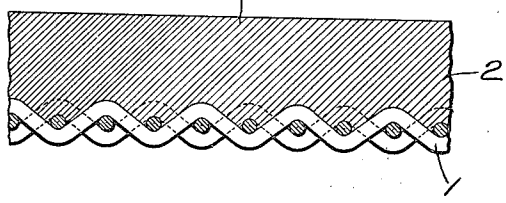
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COATED FABRIC.

APPLICATION FILED FEB. 18, 1918.

1,316,783. Patented Sept. 23, 1919.

Homogeneous coating of celluloid and castor oil, embedded in the fabric.



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UNITED STATES PATENT OFFICE.

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COATED FABRIC.

1,316,783. Specification of Letters Patent. Patented Sept. 23, 1919.

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To all whom it may concern:

Be it known that we, DANIEL D. FROTHINGHAM and RALPH U. SAWYER, citizens of the United States, residing at Salem and Winchester, respectively, in the counties of Essex and Winchester, respectively, and State of Massachusetts, have invented certain new and useful Improvements in Coated Fabrics; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to coated fabrics. The object of the invention is to reduce the cost and improve the qualities of coated fabrics. To these ends the invention consists in the coated fabric hereinafter described and particularly defined in the claims.

The accompanying drawing illustrates diagrammatically a cross-section of the coated fabric.

The material to be coated is illustrated as a cloth or canvas 1 having a coating 2 applied to it. The preferred coating consists essentially of scrap celluloid and castor oil. If color is desired, a soluble coloring material is used in connection with the material, as distinguished from a pigmentous, or dry earthy sort of coloring material. The coating is made up in accordance with the following formula:—

Wood alcohol	90	oz.
Acetone	36	"
Amylacetate	12	"
Scrap celluloid	54–60	"
Castor oil	72	"
Soluble or spirit negrocin	½	"

This coating material is prepared by mixing the solvents, viz., the wood alcohol, acetone, amylacetate, and the soluble or spirit negrocin, in a mixer, and then the comminuted scrap celluloid, such as cleaned moving-picture films, or other celluloid compounds, is introduced into the mixture and the mixing process is continued until the batch is thoroughly mixed, after which the castor oil is stirred or mixed in. The resulting coating material is a stiff viscous mass which is applied to the fabric to be coated by a single coating operation, preferably by spreading the material on the surface of the fabric to be coated and pressing it against such material with long-continued heavy pressure so as thereby inwardly to unite and secure the coating to the fabric. After the coating has been applied the solvents are evaporated and the firm flexible coating remains securely attached to the fabric. Thus the wood alcohol, acetone and amylacetate are entirely removed and the coating consists essentially of a single integral homogeneous layer of a compound of celluloid and castor oil. This coating is free from pin-holes and is highly flexible and durable. By increasing the amount of castor oil the flexibility of the coating may be increased. By increasing the amount of the amylacetate and decreasing the amount of acetone, a coating having a high gloss will be produced. Other solvents may be employed if desired, and if it would not be objectionable for the coating to display a bloom, the amylacetate may be entirely omitted. The coating of the formula is highly flexible at all temperatures from zero to 100° F.

Heretofore fabrics having a coating of celluloid or nitrocellulose have been applied in a large number of layers so that the resulting product was a fabric having a laminated coating. Moreover, the several layers of the former coatings were of different composition. One of the principal virtues of the coated fabric of the present invention resides in the homogeneity of the coating which from top to bottom is of uniform composition. Another substantial virtue of the coating fabric of the present invention resides in the fact that it is entirely devoid of pin-holes, a detriment at present in all coated fabrics of which the writer is aware.

The coated fabric of the present invention is exceptionally durable. By reason of its durability, its freedom from pin-holes, the homogeneity of the coating, it is superior in quality to any known coated material, and besides is susceptible of being produced at a cost very much lower than the cost of laminated coated fabrics. The cost of the completed fabric, including the base of canvas and the 20 oz. per square yard of coating of the nitrocellulose castor oil compound being approximately one-half the cost of multiple coated fabrics.

The method and machine disclosed here-

in form the subject matter of copending applications filed by us on even date herewith and bearing Serial Nos. 217,967 and 217,969, respectively.

Having thus described the invention what is claimed is:

1. A coated fabric consisting of a fabric provided with a single homogeneous integral layer coating of substantial thickness consisting essentially of celluloid and castor oil containing soluble coloring matter.

2. A coated fabric consisting of a fabric having embedded therein a single homogeneous integral layer coating of substantial thickness consisting essentially of celluloid and castor-oil.

3. An intermediate product consisting of a fabric having embedded therein a single homogeneous layer of coating material of the nature described of substantial thickness and of a stiff yet viscous nature at ordinary room temperature, all portions of said layer being secured together by the cohesion of the particles thereof.

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