

# UNITED STATES PATENT OFFICE.

GOODMAN CHARLES MANDLEBERG, OF MANCHESTER, ENGLAND.

PROCESS OF PRODUCING ORNAMENTAL INDIA-RUBBER WATERPROOF FABRICS.

SPECIFICATION forming part of Letters Patent No. 496,978, dated May 9, 1893.

Application filed August 15, 1892. Serial No. 443,163. (No specimens.) Patented in England April 9, 1892, No. 6,879.

*To all whom it may concern:*

Be it known that I, GOODMAN CHARLES MANDLEBERG, a subject of the Queen of Great Britain, residing at Manchester, in the county of Lancaster, England, have invented certain new and useful Improvements in Processes of Producing Ornamental India-Rubber Waterproof Fabrics, (for which I have applied for Letters Patent in Great Britain, No. 6,879, dated April 9, 1892;) and I 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.

My invention relates to the manufacture of waterproof fabrics, and more especially to the ornamentation of rubber proofed fabrics designed for ladies' garments, and it consists in a novel process whereby said fabrics may be tastefully ornamented without materially increasing the weight thereof over and above the weight of that class of fabrics known as single texture india rubber waterproofed fabrics, as will now be fully described.

In carrying out this invention I take a wide fabric of any desired material woven with any desired pattern on its face and proof the same on its back in the usual manner. This fabric is then cut up lengthwise in strips or ribbons of any desired width according to the design to be produced, the strips being wound on bobbins or beams at such distances apart as may be required by the design intended to be produced upon the proofed face of a waterproof fabric. These proofed strips are then guided onto the proofed face of the waterproofed fabric to be ornamented while the proofing is yet sufficiently "tacky" or adhesive, and consolidated therewith by pressure, the fabric being passed between calendering rolls, or this may be effected in the spreading machine, the proofed strips being applied to the proofed fabric at a stage when the proofing is yet sufficiently adhesive to cause the ornamenting strips to firmly adhere to the proofed face of the waterproof fabric. But if desired the strips may be applied to the waterproofed fabric after the proofing on both has become too dry to admit of a perfect union or cementation of the two, by coating the proofed faces of both fabrics with a rubber solvent and uniting the two after the proofing has become

sufficiently tacky or adhesive to admit of a perfect union of the two fabrics, substantially as described in my two applications for patents of even date with this, Serial Nos. 443,161 and 443,162. After the proofed strips have been made to adhere to the proofed face of the ground or body fabric, it is vulcanized by any of the well-known processes and has farina applied to it.

By the process described striped waterproof fabrics may be obtained of great beauty of design, admitting of the economical use of rich textures, and beautiful effects can be produced by the use of ribbons or strips of different patterns or colors, or both.

Instead of cutting the strips or ribbons from a wide fabric having its wrong side proofed, these strips or ribbons may be obtained from the loom as such, or in the form of braid or the like, and may have the wrong side thereof first proofed, or they may be applied to the proofed face of the waterproof fabric without such prior proofing, the necessity of which will depend upon the thickness of the braid or ribbon.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In the manufacture of waterproof fabrics, the herein described process of ornamenting the proofed face of such fabrics, which consists in forming thereon a design by means of strips of a fabric applied and caused to adhere to the proofing.

2. In the manufacture of waterproof fabrics, the herein described process of ornamenting the proofed face of such fabrics, which consists in proofing a wide fabric on the wrong side, cutting the proofed fabric into strips or ribbons and forming an ornamental design upon the proofed face of the waterproof fabric by applying the strips and causing the same to adhere to the said proofed face.

3. As an article of manufacture, a waterproof fabric having its proofed face ornamented with ribbons or strips cemented thereto, as set forth.

GOODMAN CHARLES MANDLEBERG.

Witnesses:

PETER J. LIVSEY,

WILLIAM FAULKNER.