

UNITED STATES PATENT OFFICE.

STEWART F. CARTER, OF NORTH ADAMS, MASSACHUSETTS, ASSIGNOR TO
THE WINDSOR COMPANY, OF SAME PLACE.

PROCESS OF PRODUCING WHITE EFFECTS ON FABRICS.

SPECIFICATION forming part of Letters Patent No. 606,777, dated July 5, 1898.

Application filed October 28, 1897. Serial No. 656,723. (No specimens.)

To all whom it may concern:

Be it known that I, STEWART F. CARTER, a subject of the Queen of Great Britain, residing at North Adams, in the county of Berkshire and State of Massachusetts, have invented a certain new and useful Improvement in Processes of Producing White Effects on Cotton and other Fabrics, of which the following is a specification.

10 The object of my invention is to produce white effects of great permanence upon cotton and other fabrics.

Prior to my invention it has been the custom, in the art of calico-printing particularly, 15 to imprint upon the fabric the designs with a pigment consisting of oxid of zinc or sulfate of barium, to which albumen has been added, and to subsequently subject the fabric to the effect of heat, so as to decompose the albumen, whereby the latter will mechanically 20 bind the pigment upon the fabric. It has also been proposed to print upon the fabric, where a white effect is desired with tungstate of soda to which gum or starch is added, and 25 subsequently passing the fabric through a solution of barium chlorid, whereby insoluble tungstate of barium will be produced as the coloring-matter. This color, however, has been more or less fugitive, and it is the object 30 of my invention to increase its permanence.

In carrying out my invention I proceed as follows: Tungstate of barium is produced by subjecting tungstate of soda to the action of 35 barium chlorid. The barium tungstate in the form of a heavy white precipitate is then added to the requisite amount of albumen, and the mixture is printed upon the fabric as an ordinary pigment. After this printing 40 has been effected the fabric is subjected to the effects of heat, so as to coagulate the albumen and mechanically bind the barium tungstate to the fabric. I find in practice that by employing a pigment comprising barium tungstate an intensely white and clear 45 effect is produced, which will be far superior to that obtained by the use of zinc oxid, as practiced prior to my invention, and that by affixing such pigment to the fabric by albumen subjected to heat, as I have explained, a 50 color of great permanence will be produced.

Instead of first forming the tungstate of barium as a pigment, which is subsequently imprinted upon the fabric, it will be understood that the fabric may be imprinted either 55 with tungstate of soda or with barium chlorid and subsequently passed through a bath of one or the other of such substances, so as to result in the chemical formation of tungstate of barium, as will be obvious. I prefer, however, to first produce the tungstate of barium 60 as a pigment before applying the same to the fabric, because by doing so I overcome the necessity of passing the fabric through a bath, and I also make it possible to print other colors upon the fabric at the same operation. 65

It will be obvious that instead of using albumen alone as a binding agent for fixing the color a mixture of albumen and gum may be employed, as is now common in the art of 70 calico-printing, and also that instead of employing albumen, either alone or in combination with gum, for the purpose it will be possible to use other binding agents which coagulate by heat—such, for example, as lactarene. 75

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is as follows:

1. An improved process for producing white effects on cotton and other fabrics, which consists in printing upon the fabric, in suitable 80 designs, tungstate of barium, together with albumen, and in finally subjecting the fabric to heat, so as to coagulate the albumen, thereby mechanically binding the pigment to the fabric, substantially as set forth. 85

2. An improved process for producing white effects on cotton and other fabrics, which consists in printing upon the fabric, in suitable 90 designs, with a pigment comprising tungstate of barium, to which has been added a suitable binding agent, such as albumen, and in finally subjecting the fabric to heat, substantially as set forth.

This specification signed and witnessed this 95 19th day of October, 1897.

STEWART F. CARTER.

Witnesses:

FRANK L. DYER,
JNO. R. TAYLOR.