

# UNITED STATES PATENT OFFICE.

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## FABRIC.

1,241,853.

Specification of Letters Patent.

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No Drawing.

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*To all whom it may concern:*

Be it known that I, ALFRED E. JURY, a citizen of the United States, residing in New York, county and State of New York, have invented certain new and useful Improvements in Fabrics, of which the following is a full, clear, and exact description.

This invention relates to fabrics, more particularly to a fabric comprising a plurality of layers joined together by an adhesive bond.

The objects of the invention are to provide a fabric of the kind mentioned which may be manufactured at a low cost; which shall be transpirational; which may be readily caused to conform to last and other irregular surfaces; which shall indefinitely retain its flexibility; which shall be water-repellent; and which in general shall possess the advantages of a plied fabric bonded by an adhesive material such as rubber cement, while doing away with various disadvantages of such material, particularly the relatively high cost thereof.

In manufacturing the material, preferably two layers of fabric are brought together in superposed position and bonded under tension by an adhesive material which may be applied to either one or both layers. The adhesive material in its preferred form consists of the following ingredients in approximately the proportions noted:—

|            |         |
|------------|---------|
| Dextrin    | 20%—50% |
| Glucose    | 5%—10%  |
| Water      | 73%—35% |
| Castor oil | 2%—5%   |

Totals..... 100%—100%

In making the mixture the dextrin and glucose are dissolved in water, the mixture being heated to approximately 180° F. and after the solution is complete allowed to cool. As the mixture cools it becomes more viscous and after about twenty-four hours reaches its maximum viscosity, at which point the castor oil may be most satisfactorily added. The castor oil is stirred into the mass and

is retained therein in a state of emulsion. In this connection I have observed that under the conditions noted dextrin has a remarkable property for maintaining castor and other oils in emulsified form without separation, for a considerable length of time. An antiseptic material may be added at any time during the process of manufacture. I preferably employ for this purpose 1% of sodium bi-sulfite which has a bleaching as well as an antiseptic action. It will be observed that although dextrin has been mentioned in the composition that other carbohydrates may be employed and that oils other than castor oil may be used.

It has been found that the article made in accordance with the procedure outlined above possesses in general the characteristics heretofore set forth as the objects of the invention. The material is readily conformable to last and other surfaces, and its flexibility remains substantially permanently unchanged. The material has been found to be more transpirational than leather. It may be readily joined by vulcanization with rubber since the bonding material is not hygroscopic and hence does not prevent adhesion through steaming during vulcanization. The material is also water-repellent.

Having thus described my invention, what I claim and desire to protect by Letters Patent is:

1. As a new article of manufacture a plurality of layers of flexible fibrous material joined by a flexible adhesive bond consisting of a carbohydrate, water and oil held in an emulsified condition therein.

2. As a new article of manufacture a plurality of layers of fabric joined by a flexible adhesive bond consisting of a mixture of a carbohydrate water and castor oil.

3. As a new article of manufacture a plurality of layers of fabric joined by a flexible adhesive bond comprising dextrin, water and castor oil.

Signed at New York, county and State of New York, this 7th day of March, 1917.  
ALFRED E. JURY.