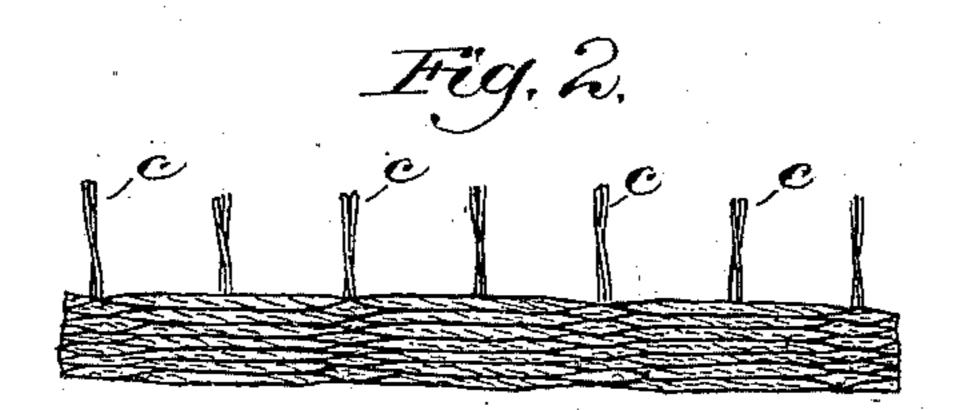
(Specimens.)

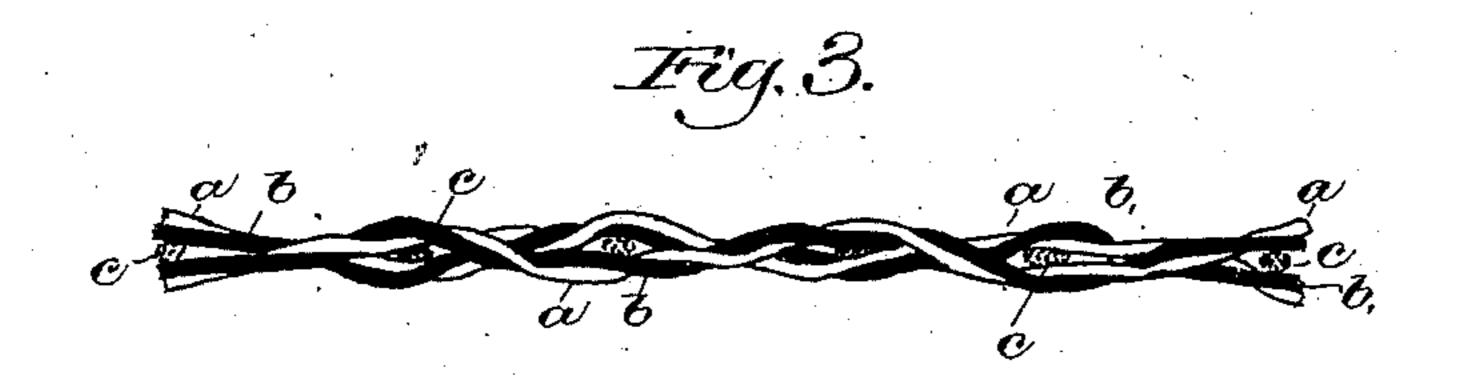
G. J. BICKNELL.

No. 366,198.

Patented July 12, 1887.







Witnesses. John F.C. Premitert Flux L. Envery

Troveritor, George J. Bicknett. By lensey Alregory attiss

## United States Patent Office.

GEORGE J. BICKNELL, OF MELROSE, MASSACHUSETTS.

## INDIA MATTING.

SPECIFICATION forming part of Letters Patent No. 366,198, dated July 12, 1887.

Application filed February 15, 1886. Serial No. 191,962. (Specimens.)

To all whom it may concern:

Be it known that I, George J. Bicknell, of Melrose, county of Middlesex, and State of Massachusetts, have invented an Improvement in India Matting, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to that class of matto ting known as "India matting," and has for its object to produce a matting of greater body, and one which will be capable of withstanding greater wear than the matting of this class now in use. Matting of the kind re-15 ferred to, and as now commonly made, has its west composed of strands of a kind of grass indigenous in India, while its warp is made of hemp or other analogous fiber. To produce a matting capable of withstanding 20 increased wear over that now commonly made, I purpose, in accordance with my invention, to make each west consist of two strands of grass of the kind referred to twisted together, and when so formed the west will be woven 25 in the usual manner with the warp.

Figure 1 shows a detached west strand or thread formed in accordance with my invention; Fig. 2, a top or surface view of a piece of matting made in accordance with my invention, and Fig. 3 a side view of Fig. 2.

Referring to the drawings, I have shown in Fig. 1 a single weft as composed of two separate and distinct strands of grass, a b, of the kind referred to, the said strands being twisted together to form a single strand or thread. The weft, thus composed of two single strands twisted into one, is woven in any usual or ordinary manner with the warp strands or threads c, which may be of hemp or other an-4c alogous fiber. It will be seen on reference to Fig. 3 that each west-strand above and below the warp presents a double amount of wearing-surface—that is, two single strands twisted together, so that the wear upon the matting 45 is not confined to one strand, as a, but is borne equally by both the strands a b of the twisted weft.

It has been demonstrated by experience that a matting made as above described will en-50 dure wear a considerable longer time than when the west is composed of single strands. By having the strands a b of different colors or shades of color a matting of varied design and pleasing appearance may be produced.

It is necessary, in order that the matting made according to my invention should have a smooth and attractive appearance, that the long India or China grass should be used, so that each strand thereof will be of sufficient 60 length to extend from one edge to the other of the matting; otherwise the projecting ends of the strands would give the matting an unsightly appearance, and would render it so rough that it could not be properly swept.

While it may be difficult practically to avoid using some strands which when twisted will be of less length than the width of the matting, very few such short strands will be used, and they will be entirely excluded so 70 far as it is possible to do so practically. Each twisted strand of the weft or filling will preferably consist of only two strands of the grass, as shown in the drawings, although with very fine grass or very heavy matting a greater 75 number of the strands of grass may enter into each of the twisted strands composing the weft.

I claim—

1. As a new article of manufacture, a mat- 80 ting having a warp of hemp or other analogous material and a west of strands of grass twisted together, all, or substantially all, of the said strands being of a length equal to the width of the matting and having their ends 85 at the edges of the latter, substantially as set forth.

2. As a new article of manufacture, a matting having a warp of hemp or analogous material and a west composed of two twisted 90 strands only of grass in each of the strands of the filling of the matting, the ends of the said strands being at the edges of the matting, substantially as set forth.

In testimony whereof I have signed my name 95 to this specification in the presence of two subscribing witnesses.

GEO. J. BICKNELL.

Witnesses:

G. W. GREGORY, F. CUTTER.