

UNITED STATES PATENT OFFICE.

CHARLES P. WYMAN, OF ARLINGTON, MASSACHUSETTS.

METHOD OF MAKING PAPER FABRIC.

SPECIFICATION forming part of Letters Patent No. 342,988, dated June 1, 1886.

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To all whom it may concern:

Be it known that I, CHARLES P. WYMAN, a citizen of the United States, residing at Arlington, in the county of Middlesex and State of Massachusetts, have invented a new and useful Method of Making Paper Fabric, of which the following is a specification.

My invention relates to an improved method of making a fabric composed of paper twine or paper twine combined with yarn made of other material than paper. My method is as follows: I take a fine tissue paper, made of Manila hemp or other suitable fiber, and cut it into narrow strips. I usually cut these strips about three-eighths of an inch in width, (more or less, as the quality is to be fine or coarse,) and wind these strips onto bobbins or spools, so that these bobbins or spools can be conveniently put on a twisting-frame. This work is done on a paper cutting and winding machine designed for the purpose. These strips of paper are then thoroughly wet. This I prefer to do by putting them in a water bath. This bath may contain dye or size, or the paper may be drawn unrolled through such baths. When the paper is thoroughly wet, I put it on a twisting-frame and twist it hard. A little practice will enable the operator to put in the right amount of twist. The amount depends upon the kind of yarn needed, the thickness and width of the paper. After the yarn is twisted, and while it is in a damp pliable condition, I draw it off from the twister-bobbins and wind it on smaller bobbins to be used as weft. This can be done on the common quiller. This takes out kinks and draws the paper into a more compact thread. The yarn may be twisted directly onto the weft-bobbins, but I think the former method better. During this rapid process the yarn has not time to dry, and in its damp pliable state I put it in the shuttle and weave it into cloth, using paper twine or any kind of suitable yarn for warp. I prefer, however, to use cotton warp. When I use paper yarn for warp, I find it is better to size it; the same as if it were cotton.

In practice I find that to make a light, pliable, springy, cheap fabric cotton warp and paper filling is the best. The springiness of

the goods is in proportion to the amount of paper it contains.

In the manufacture of paper fabrics to be used as skirtings I use what is generally called "Manila" tissue-paper weighing nine and one-half pounds to the ream, (twenty-four by thirty-six inch sheets,) cut into strips about three-eighths of an inch wide, and twisted hard for weft, and for warp No. 22 single cotton yarn, eighteen hundred and sixty ends. This fabric weighs about five ounces to the yard, and is twenty-seven inches wide. The weight of the warp is about two ounces, and the weft about three ounces. There are twenty-four picks to the inch. After the fabric has been woven, I finish it by dyeing, calendering, or other process common to textile fabrics, as may be desired.

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

1. The method herein set forth of making fabric of paper twine, which method consists in first cutting thin tissue paper made of Manila hemp or any suitable fiber into narrow strips, then winding these strips onto bobbins or spools, then wetting these strips of paper by any suitable means, then twisting the paper while it is in a damp state into a hard twine, then while the twine is in a damp pliable condition weaving it either as warp or weft, or both, into cloth, substantially as described.

2. The method herein set forth of making fabric of paper twine, which method consists in first cutting thin tissue-paper made of Manila hemp or any suitable fiber into narrow strips, then winding these strips of paper onto bobbins or spools, then wetting these strips of paper by any suitable means, then twisting the paper while it is in a damp state into a hard twine, then, while the twine is in a damp pliable condition, weaving it as warp or weft, or both, into cloth, then finishing the fabric by dyeing, calendering, or other process common to textile fabrics, substantially as herein described.

C. P. WYMAN.

Witnesses:

GEORGE DENNISON,
HENRY H. FITCH.