

# UNITED STATES PATENT OFFICE.

WILLIAM ROSSNAGEL, OF NEWARK, NEW JERSEY.

## IMPROVEMENT IN HAIR-CLOTH.

Specification forming part of Letters Patent No. 120,330, dated October 24, 1871.

*To all whom it may concern:*

Be it known that I, WILLIAM ROSSNAGEL, of Newark, in the county of Essex and State of New Jersey, have invented certain Improvements in the Manufacture of Hair-Cloth, of which the following is a specification:

My invention consists in combining Sisal hemp or Manila with hair in the manufacture of hair-cloth. The object of my invention is to reduce the cost of the article and also to render the fabric more pliable.

The cloth is woven in the usual manner, except that a thread of hair and a thread of Sisal hemp or Manila is used alternately for the filling, forming what I denominate a union hair-cloth. After the cloth is woven it is colored or dyed, then pressed twice, after which it is varnished, walnut-stain being mingled with said varnish. After the varnish becomes dry it is finished with a fine coat of shellac varnish, when it is ready for use. I find it preferable to apply the varnish with a woolen cloth having a sponge inclosed.

The ingredients and process of forming the dye are as follows: First solution, ten pounds extract logwood and six pounds fustic in two hundred and fifty gallons of water; second solution, one and a half pounds bichromate of potash dissolved in the same quantity of cold water; third solution, one and a quarter pound cop-

peras dissolved in the same quantity of cold water.

The process of dyeing is as follows: The first solution should be lukewarm when the cloth is submerged, and it should remain in the solution for fifteen minutes. It is then taken out and submerged in the second solution and allowed to remain for the same length of time, after which it is submerged in the third solution, also for the same length of time. This process is repeated three times, after which it is dried, and is then ready for the process of finishing.

I am aware of the patent granted to J. J. Comstock and James Aborn, dated May 17, 1870, No. 103,018, for the manufacture of imitation hair-cloth, wherein is claimed the use of the fiber of the stem of the wild plantain tree as a substitute for animal hair in the manufacture of fabrics for purposes for which hair-cloth is suitable. Such is not claimed by me; but

What I claim as new, and desire to secure by Letters Patent, is—

The invention of a union hair-cloth, consisting of the articles above named, and manufactured substantially as set forth and described.

WILLIAM ROSSNAGEL.

Witnesses:

OLIVER DRAKE,  
ELIAS FRANCIS.

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