

No. 658,292.

Patented Sept. 18, 1900.

W. M. STEVENSON.  
WOVEN FABRIC.

(Application filed Jan. 22, 1900.)

(No Model.)

Fig. 1.

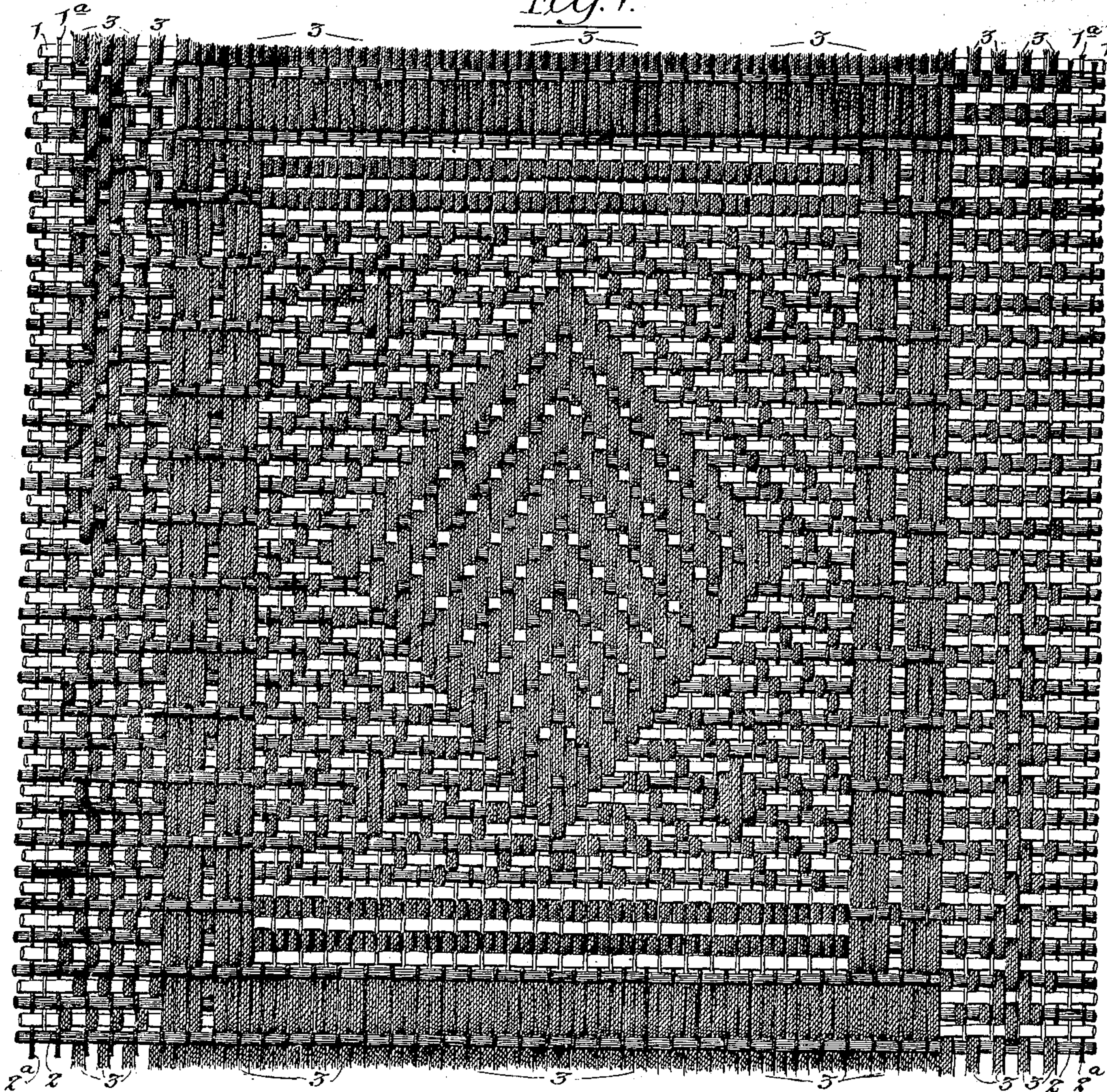


Fig. 2.

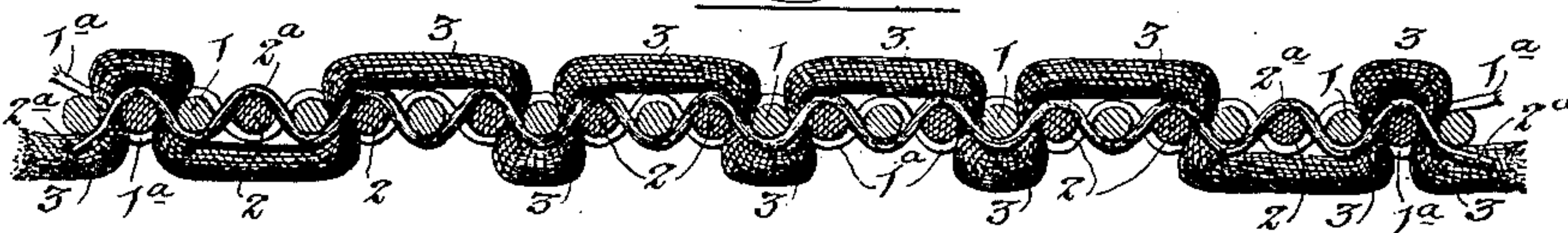
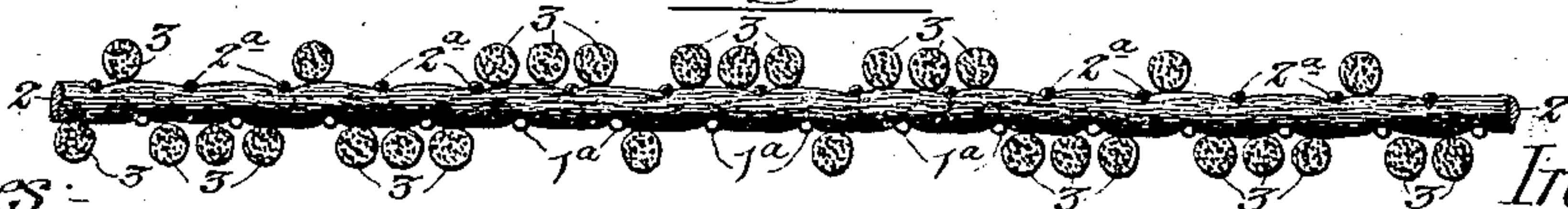


Fig. 3.



Witnesses:

Wm. M. Whitehead.  
F. E. Bechtold

Inventor:

William M. Stevenson.  
by his Attorneys:

Howson & Howson



# UNITED STATES PATENT OFFICE.

WILLIAM M. STEVENSON, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR TO  
THE HODGES FIBER CARPET COMPANY, OF SAME PLACE AND PORT-  
LAND, MAINE.

## WOVEN FABRIC.

SPECIFICATION forming part of Letters Patent No. 658,292, dated September 18, 1900.

Application filed January 22, 1900. Serial No. 2,324. (No specimens.)

*To all whom it may concern:*

Be it known that I, WILLIAM M. STEVENSON, a citizen of the United States, and a resident of Springfield, (Indian Orchard,) Hampden county, Massachusetts, have invented certain Improvements in Woven Fabrics, of which the following is a specification.

The object of my invention is to produce a single-ply fabric having elaborate color effects due to the use of both warp and weft in the formation of the pattern and having in those portions of the pattern which are produced by the warp-threads a raised or relief effect which materially enhances the appearance of the fabric.

In carrying out my invention I use weft or filling threads of paper in combination with textile figuring and binding warp-threads, one set of the latter being preferably employed for each different color of weft-thread employed and corresponding with said weft-thread in color, so as to provide for the production of solid color effects where the weft-threads appear upon the face of the fabric. The paper weft or filling threads employed offer a much greater resistance to compression than a thread of cotton, wool, or other textile material. Hence the comparatively heavy figuring warp-threads do not appreciably indent said paper weft-threads, but lie on the surface of the same, and consequently project or form figures in relief. The binding warp-threads, however, being much smaller and under greater tension indent the paper weft-threads more deeply and do not rise much, if any, above the plane of said weft-threads. Hence the face of the fabric practically presents two planes, the higher being that portion in which the pattern is formed by the figuring warp-threads and the lower that in which the pattern is formed by the figuring weft-threads.

In the accompanying drawings, Figure 1 is a face view of a piece of fabric embodying my invention. Fig. 2 is an exaggerated sectional view of the same taken in the direction of the warp, and Fig. 3 is an exaggerated sectional view taken in the direction of the weft or filling thread.

The fabric comprises repetitions of two or more successively and differently colored figuring weft or filling threads composed of twisted paper, binding warp-threads therefor composed of cotton or other textile material, and a set of figuring warp-threads, also of textile material, the fabric shown in the drawings comprising repetitions of the two paper weft-threads 1 and 2 interwoven with binding warp-threads 1<sup>a</sup> and 2<sup>a</sup> and figuring warp-threads 3, the threads 1<sup>a</sup> and 2<sup>a</sup> corresponding in color, respectively, with the paper weft-threads 1 and 2 and each of the paper weft-threads being bound upon the face of the fabric by a warp-thread of its own color and on the back by a warp-thread of the other color, the figuring warp-thread being bound down at the desired intervals by passing behind one or other or one or more of the figuring weft-threads in accordance with the demands of the pattern as to figure and color. Three colors are thus available in the formation of the pattern, and various combinations of these colors may be obtained by a suitable manipulation of the threads. Thus the figuring warp-threads may within certain limits be permitted to float on the surface of the fabric throughout any desired area of the figure to produce a solid color effect, or lines of solid color may be produced by permitting either of the weft-threads to appear upon the surface, or these color-lines may be broken up by permitting the figuring warp-threads to cross the weft-threads at any desired intervals.

My invention consists, mainly, in combining the paper weft-threads with the fine textile binding warp-threads and the coarser textile figuring warp-threads, for owing to the comparative incompressibility of said paper weft-threads the heavy figuring warp-threads will not indent the same to any appreciable extent, and consequently will form raised or relief portions of the fabric wherever they are employed in the formation of the pattern, as will be understood on reference to Figs. 2 and 3 of the drawings.

A fabric made in accordance with my invention is especially available for carpets,

rugs, or other floor-coverings, although it may, if desired, be used for curtains, draperies, and upholstery purposes generally.

Having thus described my invention, I  
5 claim and desire to secure by Letters Patent—

A woven fabric in which are combined figuring weft or filling threads of paper, fine binding warp-threads therefor, and figuring warp-threads which, owing to the incompressibility of the paper weft-threads, are caused  
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to lie upon the surface of the latter and form figures in relief, substantially as specified.

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

WILLIAM M. STEVENSON.

Witnesses:

F. E. BECHTOLD,  
JOS. H. KLEIN.