

# United States Patent Office.

JOHN COCHRANE, JR., OF MALDEN, MASSACHUSETTS.

*Letters Patent No. 100,377, dated March 1, 1870.*

## IMPROVEMENT IN CARPET.

The Schedules referred to in these Letters Patent and making part of the same:

### *To all whom it may concern:*

Be it known that I, JOHN COCHRANE, Jr., of Malden, in the county of Middlesex, and State of Massachusetts, have invented an Improved Carpet; and I do hereby declare that the following is a description of my invention sufficient to enable those skilled in the art to practise it.

My invention relates to the manufacture of woven carpets in which the colors are produced by printing, the same or different figures being printed upon the opposite sides, and in the same or different colors.

In my invention I employ jute or jute-flax as the material of which to form or weave the carpet, (the warp and filling being both formed of jute yarns,) and I make a twilled fabric having the twills or tweels "reversed," so as to obtain the closest contact side by side of the adjacent yarns of the warp and of the adjacent yarns of the filling.

Previous to printing the jute fabric thus woven, I immerse it in or run it through a hot solution of glue or other sizing in water for the purpose of expanding or swelling the yarns, and closing the interstices and making a comparatively smooth surface upon which to print.

The fiber of jute being very short it has to be twisted very hard in order to be worked in a loom, and consequently, it expands very greatly under the action of the size, much more so than wool and other long fibers.

And after this treatment, and when the fabric has become sufficiently dry, I print both surfaces with suitable patterns and colors on a common cylinder printing-machine.

It is in a carpet thus made that my invention consists, that is to say, in a jute carpet woven with a reverse twill, and printed on both surfaces, the woven fabric, previous to printing it, being immersed or run through liquid sizing to expand the yarn and impart body thereto for the action of the printing-cylinder.

By weaving the fabric with a twill instead of plain, a very light and cheap fabric may be produced, with the yarn so closely united by contact that the color will not strike through from one side to the other, while by weaving with the reverse twill the colors are prevented from spreading laterally, the reverse of the twilling also preventing the carpet from being drawn awry.

I claim—

A jute carpet woven with a reverse twill, and printed on both sides, the fabric, previous to being printed, being immersed or run through hot liquid sizing.

JOHN COCHRANE, JR.

Witnesses:

FRANCIS GOULD,  
S. B. KIDDER.