

UNITED STATES PATENT OFFICE.

NEWTON W. NUTTING, OF OSWEGO, NEW YORK.

PROCESS OF CONVERTING WOOD FIBER INTO FLEXIBLE CARPETS, &c.

SPECIFICATION forming part of Letters Patent No. 244,820, dated July 26, 1881.

Application filed June 13, 1881. (No specimens.)

To all whom it may concern:

Be it known that I, NEWTON W. NUTTING, a citizen of the United States of America, residing at Oswego, in the county of Oswego and State of New York, have invented a certain new and useful Process of Converting Wood Fiber into Flexible Carpets, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention consists in a new process for making carpets and other flexible fabrics out of wood fiber, as hereinafter particularly set forth and claimed. The first step in my process is to reduce said fiber to the consistency and condition of pulp such as is used in paper-making. This may be effected in any of the well-known ways—such as boiling under pressure with acids. None of these methods or processes need be set forth here in detail, they being familiar to all versed in the art, and described in divers expired patents and elsewhere. The next step is to take the pulp thus produced and press it between one or more rolls, or sets of rolls, which will force out most of the moisture, and make the pulp homogeneous in texture, breaking up all lumps and causing the fine particles to adhere to one another, so as to form an entire fabric of the thickness or width desired and the solidity required. The next step is to pass the pulp thus pressed into fabric through oil, or apply oil thereto until the whole fabric is permeated with it. The object of the application of the oil is to increase the flexibility of the fabric and to toughen the same. Any surplus of oily matter may be expressed by passing the fabric again through rolls; but this will be unnecessary in many cases. The fabric is then ornamented in suitable designs by painting and printing or stamping, or in any other well-known way. The next step is to make a mixture of alcohol and shellac or gum-shellac in the following proportions: eight parts of alcohol to two parts of shellac or gum-shellac. This mixture is applied to the ornamented surface of the carpet

with a brush or by machinery. After this mixture is dry, then with a brush or machinery apply one or more coats of the best coach-body or other varnish. The object of the application of the alcohol and shellac or gum-shellac and varnish is to make a smooth glossy surface that will be impervious to moisture and easily cleaned, and a surface that will not stain, or from which stains may be removed easily.

The fabric thus produced is very flexible and suitable for floor-cloths or carpets, ceilings, and table-cloths, and many other uses. The oil softens all parts of the fabric, so that it has none of the stiffness of linoleum and other floor-cloths. The oil also toughens the fabric and makes it impervious to moisture; and it can be applied as conveniently and cheaply as ordinary textile fabrics wherever such fabric is needed. The preliminary pressing between rolls is not absolutely indispensable, for the woody fibers of the pulp may be spun and then woven together, this manipulation and the action of the oil sufficing to give the necessary flexibility, and the application of the alcohol and shellac or gum-shellac and varnish producing a surface desirable for carpets, floor-cloths, ceilings, and table-cloths, for the reason that a surface so produced will resist moisture, will be smooth and glossy, can be washed readily and without injury, and the surface so produced also protects the ornamenting, and is not sticky or tacky.

Of course flat pressure may be substituted for pressure between rolls. The latter plan is, however, much better for convenience in feeding and for other purposes.

I prefer linseed-oil for the oil process, though other oils may be used; and in the mixture hereinbefore described I prefer the ingredients and proportions as set forth, though these may be considerably varied.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The method or process of manufacturing carpets or floor-cloths and other flexible fabrics from wood fiber, consisting in the following steps: first converting said fiber into pulp, next pressing said pulp or spinning and weaving the same, then passing the fabric thus

made through oil, or treating it with oil, substantially as described, then ornamenting the surface by stamping, printing by hand, or in any other convenient manner, and finally, by
5 machinery or by hand, applying a mixture of alcohol and shellac or gum-shellac to the ornamented surface of the fabric, substantially as hereinbefore described, and after this mixture is dry varnishing this surface, substantially as
10 described.

2. The method or process of manufacturing carpets or floor-cloths and other flexible fabrics from wood fiber, consisting in the follow-

ing steps: first converting said fiber into pulp, next pressing said pulp or spinning and weaving the same, then passing the fabric thus produced through oil or treating it with oil, substantially as described, and finally ornamenting the surface by stamping, printing by hand, or in any other convenient manner. 15 20

In testimony whereof I affix my signature in presence of two witnesses.

NEWTON W. NUTTING.

Witnesses:

J. H. BISHOP,
JAMES PAPPAS.