

(Specimens.)

2 Sheets—Sheet 1.

T. McAULIFFE.
WOVEN FABRIC.

No. 579,164.

Patented Mar. 23, 1897.

Fig. 1.

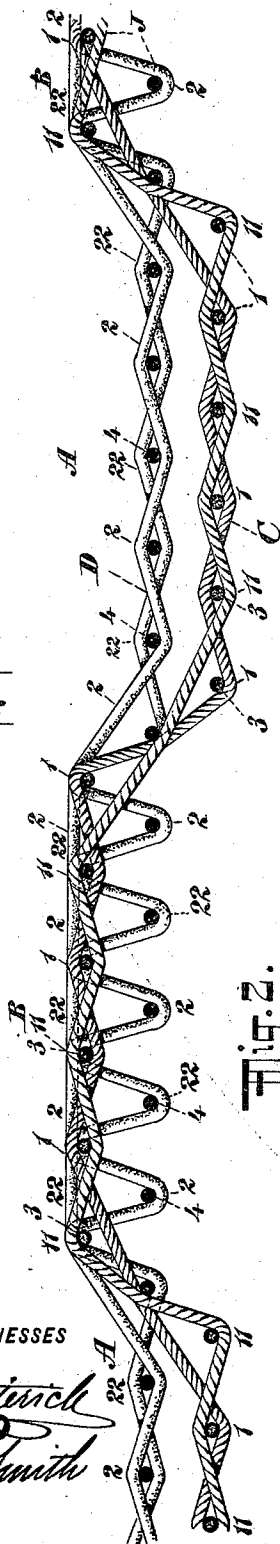
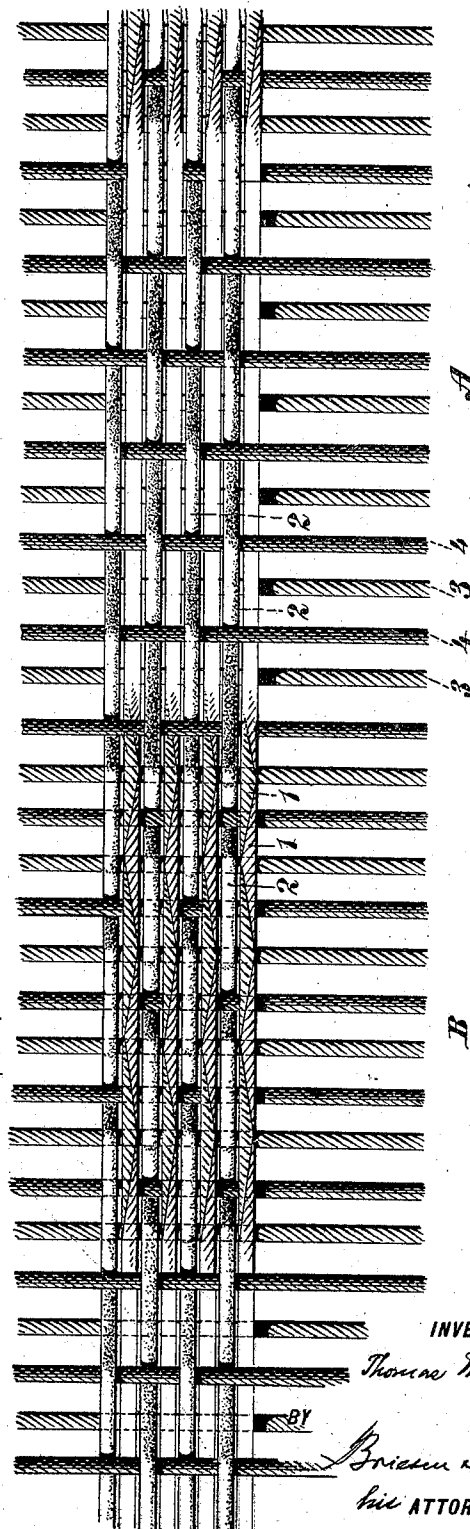


Fig. 2.



WITNESSES

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INVENTOR

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Brown & Smith
his ATTORNEYS.

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Fig. 3.

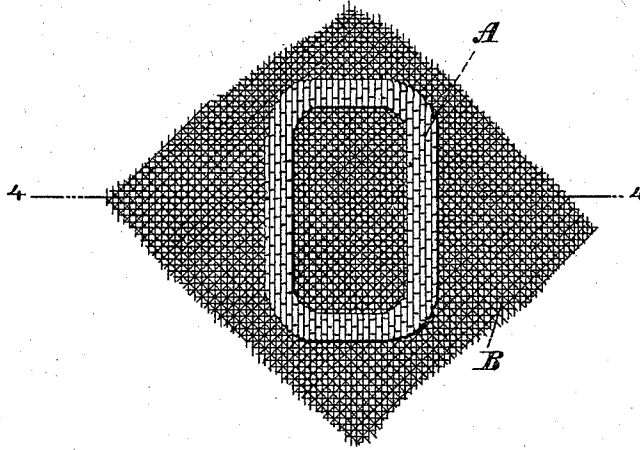
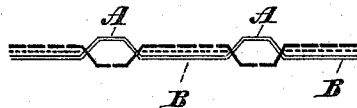


Fig. 4.



WITNESSES

Gustave Petrich.
Charles E. Smith

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Thomas McAuliffe,
BY *Brice & Munn*
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UNITED STATES PATENT OFFICE.

THOMAS MCAULIFFE, OF FALL RIVER, MASSACHUSETTS, ASSIGNOR TO
THE STEVENS MANUFACTURING COMPANY, OF SAME PLACE.

WOVEN FABRIC.

SPECIFICATION forming part of Letters Patent No. 579,164, dated March 23, 1897.

Application filed August 11, 1896. Serial No. 602,398. (Specimens.)

To all whom it may concern:

Be it known that I, THOMAS MCAULIFFE, a resident of Fall River, county of Bristol, State of Massachusetts, have invented a certain new and useful Improvement in Woven Fabrics, of which the following is a specification.

My invention relates to a new character of woven fabrics, more especially adapted for bedspreads, though obviously it may be used for other purposes.

The object of my invention is to produce a woven pattern fabric having new physical characteristics.

To this end my invention consists in a new and useful fabric comprising the novel arrangement and combination of parts herein-after described and claimed.

My invention will be understood by referring to the accompanying drawings, wherein like letters and figures of reference indicate corresponding parts.

Figure 1 is an enlarged detail diagrammatic sectional view of a portion of fabric embodying my invention, the section being taken in the direction of the warp and the threads being distorted to more clearly illustrate the invention. Fig. 2 is a plan view of the same. Fig. 3 is a face view of a piece of woven fabric embodying my invention. Fig. 4 is a distorted diagrammatic sectional view on the line 4 4 of Fig. 3.

That my invention may be clearly understood I will now describe the construction of a fabric embodying the same.

In producing a fabric in accordance with my invention two warps are employed. One warp I term a "jacquard-warp" and the other a "heald-shaft" warp. The jacquard-warp is indicated by the cabled strands 1 and 11 in Figs. 1 and 2 and the heald-shaft warp is represented by the stippled strands 2 and 22 in the said figures.

In practice it has been found desirable to employ two sets of weft-threads of different thicknesses, one set, the ground set of weft-threads 3, being fine, while the other set, the pattern weft-threads 4, are coarse. While the preferred manner of making the fabric is to employ two sets of weft-threads of different thicknesses, it is obvious that any suit-

able number and character of weft-threads may be employed, for which reason I have shown all of the weft-threads of the same thickness, but have indicated the weft-threads in different manners. Thus the section of the ground set of weft-threads 3 in Fig. 1 is stippled, whereas the pattern weft-threads 4 are in solid black.

The portions of the fabric represented at A are those which form the pattern of the goods, which pattern is raised above the ground, as shown at A in Figs. 3 and 4.

It will be clearly seen in Fig. 1 that the pattern portions A of the fabric are constituted by two fabrics whose warp and weft threads are woven into a single fabric to form the ground portions B of the fabric. This is effected by means of the jacquard or other pattern mechanism, which, when the pattern desired is to be produced, causes the jacquard-warp 1 and 11 at that portion of the fabric to drop, so that the face and back of the pattern portions will be woven as two separate fabrics, the said face of the pattern portion of the fabric being composed of the heald-shaft warp and pattern set of weft-threads and constructed in the manner clearly shown at D on Fig. 1, the back C of this portion of the fabric being composed of the jacquard-warp and ground set of weft-threads. However, where the ground is being woven, the jacquard-warp at this portion of the fabric is raised and the picks shot in the manner indicated at B, Fig. 1, thereby making this ground portion of the fabric into a single cloth.

It will be observed that the heald-shaft warp is entirely upon the face of the fabric in the portions A which constitute the pattern of the goods, whereas the jacquard-warp is entirely upon the back of the fabric at these places, as shown at C, Fig. 1. On the other hand, in the ground portion of the fabric the jacquard-warp is on the face of the fabric and is interwoven with the ground set of weft-threads, while the heald-shaft warp is incorporated with the ground and pattern set of weft-threads in the manner shown at B in Fig. 1. By this means the face of the "ground" is formed of a closely-woven fabric composed of all the jacquard warp-threads and ground set of weft-threads and all the

heald-shaft warp-threads, except where each
heald-shaft warp-thread alternately is caused
to drop through between the jacquard warp-
threads and in front of the preceding pick of
5 ground-weft to interweave with the pattern
set of weft-threads on the back of the ground,
after which it returns at once to the face of
the ground and remains until the next regu-
lar intersection with the pattern-weft on the
10 back of the ground or single cloth portion of
the fabric, as shown at B on Fig. 1.

It will be seen by reference to Figs. 1 and
2 that the heald-shaft warp-threads 2 and 22
interweave at their regular intervals with the
15 pattern set of weft-threads 4 in the ground
or single cloth portion of the fabric, each of
the said heald-shaft warp-threads 2 or 22 be-
ing run across two shots of the ground weft-
threads 3 and one of the pattern weft-threads
20 4, as will be clearly seen at B in Fig. 1.

While I have described one form of my in-
vention in specific terms that a clear com-
prehension of the invention may be had, I
would have it understood that I do not limit
25 myself to the specific construction shown and
described, since I am aware that the number
and character of threads employed and the
exact relation thereof to one another may be
varied without departing from my invention.

30 What I claim, and desire to secure by Let-
ters Patent, is—

1. A pattern fabric consisting of ground
and pattern portions, the said fabric com-
prising jacquard warp-threads, heald-shaft
35 warp-threads, pattern weft-threads and
ground weft-threads; the said fabric at the
pattern portions thereof being formed of two
fabrics the upper one constituted by the heald-
shaft warp-threads and the pattern weft-

40 threads, and the lower one constituted by the
jacquard warp-threads and the ground weft-
threads; the ground portions of the fabric be-
ing formed of the jacquard warp-threads and
ground weft-threads interwoven on the face
thereof, and the heald-shaft warp-threads and
45 pattern weft-threads interwoven on the back
thereof; the said heald-shaft warp-threads
being also interwoven with and incorporated
into the ground by running the said heald-
shaft warp-threads across two shots of the
50 ground-weft and one of the pattern-weft, sub-
stantially as described and for the purposes
set forth.

2. A pattern woven fabric, having the face
and back of the pattern portion thereof
55 formed of separate fabrics, and the ground
portion thereof formed of a single fabric; the
jacquard-warp in the said ground portion be-
ing interwoven with the ground set of weft-
threads on the face of said ground portion,
60 each alternate jacquard warp-thread weaving
over and under each alternate shot of ground-
weft, while each alternate heald-shaft warp-
thread in said ground portion of the fabric
weaves alternately over two shots of the
65 ground-weft and one shot of the pattern-weft
and under the subsequent pick of the pattern-
weft on the back of the said ground portion,
and returns to the face to again weave on the
face of the fabric, over the two next ground-
70 shots of weft and one shot of pattern-weft re-
peating until the ground portion thereof is
finished, substantially as described.

THOMAS MCAULIFFE.

Witnesses:

GEO. E. MORSE,
HARRY M. TURK.