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UNITED STATES PATENT OFFICE.

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PROCESS OF COATING WOVEN FABRICS.

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To all whom it may concern:

Be it known that I, WILLIAM T. PLUM, JR., a citizen of the United States, residing in the city of Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Processes of Coating Woven Fabrics, of which the following is a full, clear, and exact description.

This invention relates to the manufacture of sheet material which have waterproofed qualities, and in some instances are in imitation of leather, and one of the objects of the invention is to provide a paper sheet or fabric that will not only be waterproof but will possess any of the desirable characteristics of a rubberized fabric of unusual strength and durability which will not lose its tensile strength or become wrinkled when folded.

Another object of the invention is not only to adapt ordinary paper-cloth or fabrics as a substitute for leather, but also to give to it the color and appearance otherwise of the leather for which it is to be substituted and to render it under all practical circumstances, thoroughly proof against injury from water, perspiration or moisture.

Under this invention the sheet material whether it consists of a sheet of absorbent paper fabric or a sheet of other absorbent material is stained or colored upon either one or both of its surfaces to any desired color, to correspond with the tint required for the artificial leather to be produced.

The paper fabric or other absorbent material having been colored to the tint required is then passed through napping rolls in order to provide either one or both of its surfaces with a napped, fuzzed, raised or roughened surface.

I wish it to be understood that the preliminary napping or roughening of one or both of the surfaces of the paper fabric or other absorbent material is an essential step in the process or method constituting my invention.

The object of this is to impart to the body of the fabric or material the peculiar soft and pliable quality found in leather, and which is not obtainable by simply and at once applying to the fabric or material a rubber or cellulose composition, which constitutes the imitation leather or rubber surface.

The napped, fuzzed or roughened surface applied first also serves the purpose of a medium to easily receive and hold the after-coating which cannot otherwise be neatly and expeditiously applied.

In order to impregnate the paper fabric or other absorbent material, to render it waterproof and to give it the appearance of rubberized material or the appearance of imitation leather, the same is then impregnated with a mixture either of a rubber composition or compounds, a pyroxylin gum or varnish compound or a cellulose composition, in any desired or well known manner.

Having thus described my invention, what I claim is:

1. A new article of manufacture consisting of a paper-cloth stained or colored, the surface of which has been raised or roughened and having applied thereto a waterproofing material.

2. The herein described process of treating paper fabric, consisting of dyeing said fabric, then providing a raised or napped surface on said fabric and thereafter impregnating the raised or napped surface of said fabric with a waterproofing compound.

3. The herein described process of treating woven paper fabric or the like, consisting in first applying a dye to said fabric, then providing the same with a roughened surface and thereafter impregnating the roughened surface of said fabric with a waterproofing composition.

4. A new article of manufacture, consisting of a woven paper fabric, the surface of which has been raised or roughened and impregnated with a waterproofing material.

5. The herein described process of treating woven paper fabric, consisting in first napping or roughening the surface thereof and thereafter impregnating said surface with a waterproofing material.

This specification signed and witnessed this 18th day of February, 1921.

WILLIAM T. PLUM, JR.

Witnesses:
JOHN A. MILLER,
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