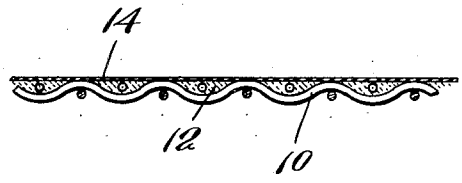
H. S. MORK.

COATED FABRIC.

APPLICATION FILED MAR. 17, 1910.

1,062,725. Patented May 27, 1913.



Witnesses:
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UNITED STATES PATENT OFFICE.

HARRY S. MORK, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO CHEMICAL PRODUCTS COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

COATED FABRIC.

1,062,725. Specification of Letters Patent. Patented May 27, 1913.

Application filed March 17, 1910. Serial No. 549,934.

To all whom it may concern:

Be it known that I, HARRY S. MORK, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Coated Fabrics, of which the following is a specification.

This invention relates to a fabric with a waterproof, grease-proof coating of low combustibility, composed essentially of a cellulose ester of a fatty acid, such, for instance, as cellulose acetate, and to the process of producing such a coated fabric.

Various methods are at present in use, for coating fabrics with different materials, involving the employment of spreading-machines and calender-rolls. When a spreading-machine is used the coating material is dissolved in a solvent, and, in case cellulose acetate is employed as the coating material, and by the usual spreading-machine a coating of considerable thickness is applied, the strains occurring during the drying process result in the production of a coating which is deficient in mechanical strength.

I have discovered that when a fabric is impregnated or padded with a solution of cellulose acetate, and the excess removed by squeezing-rolls, or when a light coating of the solution is spread on the surface of the fabric and permitted to impregnate the fabric and the fabric then dried, a fabric with a heavy finish of cellulose acetate may be made by affixing or cementing to the fabric, which has been thus initially prepared, an independent sheet or film of cellulose acetate. The independent sheet or film may be laid on the initially-prepared fabric before the solvent of the padding material has become wholly evaporated, and caused to adhere thereto by a slight uniform pressure, and, in such case, the padding material serves as a cement for affixing the independent sheet or film to the fabric; or, in case the solvent of the padding material has become wholly or substantially wholly evaporated, at least to such an extent that it will no longer serve as a cement, then a separate layer of cement may be employed, which is spread on the surface of the initially-prepared fabric, or on the under side of the independent sheet or film, or both, and then said sheet or film applied with a uniform pressure. Such sheets or films of cellulose acetate can be made on glass plates, or on any machine customarily used for the purpose.

As an example of suitable solution of cellulose acetate for first impregnating or padding the fabric, I may use, say, one pound of cellulose acetate dissolved in one gallon of acetylene-tetrachlorid. Such a solution also makes a satisfactory cement which may be used, if desired, for uniting the film to the initially-prepared fabric, although my invention is not limited to the employment of such a cement. I prefer to employ a cement composed of a solution of the ester employed, as cellulose acetate for the reason that the solvent contained in the solution acts as a solvent for the surface of the padding material and also for the surface of the independent sheet or film, thereby enabling the sheet or film to become intimately united with the padding material and thereby securely attached to the fabric. Either the padding solution or the film which is to be subsequently cemented to the initially-prepared fabric, or both, may be modified by the addition of softeners or pigments, according to the results which it is desired to obtain. It will be observed that, when the independent sheet or film of cellulose acetate is affixed to the fabric by uniting with a padding material, composed of a solution of cellulose acetate, a homogeneous coating is formed, which is securely affixed to the fabric, the fabric being partially or wholly embedded in the homogeneous coating thus produced, and, in case an interposed layer of cement is employed, composed of the same material, a like homogeneous coating is produced.

The figure of the drawing is a sectional view of a coated fabric embodying this invention.

In the drawing here shown for the purpose of illustrating one embodiment of my invention, 10 represents the fabric, 12 the padding or cementing material of cellulose acetate, and 14 a sheet or film of cellulose acetate which is united with the acetate with which the fabric is impregnated, whereby said sheet or film is affixed to the fabric.

I claim:

1. As a new article of manufacture, a fabric impregnated with cellulose acetate and an independent sheet or film of cellulose acetate united with the acetate with which

the fabric is impregnated, and thereby affixed to the fabric, substantially as described.

2. As a new article of manufacture, a fabric padded with a solution of cellulose acetate, and a sheet or film homogeneously united with the padding material.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HARRY S. MORK.

Witnesses:
B. J. NOYES,
H. B. DAVIS.