(Specimens.)

C. MOSELEY.

WATER PROOF FABRIC.

No. 352,954. Patented Nov. 23, 1886.

Fig. 1.

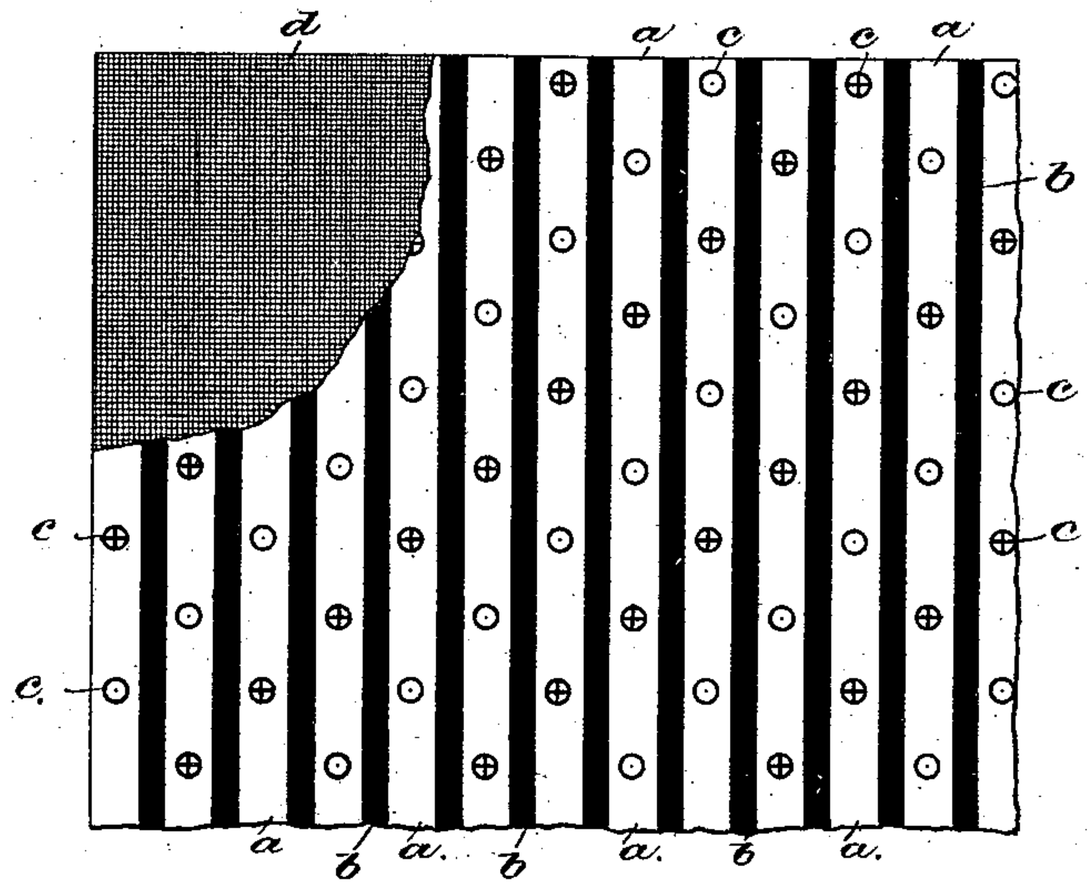
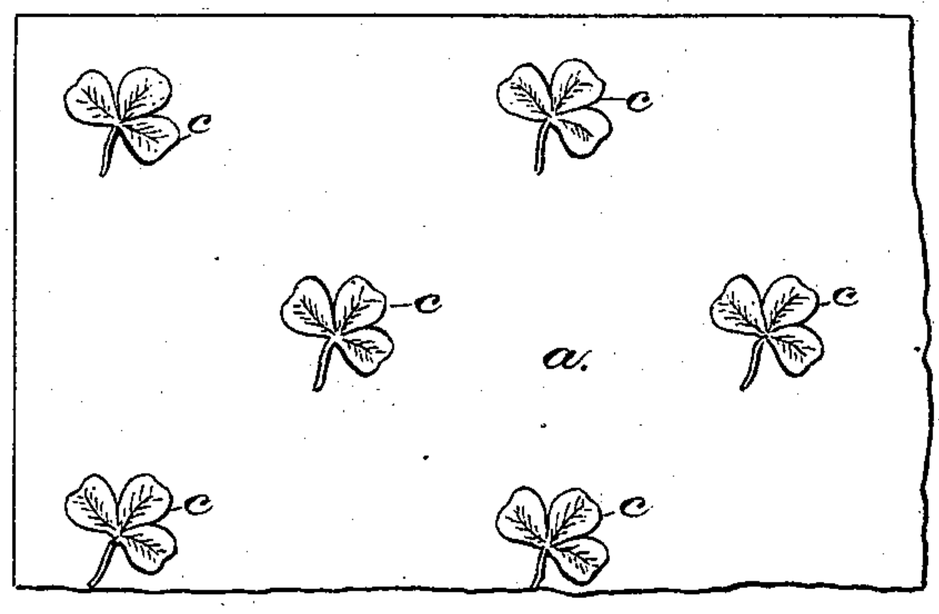


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES MOSELEY, OF MANCHESTER, COUNTY OF LANCASTER, ENGLAND.

WATER-PROOF FABRIC.

SPECIFICATION forming part of Letters Patent No. 352,954, dated November 23, 1886.

Application filed August 20, 1885. Serial No. 174,860. (Specimens.) Patented in England November 2, 1883, No. 5,207, and April 9, 1884, No. 6,175.

To all whom it may concern:

Be it known that I, CHARLES MOSELEY, of Manchester, county of Lancaster, and Kingdom of Great Britain, have invented an Improvement in Water-Proof Fabrics, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Thin water-proof fabrics are now produced in which the outer face is made lustrous by the application of farina. In my experiments to relieve this plain lustrous surface and produce a novel and desirable fabric suitable for a greater variety of uses I have discovered a method whereby this lustrous surface may be made to appear only upon parts of the face of the fabric, the lustrous and plain parts of the face of the fabric constituting ornamental figures or designs, and I have also discovered a method of ornamenting the lustrous portions of the face of the fabric by printing.

The face of my improved fabric may be made to present any desired design or pattern, and the fabric may be used for traveling dresses, cloaks, coats, &c.

My invention consists in a rubber-coated water-proof fabric having a surface partially lustrous and partially plain, the lustrous and plain portions forming a design.

My invention also consists in a rubber-coated water-proof fabric having a lustrous surface ornamented by printing.

Figure 1 of the drawings represents a piece of fabric embodying my invention, and Fig. 2 a modification.

In the drawings, *a* represents the lustrous portion; *b*, the dull or non-lustrous portion; *c*, the figure applied in color by printing, and *d* the fabric.

The woven fabric to constitute the body of the goods may be of any suitable material, preferably, however, worsted, wool, mohair, silk, or a mixture of the same, and of any desired thickness, the said fabric being woven in the same or different colors to show at the back of the goods and present the appearance desired for the interior, or what might be considered the lining of the garment; but the fabric may be woven in a plain or in one color and be printed at its inner or wrong side.

My improved fabric may be produced in several different ways, of which those now to be described are deemed the more desirable.

The woven fabric selected for conversion into water-proof goods will have applied to its surface india-rubber or other usual equivalent waterproofing substance or material capable of being vulcanized, and the surface of the india-rubber or waterproofing material while "tacky" will have applied to it the farina to produce the lustrous, glossy, or silky face, and then this lustrous face will have its original luster destroyed at different points, thus leaving the remaining lustrous and the plainer or dull-appearing portions contrasting in design. This may be done during the cold process of vulcanization by applying the usual vulcanizing solution to the lustrous or farina face of the goods by means of an engraved roller made to imprint upon the same the design or pattern which it is desired to show on the goods, the vulcanizing solution rendering dull or non-lustrous only those parts of the lustrous or farina face touched by it, leaving lustrous and plain or darker portions, which, contrasting, represent the design.

Referring again to the drawings, where the letter *a* designates the lustrous or farina portion, and the letter *b* the portions made dull or non-lustrous by the vulcanizing solution, the design showing a stripe, the vulcanizing solution may be applied to the farina face by a roller having annular projections and depressions.

It will be understood that the waterproofing solution, preferably chloride of sulphur, where it acts on the farina and wets it causes the farina surface to lose its luster, whereas the parts of the farina surface acted upon by the vapor of the said solution is "fixed," as it is called, and left lustrous, and if sufficiently fixed the subsequent application of a coating of india-rubber will not destroy the luster.

If desired, the farina to produce the lustrous surface may be applied to the tacky surface of the fabric through openings in suitable stencil-plates cut to represent the design required, as in Fig. 2.

The india-rubber or waterproofing tacky surface may be applied to the fabric by means of stencils or by engraved rollers, and the

farina be thereafter applied to the tacky surface, leaving a lustrous surface corresponding with the pattern on the engraved roller or in the stencil used.

The design may be obtained by pressure applied to the lustrous surface, particularly before vulcanization, this pressure cutting or driving the farina into the rubber and so destroying the lustrous effect.

Fabrics coated with india-rubber or other waterproofing material to conceal the fabric and the color of its threads and showing a lustrous face may be ornamented by printing thereon in any suitable dyes, pigments, or media, as at *c*, and preferably the design to be shown in the lustrous ground will be printed directly upon the lustrous portion of the goods; but it may be printed on the india-rubber face of the fabric, and the latter be thereafter made lustrous; and so, also, the color may be printed upon and developed upon the portions of the fabric which are left dull and located in the neighborhood of the lustrous surface at the face of the fabric.

If the design is printed on the rubber before the application of the farina thereto, it generally occurs that the surface becomes dry before the farina can be applied, and to receive the farina I may therefore spread upon the printed surface a thin film of india-rubber or similar material, and upon this second rubber coating, while still tacky or adhesive, I apply the farina. The farina-coated fabric may thereafter be vulcanized by the cold process, or by dry heat, as is well understood.

If the design is imprinted after the application of the farina, before or after vulcanization, the colors, dyes, or pigments should be mixed with or dissolved in suitable media which will combine with, temporarily soften, or otherwise act upon the surface of the waterproof material, so as to cause the color, dye, or pigment to adhere thereto and combine therewith. Among such suitable media are the ordinary rubber solvents, drying-oils, linseed-oil, varnish, and the like. When it is desired to give additional body or consistency to the medium, there may be dissolved therein or mixed therewith a solid hydrocarbon, such as paraffine, india-rubber, or suitable gums and resins.

The media ordinarily employed in calico-printing and in similar operations may be employed, when the printed surface is thereafter protected by a film of india-rubber, as hereinafter described; but I prefer to employ the solvent and similar media when printing upon the farina-coated surface.

The surface of a fabric coated with rubber and farina, and showing a uniformly-lustrous face, may be ornamented in design by printing the lustrous face with a colorless varnish, which will dull the luster at such portions.

The ornamented fabric may, if desired, be vulcanized by the well-known cold-vulcanizing process or by dry heat.

By the term "lustrous face," I desire to cover a face or surface which is glossy or silky in appearance, and the said lustrous, glossy, or silky appearance may be gained either by farina, or by powdered glass, or materials having similar properties.

Having described different methods by which my improved fabric may be produced, I wish to state that I do not desire to limit my invention to the production of an improved water-proof goods by any one of the said methods; nor do I desire to limit my invention to any particular design, either in ornamentation, or of the partially-lustrous face, or the color on the said face.

I claim—

1. An india-rubber-coated water-proof fabric having a partially-lustrous and a partially-dull or non-lustrous face, the coating concealing the fibrous material of which the fabric is composed and affording a lustrous design, substantially as described.

2. An india-rubber-coated water-proof fabric having a combined lustrous or farina-coated and color-printed face, substantially as described.

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

CHARLES MOSELEY.

Witnesses:
CHAS. R. ALLEN,
Solicitor, Manchester.
WM. E. HAYS.