

# UNITED STATES PATENT OFFICE.

JACOB C. MAGUIRE, OF LITTLE FALLS, NEW JERSEY.

## DYEING AND FINISHING PLUSH FABRICS.

SPECIFICATION forming part of Letters Patent No. 283,500, dated August 21, 1883.

Application filed July 19, 1883. (No specimens.)

*To all whom it may concern:*

Be it known that I, JACOB C. MAGUIRE, a subject of the Queen of Great Britain, residing in the town of Little Falls, county of Passaic, and State of New Jersey, have invented certain new and useful Improvements in the Manufacture of Nap on Plush Fabrics, fully described and represented in the following specification.

10 This invention relates generally to the manufacture of all classes of nap or plush fabrics, but particularly to that class of these fabrics in which the threads or yarns composing the body are loosely twisted, so that a long nap or pile can be raised by the process of gigging.

15 In manufacturing these goods by the processes heretofore employed the fabric, after being woven and fulled in the usual manner, was subjected to the gigging operation, by which some of the fibers of some of the threads or yarns composing the cloth were pulled up, so as to raise a nap or pile. After the nap was thus raised the fabric was dyed or printed, then steamed to develop and set the color, 25 and then, while the color was still in a moist condition, the fabric was thoroughly washed, so as to remove the surplus color, and also all the gumming ingredients of the color, and leave the nap in a soft and pliable condition. 30 After this it was whipped, dried, and sheared, and was then ready for use. The nap or pile thus formed was, owing to the loose twisting of the threads or yarns from which it was drawn, left without a firm hold upon the body of the fabric, and consequently in such a condition as to be very easily pulled out when brought into contact with other objects. Various expedients have been adopted to cure this defect, among which is that described in 40 United States Letters Patent No. 209,805, in which a coating of paste or other adhesive substance is applied to the back of the fabric, so as to be absorbed by the threads or yarns, and thus cement or glue the ends of the fibers forming the nap to the body. This method, while it accomplished to some extent the object sought, entailed an extra operation in the manufacture, and to that extent enhanced the labor and cost of production.

50 It is the object of the present invention to obviate this extra labor and expense, and at

the same time provide means by which the fibers of the nap shall be securely held to the body of the fabric.

To that end the invention consists in a method of manufacture by which the fibers forming the nap are pasted or glued to or into the threads or yarns in the operation of dyeing or printing, and without the necessity of applying paste or other cement to the back of the 60 fabric.

In carrying the present invention into practice the fabric is woven, fulled, gigged, and dyed or printed in the usual manner, a suitable paste or cementing substance being, however, mixed with the dye or printing color, so as to be applied to the nap or face side of the fabric at the same time with the dye or color. This paste or cement may be formed by simply mixing flour or other like substance with the dye or color; but British gum, or what is known as "gum substitute," will be found preferable for the purpose, because these gums, while readily dissolved in hot water, are not readily dissolved in cold water. After the dye or color containing the paste or cement has been thus applied the fabric is submitted to the usual steaming process, by which the color is developed or set and the paste or gum thoroughly cooked and driven into all the interstices of the threads or yarns, so as to hold fast the ends of the fibers forming the nap. The fabric then, instead of being washed while the color is in a moist condition, is allowed to become thoroughly dried, so as to set the paste or gum which has soaked or been driven into the interstices of the threads or yarns. After being thus dried it is washed in cold water sufficiently to remove the soluble parts of the paste from the nap, after which it is whipped, 90 dried, and sheared in the usual manner, and is ready for use.

By applying the paste or gum before the steaming, and then allowing the fabric to become thoroughly dried before washing, and then washing in cold water, it becomes possible to wash the surplus color and the soluble parts of the paste or gum from the nap without disturbing that which has been driven into or been absorbed by the threads or yarns of the body, and consequently renders it unnecessary to apply the paste to the back of the 100



fabric, while by applying the paste or gum in connection with the dye or color all necessity of an extra operation for the purpose is avoided.

What is claimed is—

- 5 The improvement in the art of manufacturing nap or plush fabrics, which consists in applying a paste or cementing substance to the nap or face side of the fabric in connection with the dye or color, then steaming and dry-  
10 ing the fabric, and then washing the same to

remove the paste or gum from the nap, substantially as described.

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

J. C. MAGUIRE.

Witnesses:

T. H. PALMER,  
J. A. HOVEY.