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L. KIRKPATRICK

COATED FABRIC

Original Filed July 22, 1918

Fig. 1.

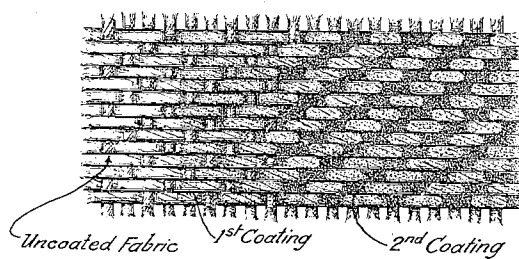


Fig. 2.



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UNITED STATES PATENT OFFICE.

LITTLETON KIRKPATRICK, OF WILMINGTON, DELAWARE, ASSIGNOR TO E. I. DU PONT DE NEMOURS & COMPANY, OF WILMINGTON, DELAWARE, A CORPORATION OF DELAWARE.

COATED FABRIC.

Original application filed July 22, 1918, Serial No. 245,991. Divided and this application filed October 26, 1920. Serial No. 419,756.

To all whom it may concern:

Be it known that I, LITTLETON KIRKPATRICK, a citizen of the United States, and a resident of Wilmington, in the county of New Castle and State of Delaware, have invented, a certain new and useful Coated Fabric, of which the following is a specification.

The object of my invention has been to provide a coated fabric which shall be adapted for use, among other purposes, for automobile tops, or the linings of such tops, for slip covers, trunk linings, etc., and, while made of comparatively cheap material, shall have the appearance of expensive material and which fabric shall also, if desired, be waterproof, oilproof and dustproof.

This application is a division of my application Ser. No. 245,991 filed July 22, 1918.

In the accompanying drawing,

Figure 1 is a representation of an embodiment of the product aspect of my invention having the appearance of "whipcord";

Figure 2 is a sectional view of Figure 1.

While my invention is capable of embodiment in many different forms and by the practice of different processes, I have chosen as an illustration of my invention the application of it to the production of a fabric having the appearance of whipcord, such as is used, for instance, in the lining of automobile tops, but this illustration of my invention is to be regarded only as typical and my invention is not to be confined thereto.

Whipcord has a characteristic appearance, giving rise to its name, and which appearance I desire to imitate.

As a base for my imitation whipcord, I use any woven fabric possessing sufficient tensile strength and elasticity, as for example, a cotton drill, this cotton drill being either undyed or dyed any convenient color. I preferably first coat the goods with a

white pyroxylin jelly, which may be composed of any of the coating compositions ordinarily used in the coating of fabrics for the production of leather substitutes, of which the following formula may be cited as an example:

	Parts.	
Zinc white	4	
Nitrocellulose	4	
Castor oil	8	55
Amyl acetate	12	
Wood alcohol	12	
Benzol	10	

This jelly is applied preferably to the "back" side of the goods with a sharp knife while the goods are under tension.

The object of applying the coating is not only to waterproof the goods and thereby prevent mildew and shrinkage to which untreated cotton fabrics are susceptible, but also to give a body or stiffness to the goods, so as to facilitate the subsequent treatment of the goods.

The putting of the goods under tension results in applying a very light coating of the jelly to the goods and it opens the threads in the direction of the pull, so that the coat is forced in to a greater extent than would otherwise be the case.

By applying a very light coating in this manner there results but little, if any, change in the textural configuration of the surface, the elevations and depressions characterizing the weave of the particular fabric used remaining to form the surface of the coated material.

Having applied the coating to the goods as described and given it time to harden, color is applied to the fabric with a sharp knife and with the goods under tension. The color coating may be of any composition ordinarily employed in the coating of fabrics for the production of leather substitutes, of which the following formula

may be cited as an example, assuming that the desired color is black:

	Parts.
Drop black -----	3
5 Nitrocellulose -----	4
Castor oil -----	8
Amyl acetate -----	13
Wood alcohol -----	13
Benzol -----	11

- 10 The knife forces the color down into the small cavities or depressions in the surface and scrapes it off of the tops of the threads which form the elevations, so as to expose the white beneath, thus giving "life" to the fabric. That is, the effect is produced of 15 the lights on top of threads and the shadows between the threads of a woven fabric, instead of the dead monotony that would be obtained from a coating all of one color. 20 This effect is in part dependent on, and varies with, the weave of the goods, and can be obtained by the use of any contrasting colors, the first coat being preferably lighter than the second.

The other side of the goods may be 25 heavily water-proofed or given any desired treatment to better enable that side to stand the weather. The initial coat to stiffen and water-proof the goods may, if desired, 30 be applied to the opposite side of the goods from that which is to receive the second or dark colored coat, but in this event, the woven appearance will be less perceptible than if the two coats are applied to the 35 same side.

There are many kinds of goods suitable for use in making my fabric by my process; for instance, sateens, drills and moleskins may be used. The color effect can, of course, 40 be varied without limit.

I claim:—

A coated fabric comprising a woven base, a coating entirely covering said base, and a contrasting coating occupying the cavi- 45 ties, but not covering the elevations, incident to the particular weave of said base.

In testimony whereof I affix my signature.

LITTLETON KIRKPATRICK.