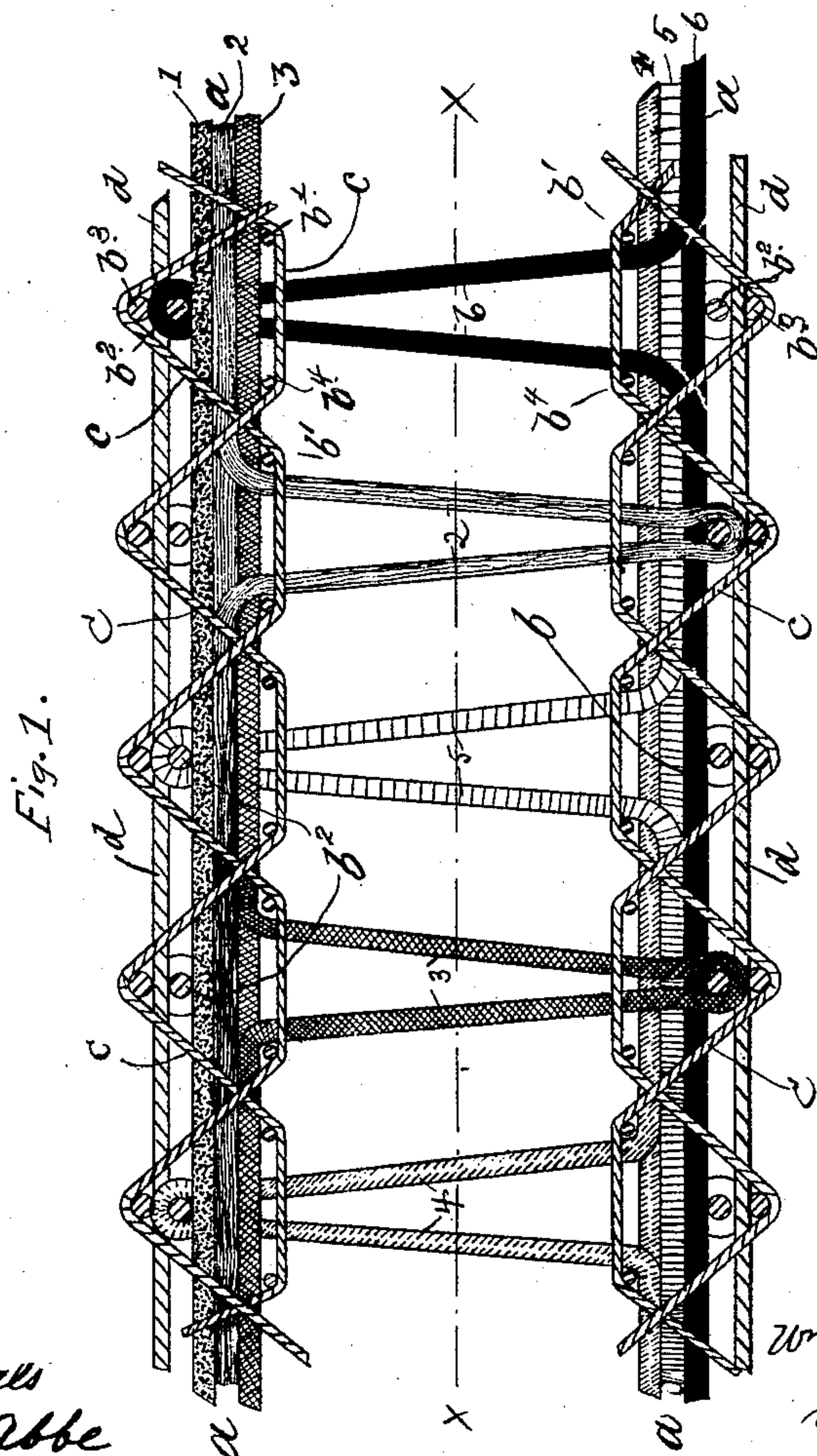
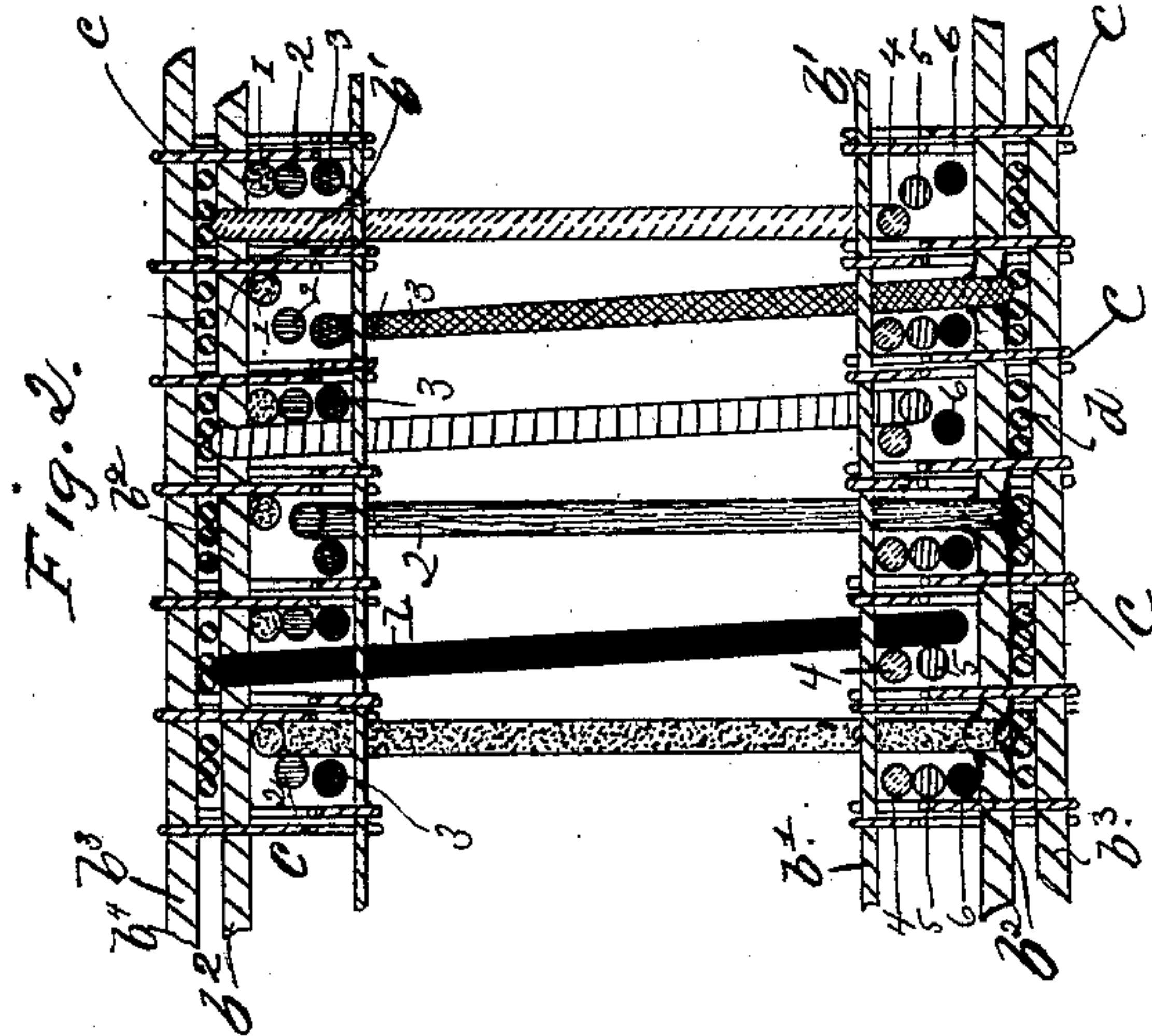


(No Model.)

W. H. BAIRSTOW.
PILE FABRIC.

No. 411,085.

Patented Sept. 17, 1889.



WITNESSES:

Wm. Chester Wells
Charles C. Abbe

INVENTOR:

Wm. Henry Bairstow
by his attorneys
Hubert Horner

UNITED STATES PATENT OFFICE.

WILLIAM HENRY BAIRSTOW, OF BRIDGENORTH, COUNTY OF SALOP,
ENGLAND.

PILE FABRIC.

SPECIFICATION forming part of Letters Patent No. 411,085, dated September 17, 1889.

Application filed November 22, 1887. Serial No. 255,895. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY BAIRSTOW, a subject of the Queen of Great Britain and Ireland, residing at 29 East Castle Street, Bridgenorth, in the county of Salop, England, have invented a certain new and useful Pile Fabric, of which the following is a specification.

This invention relates to a new article of manufacture, consisting of a fabric combining all the elements of, say, for instance, a six-frame Wilton or a cut Brussels velvet-pile carpet, (although I do not confine myself to six frames, as more or less may be used with equal advantage, but I have simply described a six-frame fabric for illustrating my invention,) in which not more than three (or half the number) of the warp-threads used are at any time buried in the back or ground of the fabric, instead of five threads being buried, as is the case with six-frame Wilton or Brussels carpets.

Figures 1 and 2 of the accompanying drawings are diagrams drawn to an exaggerated scale, illustrating the mode of weaving of the new fabric made according to this invention, Fig. 1 being a section in the direction of the warp-threads of the double fabric before it is cut apart, and Fig. 2 a section at right angles to Fig. 1.

In carrying out my invention two fabrics or cloths are simultaneously woven together, and are afterward divided by any suitable cutting device on the line $x x$, Fig. 1.

Referring to the accompanying drawings, a represents the warp-threads or colored yarn which form the pattern; $b' b^2 b^3 b^4$, the weft or shuttle shots; c , the ground-chains, and d stuffer or filling threads.

In commencing to weave the fabric let it be supposed that the warp-threads have been equally divided by the jacquard, so that the threads 1 2 3 (which, for example, may represent drab, red, and light-blue threads, respectively) are raised and the threads 4 5 6 (which may, respectively, represent dark-blue, gold, and bronze threads) lowered. With the warp-threads in this position, the weft-shots b' (which may be white, for example) on the right-hand side of Fig. 1 are simultaneously thrown by two shuttles, after which the threads

1 2 3 and 4 5 6 are respectively lowered and raised by the jacquard and the comber-board. The threads 1 2 3 required to form the pattern pass direct to the lay bottom, the rest of the threads, having been trapped, remaining in the center of the shed, while the threads 4 5 6 required to form the pattern rise to the top. The rest of the said threads are brought by the comber-board to the center in the same line as those trapped from the top, and then the shots b^2 (which may be white) are thrown by the shuttles. The stuffer or filling threads d are then lowered in the top cloth and raised in the bottom cloth to the center of the shed, and then the shots b^3 are thrown. The threads 1 2 3 and 4 5 6 and the stuffing-threads are then returned to their former positions by the jacquard, the comber-board, and the stuffer-thread heddles, after which the shots b^4 are thrown. Thus far the heddles which operate the chain c have remained unaltered; but after the shots b^4 have been thrown the said chain-heddles reverse their positions, causing the chain-threads c to cross from over to under, and vice versa, so as to bind the warp-threads and the stuffer or filling threads with the weft-shots $b' b^2 b^3 b^4$ above and below, as shown in Fig. 1, after which the shots b' and the operations hereinbefore described are repeated until the desired length of double fabric is completed.

The fabrics may be divided as the weaving progresses, or afterward, if desired.

It will be seen that the stuffer or filling threads d do not pass from one fabric to the other, but lie in the ground of the fabric. It will also be seen that of the six sets of warp-threads used never more than three of them are at any time buried or woven in the back or ground of each fabric, and when one of the sets of threads in each fabric is being worked into the pile to form the pattern there are only two sets buried or woven in the back or ground of each fabric, while the threads which form the pile are more effectually bound in the body of the fabric by the stuffer or filling threads d and the shots b^3 .

I claim as my invention—

As an article of manufacture, a cut pile fabric having pattern-warps forming the pile, of which only one-half or less are at any time

buried in the back or ground of the fabric,
the remaining portion where they appear in
the fabric being merely bound therein by
weft-threads, and weft-threads, filling-threads
5 at the back of the fabric, and ground-chains
which bind the pile warp, filling-threads, and
wefts in the body of the fabric, all substan-
tially as described.

In testimony whereof I have signed my name

to this specification in the presence of two sub- 10
scribing witnesses.

WILLIAM HENRY BAIRSTOW.

Witnesses:

THOS. H. WILLIAMS,
57 Lorne Street, Kidderminster.

FRED GADSBY,
5 Yew Tree Road, Kidderminster.