1 shows in plan view the initial or base fabric constituting one of the aforesaid illustrative embodiments of the present invention;

Fig. 2 shows in plan view the fabric of Fig. 1 in an intermediate condition of its manufacture into the fabric shown in Fig. 3 of the drawing; and

Fig. 3 shows in plan view the final fabric comprising the remaining illustrative embodiment of the products of the present invention.

Turning now to the method of the present invention, particularly the aforesaid illustrative embodiment of such method, as illustrated more or less diagrammatically in Figs. 1, 2 and 3 of the drawing, I weave, or otherwise provide, a substantially flat fabric which I call my initial or base fabric. Preferably such fabric, instead of being of uniform density, stiffness or closeness of weave throughout, consists of a succession of light and heavy portions, or relatively soft and succeeding stiffer portions, as by having a succession of stripes or bands of successively open and closely woven sections. It may here be stated that the arrangement of these successive bands or stripes of relatively light or heavy portions, which are relatively soft or stiff, as by being made of successively open and closely woven sections, may be in any desired manner and produced in accordance with any well known weaving practice.

I provide the flat fabric just described with a plurality of freely or readily pullable threads. Preferably such threads are of a coarser and stronger texture than the warp and weft threads making up the main body portion of the fabric. I prefer also that such threads shall be of a color contrasting with the color of the main body portion of the fabric. Finally, I prefer that such threads shall be warp threads and shall be woven integrally with the fabric but be so arranged as to be readily or freely pullable, which may be accomplished in a manner which will be readily apparent to those skilled in the art to which the present invention relates. I prefer also that these "pull threads," which are preferably woven into and form a part of the general fabric structure, as by being warp threads of the same, shall mark the boundaries of successive bands, stripes or sections of the fabric, or varying weight, stiffness and openness or closeness of weave.

I now lock one end of each of the pull threads in a predetermined portion of the fabric structure. This may readily be done either by knotting one end of each pull thread, or by stitching or otherwise securely positioning such end. Having done this, I pull each of the pull threads a predetermined amount through the fabric of which it forms

a part. This I do without disarranging the other portions of the fabric, an operation rendered possible by reason of the relative coarseness and increased strength in texture of the pull threads and their difference in color from the rest of the fabric, which difference in color enables such pull threads to be accurately located and as accurately manipulated.

The result of this operation is to ruffle the main body portion of the fabric by an amount dependent upon the amount that the pull threads are pulled out of the fabric and the length of the fabric itself in its flat condition.

Having completed this step, I now knot or otherwise secure the free ends of the pull threads in the free end of the fabric in its ruffled condition. I now arrange or distribute the ruffles along the pull threads, so as to get the desired effect, appearance and arrangement of the ruffled fabric portions. Those stripes or sections of the fabric which are relatively stiff will be ruffled in one way, while those stripes or sections of the fabric which are relatively soft will be ruffled in a different manner. In this way, different surface characteristics and different appearances in texture will be provided along stripes or sections of the ruffled fabric.

The free ends of the pull threads may be knotted, stitched, or both knotted and stitched, to securely fasten them in place in the ruffled fabric. Any free ends may be cut off below the knots or stitches, and the fabric may be otherwise finished in a manner which will be readily apparent to those skilled in the art to which the present invention relates.

The result of the method will be clear from the foregoing description. By means of the method, a highly attractive and very novel type of fabric may be readily, conveniently and economically produced. The method is very simple and lends itself to a wide variety of types of fabrics made in accordance with the principles of the present invention.

Turning now to the aforesaid illustrative embodiments of the products of the present invention, and more particularly to the drawing illustrating the same, 10 indicates a textile fabric having the stripes or sections 11 of relatively heavy, stiff and closely woven portions, and the strips or sections 12 of relatively light, soft and open woven sections.

At the junction or boundary between the successive sections 11 and 12 are the pull threads generally designated by reference character 13. The pull threads 13 are preferably freely or readily pullable through the fabric 10. For this purpose, I prefer that the pull threads 13 shall be of a relatively coarse and strong texture and shall constitute warp threads of the fabric 10, the selvage edges of which have been designated by reference characters 14 and 15.

The ends of the pull threads 13 are preferably fixed in the upper edge 16 of the fabric 10, as by being knotted or stitched at such upper edge, as indicated by reference character 17.

As shown in Fig. 2 of the drawing, the pull threads 13 are pulled a predetermined distance through the fabric 10, this operation being permitted by reason of the fact that the upper ends 17 of the pull threads 13 are knotted or stitched in the fabric 10. The amount by which the pull threads 13 are pulled through the fabric 10 will depend upon the specific ruffled effect desired to be obtained. The result of this operation is to produce the ruffled portions 11′ corresponding to the portions 11 of the fabric 10 and the ruffled portions 12′ corresponding to the portions 12 of the fabric 10. Since the portions 12 are of lighter, softer and more open weave, the folds of the ruffles of the portions 12′, corresponding to the portions 12 of the fabric 10, will be relatively soft and of a different character in texture from the folds or ruffles of the ruffled portions 11′ corresponding to the portions 11 of the fabric 10.

As shown in Fig. 3 of the drawing, the folds or ruffles of the portions 11′ and 12′ are adjusted along the pull threads 13, after which such pull threads are knotted, stitched, or otherwise secured in the lower end 18 of the finished fabric 10′, as indicated by reference character 19 in Fig. 2 of the drawing. In completing the fabric, the free ends 13′ of the pull threads 13 are cut off and the fabric otherwise finished in a manner which will be readily apparent to those skilled in the art to which the present invention relates.

This completes the description of the aforesaid illustrative embodiments of the products of the present invention. It will be apparent that the flat fabric, constituting one of the aforesaid illustrative embodiments of the present invention, is admirably adapted, by its embodying the pull threads and the successive sections of varying weight, pliability and openness or closeness of weave, to be converted into the ruffled fabrics of the present invention. Such ruffled fabrics are themselves characterized by their simplicity in construction, the ease, convenience and economy with which they may be made, and the highly original and attractive effects which may be produced by means of such fabrics. Other advantages and superiorities of the products of the present invention will readily occur to those skilled in the art to which the present invention relates.

What I claim as my invention is:

1. As an article of manufacture, a woven fabric comprising a plurality of bands of different textures and provided with a plurality of spaced, freely pullable warp threads, said threads being of a coarser texture than the threads making up the main portion of

the fabric, and being substantially positioned at the bounding lines of said bands of different textures.

2. As an article of manufacture, a fabric comprising a plurality of bands of different textures and provided with a plurality of spaced, freely pullable threads, said threads being of a coarser texture than the threads making up the main portion of the fabric, and being substantially positioned at the bounding lines of said bands of different textures.

3. As an article of manufacture, a fabric comprising a plurality of bands of different textures and provided with a plurality of spaced, freely pullable threads, said threads being substantially positioned at the bounding lines of said bands of different textures.

4. As an article of manufacture, a woven fabric comprising a plurality of bands of different textures and provided with a plurality of spaced, freely pullable warp threads, said threads being substantially positioned at the bounding lines of said bands of different textures.

5. As an article of manufacture, a ruffled fabric comprising a main fabric portion embodying a plurality of longitudinally disposed sections of different textures and a plurality of relatively loose threads passing through said main fabric portion and substantially shorter in length than the corresponding threads of said main fabric portion, said relatively loose threads being positioned at the junctions of said sections of different textures.

6. As an article of manufacture, a ruffled fabric comprising a main woven fabric portion embodying a plurality of longitudinally disposed sections of different textures and a plurality of relatively loose warp threads passing through said main fabric portion and substantially shorter in length than the corresponding warp threads of said main fabric portion, said relatively loose threads being positioned substantially at the junctions of said sections of different textures.

In testimony whereof, I have signed my name to this specification this 24th day of December, 1926.

EMILE M. LOVEMAN.