

UNITED STATES PATENT OFFICE.

JAMES HEBBLEWAITE AND EDWARD HOLT, OF MANCHESTER, COUNTY OF LANCASTER, ENGLAND.

FIGURED FABRIC OR MATERIAL FOR FLOOR-CLOTH, WATER-PROOF CLOTH, &c.

SPECIFICATION forming part of Letters Patent No. 322,601, dated July 21, 1885.

Application filed May 6, 1885. (No specimens.) Patented in England April 16, 1884, No. 6,399.

To all whom it may concern:

Be it known that we, JAMES HEBBLEWAITE and EDWARD HOLT, subjects of the Queen of Great Britain and Ireland, and both residing at Manchester, in the county of Lancaster, England, have invented an Improved Figured Fabric or Material for Floor-Cloth, Water-Proof Cloth, &c., (for which we obtained a patent in Great Britain, No. 6,399, dated April 16, 1884,) and of which the following is a specification.

This invention relates to the manufacture of an improved figured fabric or material by the production, in the manner hereinafter described, of designs on textile and other fabrics or materials—such as calicoes and other woven fabrics, paper, felt, and felted fabrics, floor-cloths, water-proof cloths, or other materials susceptible of such process.

By our improved means we are enabled to produce upon such textile or other fabrics or materials an endless variety of designs and effects hitherto not obtainable.

In carrying out our invention we take the textile or other fabric or material and we coat or cover one surface (or both surfaces) of the same with a solution of india-rubber or other suitable compound or solution, of any desired color or colors, and this coating or covering may be applied to such an extent as to render the fabric or material water-proof or otherwise.

We then, while this compound or solution is in a more or less adhesive state, overspread the surface or surfaces with farina, powdered soap-stone, or other suitable powder, either white or colored, according to the effect desired.

We then place the coated or covered fabric or material in a machine so constructed that a roller upon which a pattern or design has been engraved or carved presses against a roller having a yielding surface, or one so constructed that depressions in the first-named roller fit into corresponding elevations in the roller against which it presses. The coated or covered fabric or material is then passed between such rollers, and it will be found that the farina or other suitable powder has been forced from the outer surface into and becomes part of the india-rubber or other suitable coating first-named in such parts as the elevations of the said roller press against the

depressions or yielding surface of the other roller, leaving the other portions of the covered or coated fabric or machine untouched or unaffected and of the same shade or color as the whole surface or surfaces were before placement between the rollers, and the pattern or design will stand in relief or the reverse to the other portion of the covered or coated fabric or material, and the pattern or design will also be imparted to both sides of the coated or covered fabric or material. This part of our process may be called or termed "embossing," and may be accomplished by the use of cylinders, rollers, or blocks heated or maintained at a suitable temperature, and fitted with appliances or facilities for giving varied degrees of pressure; or we may adopt other convenient methods—such, for instance, as those employed in embossing leather, paper, silk, velvet, textile and other fabrics or materials—and it will be found that the farina or other suitable powders prevent the adhesion of the india-rubber (or other compound or solution aforesaid) to the engraved or carved portions of the cylinders, rollers, or blocks, and the consequent clogging or defacing of the pattern or design. We fix the farina or other suitable powder by means of vapor from a mixture of chloride of sulphur and bisulphide of carbon or other suitable liquor, and this part of our process may be effected either before or after the coated or covered fabric or material has been placed in the embossing-machine or other appliance; or we may prefer that the farina or other suitable powder may be fixed and the coated or covered fabric or material partially vulcanized or cured by placing it in contact with a roller revolving in a mixture of chloride of sulphur and bisulphide of carbon or other suitable liquor or medium.

We complete the vulcanization or curing of the whole by the liquor process, such as is produced by the action of the chloride of sulphur and bisulphide of carbon or other convenient or suitable means of vulcanization or curing.

The fabric or material may be embossed in this manner either upon a plain surface or upon one which has been previously printed upon; or they may be printed upon after embossment.

We claim—

The improved figured fabric or material produced by first coating a woven or other fabric or material with a solution of india-
5 rubber or other suitable compound or solution of any desired color or colors, then while such compound or solution is in a more or less adhesive state overspreading the same with farina, powdered soapstone, or other suitable
10 powder, (either white or colored,) and then embossing a pattern or design thereon by

means of carved or engraved rollers, cylinders, or blocks, substantially as hereinbefore particularly described.

In testimony whereof we have signed our 15 names to this specification in the presence of two subscribing witnesses.

JAMES HEBBLEWAITE.
EDWARD HOLT.

Witnesses:

GEORGE DAVIES,
JNO. HUGHES.