

No. 646,123.

Patented Mar. 27, 1900.

M. KOECK.
WOVEN FABRIC.

(Application filed Mar. 21, 1898.)

(No Model.)

Fig. 4.

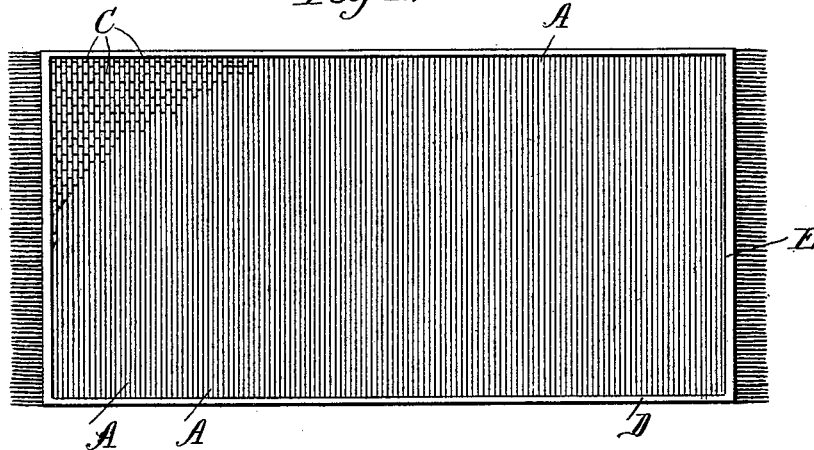


Fig. 1.

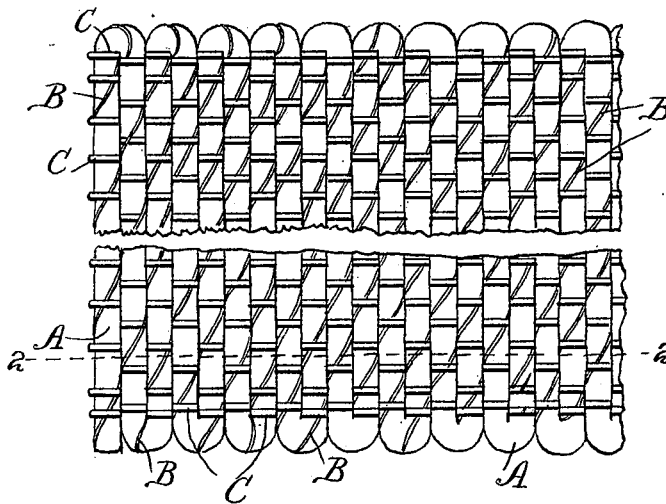


Fig. 2.

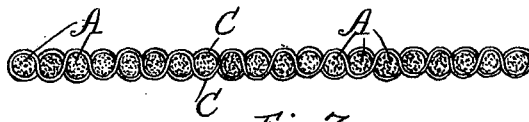


Fig. 3.



Witnesses.

Wm. M. Rhein.
Wm. J. Huming

Inventor
Martin Koeck
by Mowbray & Darby attys

UNITED STATES PATENT OFFICE.

MARTIN KOECK, OF OSHKOSH, WISCONSIN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE NORTHWESTERN GRASS TWINE COMPANY, OF ST. PAUL, MINNESOTA.

WOVEN FABRIC.

SPECIFICATION forming part of Letters Patent No. 646,123, dated March 27, 1900.

Application filed March 21, 1898. Serial No. 674,657. (No specimens.)

To all whom it may concern:

Be it known that I, MARTIN KOECK, a citizen of the United States, residing at Oshkosh, in the county of Winnebago and State of Wisconsin, have invented a new and useful Woven Fabric, of which the following is a specification.

This invention relates to fabrics.

The object of the invention is to produce a fabric of fibrous material and which is inexpensive, economical in manufacture, and durable and efficient in use.

The invention consists, substantially, in the construction, combination, arrangement, and procedure, all as will be more fully hereinafter set forth, as shown in the accompanying drawings, and finally specifically pointed out in the appended claims.

Referring to the accompanying drawings, and to the various views and reference-signs appearing thereon, Figure 1 is a broken view in plan of a fabric embodying the principles of the invention. Fig. 2 is a sectional view of the same on the line 2 2, Fig. 1. Fig. 3 is an enlarged detail view of a strand of fiber employed in the production of the fabric. Fig. 4 is a view in plan of a mat constructed in accordance with the principles of the invention.

In carrying out the principles of the invention a continuous strand of fibrous material is formed in any suitable manner, and this continuous strand is doubled back and forth upon itself to secure the desired width and length of fabric to be produced, and through the body thereof are interwoven suitable stays or bindings, and the fabric thus produced may be finished in any suitable manner. In practice the continuous strand of fibrous material is formed of stocks of fibrous material—such, for instance, and preferably, as marsh-grass. The stocks of grass are suitably prepared and arranged parallel with respect to each other and in even and regular quantities, so that adjacent ends of such stocks suitably and successively overlap each other to produce continuity in the strand, and when thus arranged such strand is given a suitable twist and is suitably wrapped spirally with a thread or cord B, as clearly indicated in Fig. 3. The

strand of fibrous material thus produced is then successively bent or doubled upon itself by hand or by any suitable or convenient arrangement of mechanism to produce the fabric. The width of the fabric to be produced is of course dependent upon the length of strand contained between adjacent bends. By suitably regulating the number of bends or doubles of the continuous strand upon itself of course the length of the fabric to be produced may be regulated. A suitable number of these doubled strands of fibrous twine forms the body of the article to be produced, and such body of the fabric being produced is interwoven with suitable thread or cord or other stay or binding C. These binding or staying strands C may be advantageously woven, respectively, under and over adjacent parallel strands of twine throughout the whole body of the article to be produced, as clearly illustrated in Fig. 2, and extend transverse to the lay of such continuous fibrous strand in the completed fabric. As indicated in Fig. 1, these interwoven binding strands or stays are interspersed throughout the entire body of the fabric and, as is evident, may be suitably variegated in color in order to produce suitable and desirable artistic and ornamental appearance in the finished article.

In order to efficiently protect the edges of the fabric, the extreme outer interwoven binding stays or strands C may be duplicated, as indicated in Fig. 1. Of course it is evident that adjacent portions of the doubled or bent fibrous strand and also of the interwoven binding strands or stays may be crowded as close together as possible or desirable or spaced as far apart with respect to each other as may be desired, thus producing fabrics varying in degree of coarseness or fineness of texture.

Fabrics produced in accordance with the principles of my invention, as above explained, are adapted for a wide variety of uses, among which may be specified matting, carpets, bags, coverings, and the like. In Fig. 4 I have shown a mat constructed in accordance with the invention, a selvage D being suitably applied to the edges of the fabric forming the mat and a suitable ornament-

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tal fringe E being applied to the ends thereof. It is evident, however, that both the selvage D and end fringe E may be omitted or varied at pleasure.

5 From the foregoing description it will be seen that I produce a fabric which is flexible, strong, durable, and useful and which is composed of material that is abundant and easily obtainable and which may be readily and
10 easily worked up, thus rendering the manufacture of such fabric expeditious and economical.

Having now set forth the object and nature of the invention and a practical embodiment
15 thereof, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. As a new article of manufacture, a fabric composed of stalks of grass twisted together and sewed to form a continuous strand,
20 said strand doubled back and forth upon itself, such doubled portions being held together by interwoven binding strands or stays, as and for the purpose set forth.

25 2. As a new article of manufacture, a fabric the body of which is composed of stalks of grass twisted together and spirally wrapped to form a continuous strand said strand bent or doubled back and forth upon itself and having

interspersed throughout transverse binding
30 stays or strands interwoven therewith, such binding strands or stays being duplicated along the edges of the fabric, as and for the purpose set forth.

3. As a new article of manufacture, a mat
35 the body of which is composed of stalks of grass twisted together and spirally wrapped to form a continuous strand, said strand bent or doubled back and forth upon itself and having interwoven therewith binding-strands
40 interspersed throughout such body portion, and a selvage-binding for the edges thereof, as and for the purpose set forth.

4. As a new article of manufacture, a fabric consisting of a main body portion formed
45 of parallel layers or strands of twisted grass, each strand being encircled spirally by a thread in combination with transverse binding-threads traversing the entire body but alternately under and over adjacent parallel
50 grass strands, as and for the purpose set forth.

In witness whereof I have hereunto set my hand, this 17th day of March, 1898, in the presence of the subscribing witnesses.

MARTIN KOECK.

Witnesses:

H. W. HARSHAW,

C. D. CLEVELAND, Jr.