

UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN WATER-PROOF FABRICS.

Specification forming part of Letters Patent No. **173,759**, dated February 22, 1876; application filed November 5, 1875.

To all whom it may concern:

Be it known that I, GEORGE EMANUEL BLOCK, of 104 Marylebone Road, Baker street, in the county of Middlesex, England, a subject of the Queen of Great Britain, have invented or discovered new and useful Improvements in the Manufacture of Artificial Leather and other Flexible Fabrics; and I, the said GEORGE EMANUEL BLOCK, do hereby declare the nature of the said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof—that is to say:

This invention has for its object to manufacture flexible fabrics from cork. For this purpose I take sheets of cork, and apply, with a brush, to one side of them a coating of india-rubber solution, hereinafter mentioned. When the coating has dried, I apply to it a second coating. I then take a piece of japanned cloth, canvas, thin leather, or other such like fabric, and similarly coat it at the back with two coatings of the solution, and then place the coated surfaces of the cork and fabric together, the edges of the pieces of cork being fitted together neatly, so as to form a continuous sheet or layer. The uncoated side of the cork and also another piece of linen, cotton, or other fabric are now similarly coated with two coats of the solution. When the coatings upon the cork and linen are quite dry, the coated surfaces are applied together, and the cork now coated on both of its sides is submitted to considerable pressure in a press or stamper, or by rollers.

In order to cause the coated surfaces of cork and fabric to adhere firmly to one another, it is better that the pressure should be applied suddenly, as by a blow, or by stamping or rolling. The two coatings of cementing solution which are thus brought together blend and form a perfect skin, which will bend at will, and which can be turned in any way, and yet always return to its original form without breaking.

As each of the coatings of cementing solution has been allowed to dry before bringing them together and submitting them to pressure,

as above described, the solution will not penetrate the outer surfaces of the fabric or material and spoil their appearance.

The artificial leather or cloth produced in the above manner is then ready to be made up into boots, harness, bags, portmanteaus, driving-belts for machinery, or other uses for which leather is now employed.

Fabrics manufactured from canvas and cork in the manner above described are also applicable as coverings for tents, being water-proof and very strong and light.

By coating cork on both sides, as above described, with fabric caused to adhere to it by an interposed elastic skin or film, the cork, which is naturally of a brittle nature, is bound together, and may be doubled and bent to any extent without injury.

In some cases also wooden veneers may be applied over the outer coatings of fabric, and the fabric so produced will serve as panels for carriages and such like; or the surfaces of the fabric may be japanned or lacquered.

The solution employed is formed from india-rubber cut into small pieces and dissolved in pure coal-tar naphtha. If the solution should get dry while being used, coal-tar naphtha may be added to it to thin down and bring it to the proper consistency.

Having thus described the nature of my invention, and the manner of performing the same, I would have it understood that I claim—

The hereinbefore-described method of manufacturing artificial leather and other fabrics composed, in part, of cork, which consists in applying to sheets of cork and pieces of fabric separate coatings of india-rubber solution, as described, and submitting the whole to pressure with the cork between the fabrics after the cementing solution has dried, whereby, while the cork and inclosing fabrics are caused to adhere together, the cementing solution is prevented from spreading through the fabrics to the outside.

G. E. BLOCK.

Witnesses:

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