

W. WALLACE.
Fabrics for Carpets.

No. 156,610.

Patented Nov. 3, 1874.

Fig. 2.

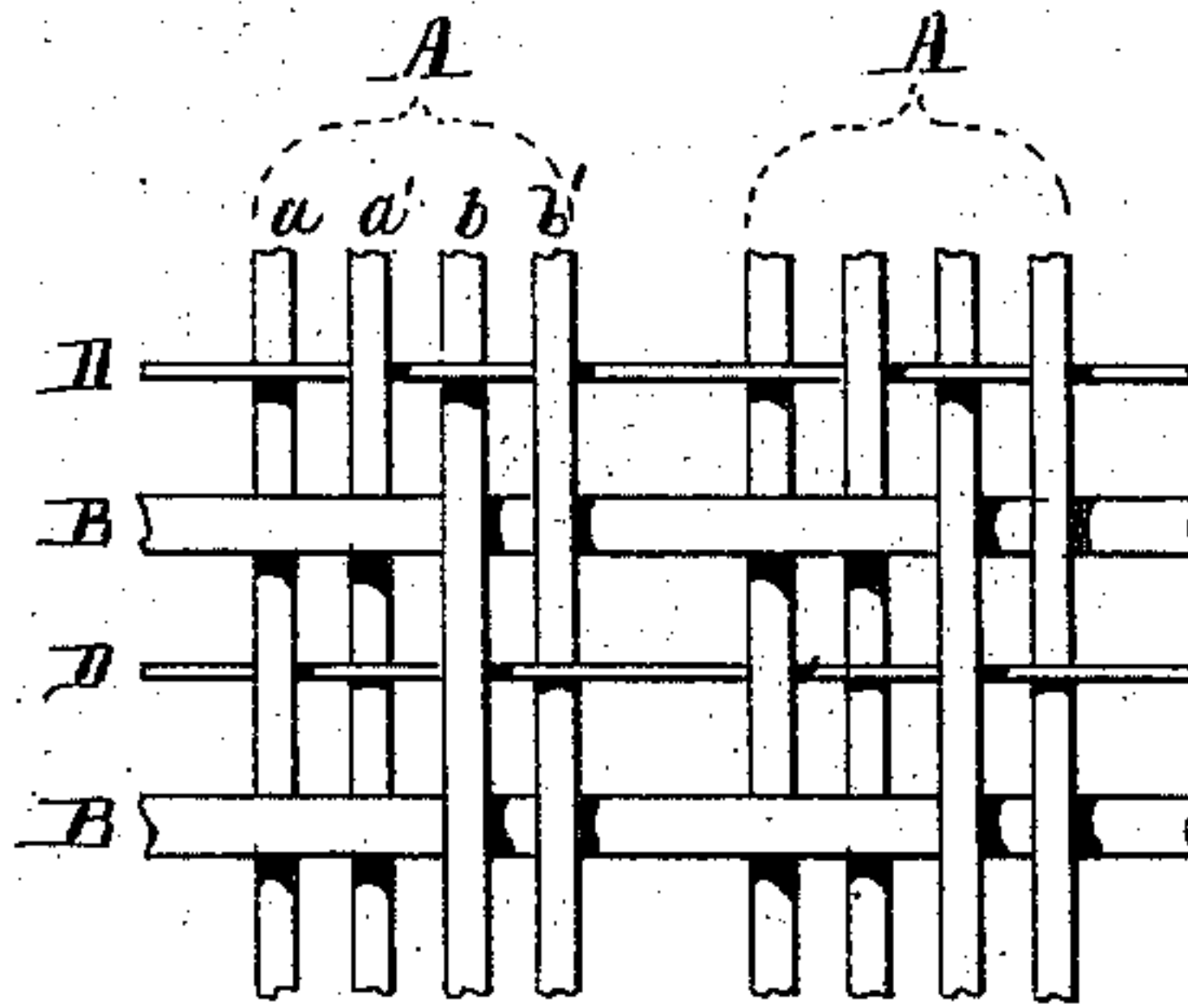
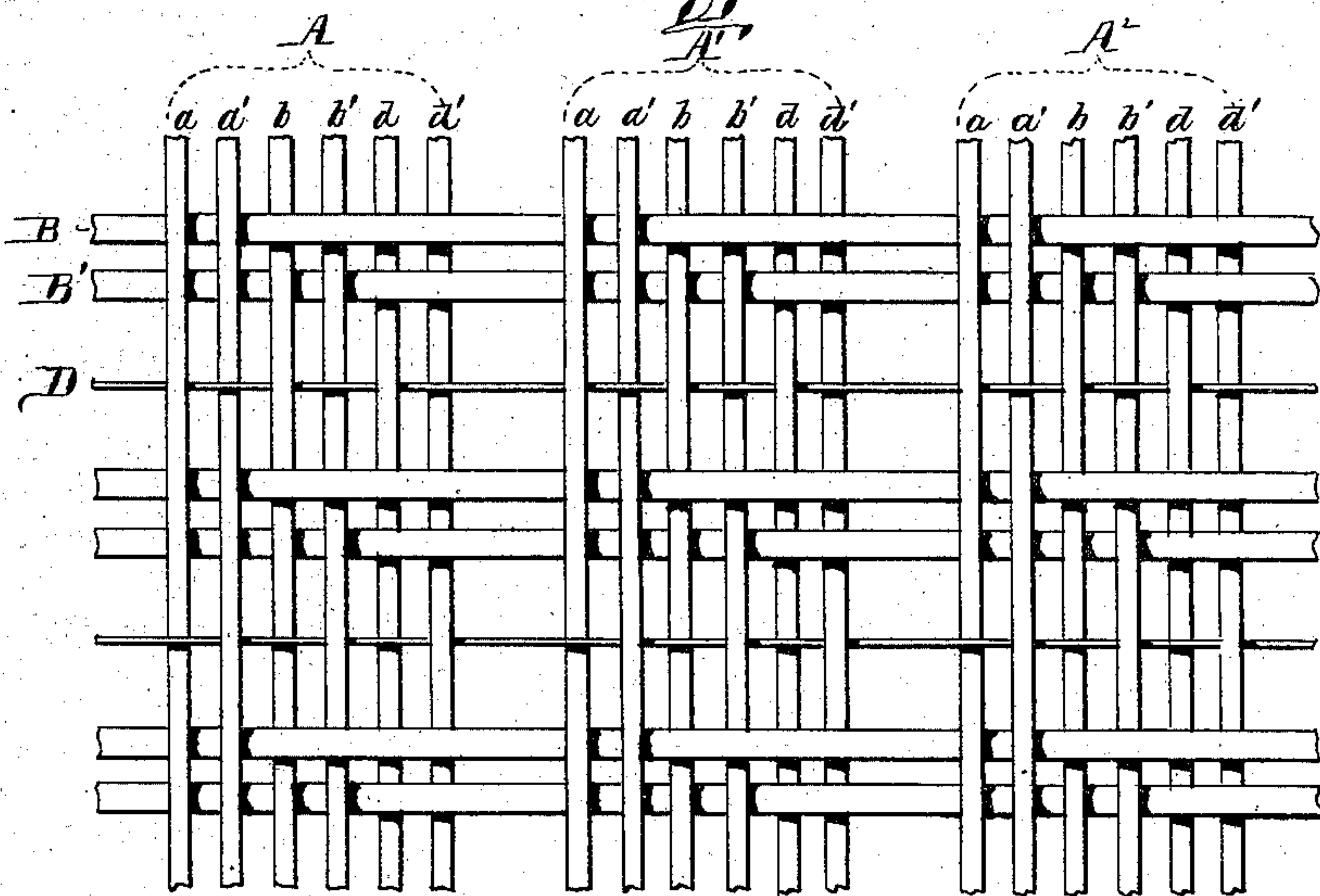


Fig. 1.



Witnesses, Henry Smith
Thomas M. Sloan

William Wallace
By his Attys
Howson and Son

UNITED STATES PATENT OFFICE.

WILLIAM WALLACE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND CHARLES McALLISTER, OF SAME PLACE.

IMPROVEMENT IN FABRICS FOR CARPETS.

Specification forming part of Letters Patent No. 156,610, dated November 3, 1874; application filed June 18, 1874.

To all whom it may concern:

Be it known that I, WILLIAM WALLACE, of Philadelphia, Pennsylvania, have invented an Improved Fabric, of which the following is a specification:

My invention relates to an improvement in the damask-carpet fabric, for which reissued Letters Patent No. 4,904 were granted to myself and Charles McAllister, as my assignees, on the 14th day of May, 1872; and the object of my said improvement is to produce a well-defined pattern upon both the face and back of the fabric, in three distinct shades or colors, which shall appear upon the same line in the direction of the length of the fabric.

I attain this object by employing warp-threads A of three distinct shades or colors, one-third of which are raised in sets for the passage of a thick filling-thread, B, and two-thirds for the passage of a second thick filling-thread, B', or vice versa, while the said sets of warp-threads, after having been thus raised for the thick threads, are separated for the passage of a single thin filling-thread, D, in the manner described in my aforesaid patent, and as illustrated by the diagram, Fig. 1, of the accompanying drawing.

In my aforesaid patented fabric, a fine surface and compact texture were obtained by disposing the threads in the manner illustrated by the diagram, Fig. 2, in which—

A represent the warp-threads; B, the thick filling-threads; and D, the fine filling-threads, the main peculiarity of the fabric being the separation, for the reception of the thin filling, of the sets of warp-threads which were raised for the thick filling. For instance, the sets of warp-threads *a a'* and *b b'* which were raised for the thick filling-thread B were afterward separated for the thin filling-thread D. In this fabric, also, the warp for the thick filling was controlled by jacquard apparatus, which determined the character of the pattern, while the warp for the thin filling was under the control of separate mechanism independent of the jacquard. Warp-threads of two distinct shades or colors were also employed, and these were so disposed as to produce a pattern upon the back, as well defined as that upon the

face of the fabric, except that the colors were reversed, the fabric being, in this respect, similar to ordinary damask carpets.

In my improved fabric, which I will now proceed to describe, I attain all the above advantages of fineness of surface and compactness of texture, and am enabled at the same time to produce well-defined patterns upon both sides of the fabric in three distinct shades or colors, which appear on the same line in the direction of the length of the fabric.

In the present instance, the warp-threads A A', &c., are arranged in groups of six threads each, which are again subdivided into three sets, *a a'*, *b b'*, and *d d'*, all of which pass through one space in the reed, and each of these threads may consist of one or of several strands. There are two thick filling-threads, B and B', for every single thin filling-thread D, and the warp is so controlled by jacquard apparatus for the thick filling that if one-third is raised for the thread B, two-thirds must be raised for the next succeeding thread B', or vice versa.

In Fig. 1, for instance, the sets of threads, *a a'*, which constitute one-third of the warp, have been raised for the thick thread B, and the sets of threads *a a'* and *b b'*, constituting two-thirds of the warp, have been raised for the next thick filling-thread B', the consequence being that when the threads are beaten up the warps *a a'* will appear upon one face of the fabric, and the warps *d d'*, of a different shade or color, upon the opposite face, while the intermediate warps *b b'* will, in this case, be concealed within the body of the fabric. The result of this manipulation of the warp-threads in respect to each pair of thick filling-threads must be the production of precisely similar designs at opposite sides of the fabric, except that the colors will be reversed.

The warp-threads are controlled for the reception of the thin filling-threads D by separate harness or shafts in the manner described in my aforesaid patent of May 14, 1872, so that each set of warps raised for the thick filling shall be afterward separated for the thin filling. For instance, the warps *a a'*, *b b'*, and *d*

d', which are raised in sets or pairs for the thick filling-threads B and B' are separated for the fine filling-thread D.

This division of the warps for the fine filling produces a fine surface and compact texture, as in my aforesaid patented fabric.

My invention, it will be evident, can be used for shawl or other fabrics, as well as for carpets.

I claim as my invention—

A fabric, in which one-third of the warp-threads are raised in sets for the passage of one thick filling-thread, and two-thirds for

the passage of a succeeding thick filling-thread, or vice versa, and in which the sets of warps thus raised are afterward separated for the passage of a thin filling-thread, all as and for the purpose specified.

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

WILLIAM WALLACE.

Witnesses:

WM. A. STEEL,

THOMAS MCILVAIN.