

UNITED STATES PATENT OFFICE.

CARL BUCHER, OF GERA, GERMANY.

PROCESS OF MANUFACTURING COLORED FABRICS.

SPECIFICATION forming part of Letters Patent No. 790,718, dated May 23, 1905.

Application filed September 3, 1902. Serial No. 122,008.

To all whom it may concern:

Be it known that I, CARL BUCHER, chemist, a subject of the Emperor of Austria-Hungary, residing at Gera, Principality of Reuss, Germany, have invented certain new and useful Improvements in Processes of Manufacturing Colored Fabrics, of which the following is a specification.

This invention has for its object a process of imparting to goods by means of pressure a mixed, sprinkled, or flamed appearance, such as cloths have made of mixed beige thrown and fancy yarns and also those which are made of yarns which are either printed in the sliver or spun from a mixture of various white and colored or mordanted fibrous material. It is a question here of both wool and semiwool goods.

The present invention consists in color-printing on the wet goods and not on the prepared dry goods, as was hitherto customary. The wet wool fibers have very great capillarity, which may be considerably increased by preparation, and consequently a color applied in places runs.

The goods before being printed are wrung out uniformly in a wet condition or moistened in any suitable manner. The color is then applied to the fabric merely in places by means of one or more recessed or relief rollers. By this means the color does not remain sharply impressed, as has hitherto been required in color-printing, but it is distributed on all sides, like, for instance, a drop on a piece of absorbent paper. The center is darker and the color diminishes to all sides.

The goods must of course be previously cleaned and, if desired, bleached or colored and perfectly uniformly wetted or sprinkled and prepared. In order to increase the capillarity of the thread, the goods may be saturated, for instance, with glycerin or other hygroscopic substance.

The colors must be made thinner than in ordinary color-printing, so that in contrast to what is usually demanded in color-printing they may not stand well—that is to say, yield no sharp outlines of the printed pattern—but easily run. After the color is applied it is fixed in the ordinary manner.

If it is a question of dark shades or characteristic designs which the fabric is to re-

ceive, the course hereinbefore described is still adopted, but the degree of moisture in the fabric is as far as possible diminished. The capillarity and the assimilating properties of the fiber must, however, be increased. Both are obtained by suitable preparation. If, for instance, the known marengo tint is to be produced on the fabric, the wet prepared fabric is passed through two pressure-rollers, the first of which acts as a grounding-roller and produces a dense pattern and applies a medium gray. This color is very fluid, and thereby is able to rapidly penetrate the fiber. The next roller (character-roller) has a more delicate engraving and a definite pattern. The shade is in this special instance deep black and the color is of a thick fluid consistency. The medium gray applied mingles, in consequence of the capillary properties of the fiber, increased by the wet preparation, with the raw white of the thread and the black with the gray into a uniform print of a complete marengo mixture, such as was hitherto only possible by mixing various colored or printed kinds of loose wool. Special effects can still be obtained if various solvents and dyes of different character are contained in the printing-colors employed or if mordants, reserves, and etching substances are allowed to act on one another or on the preceding color or directly on the fabric.

I declare that what I claim is—

1. A method of manufacturing colored fabrics which consists in moistening the fabric, and then progressively applying the parts of a design in color to the fabric thereby producing a colored fabric with a mottled design.

2. A method of manufacturing colored fabrics which consists in moistening the fabric, and then progressively applying under pressure the parts of a design in color to the fabric and removing the pressure from that portion of the fabric upon which the parts of the design have been applied, thereby producing a colored fabric with a mottled design.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CARL BUCHER.

Witnesses:

PAUL SPIESS,
PAUL WOLF.