No. 870,697. PATENTED NOV. 12, 1907.

W. M. STEVENSON.

WOVEN FABRIC.

APPLICATION FILED AUG. 5, 1905.

Fig. 1.

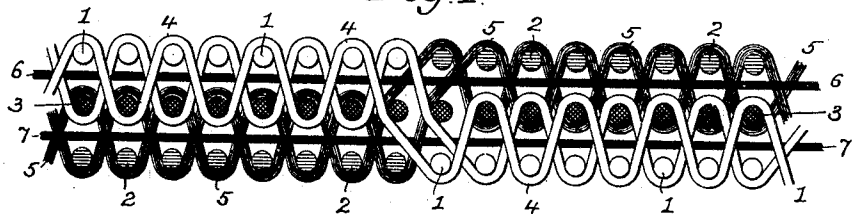


Fig. 2.

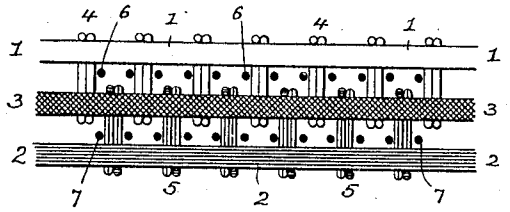
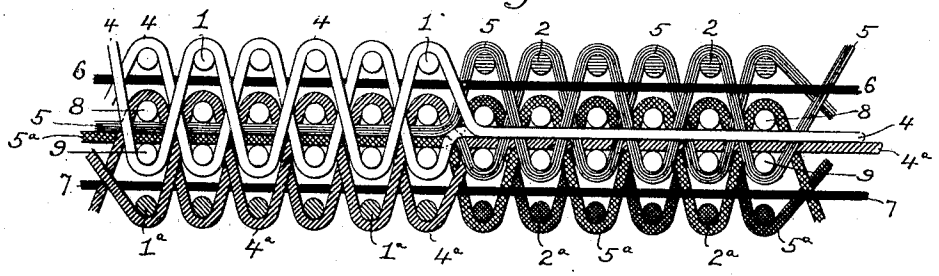


Fig. 3.



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WOVEN FABRIC.

No. 870,697. Specification of Letters Patent. Patented Nov. 12, 1907.

Application filed August 5, 1905. Serial No. 272,888.

To all whom it may concern:

Be it known that I, WILLIAM M. STEVENSON, a citizen of the United States, residing in Indian Orchard, Massachusetts, have invented certain Improvements in Woven Fabrics, of which the following is a specification.

My invention consists of a double faced fabric having on each face a pattern in two or more solid colors.

In the accompanying drawing, Figure 1, is an exaggerated section of a piece of fabric made in accordance with my invention, the section being taken in the direction of the warp; Fig. 2, is a section in the direction of the weft; and Fig. 3, is a view similar to Fig. 1, but illustrating another form of fabric embodying my invention.

The fabric shown in Fig. 1, comprises top and bottom surface weft threads 1 and 2, and intermediate weft thread 3, pairs of binder warp threads 4 for the weft threads of the top face, pairs of binder warp threads 5 for the weft threads of the back face, and stuffer warp threads 6 and 7, the warp threads 6 being interposed between the weft threads 1 and 3, and the warp threads 7 being interposed between the weft threads 2 and 3. Each binding warp thread 4 or 5, after binding a weft thread of its respective face, passes to and around the intermediate or buried weft thread, and thence back to its own face of the fabric, so that each weft thread of each face can be bound at all points by a warp thread of its own color, hence patterns in solid color can be produced upon each face of the fabric.

The intermediate weft thread is contained in the same shed of warp threads of each face which contains the face weft thread, hence all three of the weft threads are in the same vertical plane and the close beating-up of the fabric is therefore permitted.

As shown in Figs. 1 and 2, the pattern of each face of the fabric is in the same colors, the pattern on one face being the reverse of that on the other, and the warp threads changing from face to face in order to effect this reversal of pattern, but it is manifest that the warp threads which bind the weft threads of one face may be different from those which bind the weft threads of the other face, so that the pattern of one face may be essentially different in color from that of the other face. In this case a binding warp thread of a color which is required only on one face of the fabric will appear only on that face, and when not so required can float or be buried in the interior of the fabric. For instance, in the fabric shown in Fig. 3, one face of the fabric has weft threads 1 and 2, and the other face has weft threads 1^a and 2^a, each of these weft threads differing in color from each of the others, and each weft thread being bound by one or other of a pair of warp threads, 4, 4^a, 5 or 5^a of its own color, the warp threads, when not so employed in binding the surface weft threads, floating between intermediate weft threads 8 and 9, and taking the place of and acting as a stuffer warp thread between said weft threads.

The use of the additional weft threads in this case imparts increased bulk and stiffness to the fabric, and it will be evident that further modifications within the scope of my invention can readily be devised by those skilled in the art.

The main function of the stuffer warp threads 6 and 7 is to prevent the stretching of the fabric in the direction of the warp threads, and to increase the bulk and strength of the fabric, hence said stuffer warp threads may or may not be used, as desired.

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

1. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, are combined with stuffer warp threads disposed between said intermediate weft threads, and binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, substantially as specified.

2. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, are combined with stuffer warp threads interposed between said intermediate weft threads, and also between the latter and the face weft threads, and binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, substantially as specified.

3. A woven fabric, in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face floating on the inside of the fabric when not required for binding purposes, substantially as specified.

4. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face floating between said intermediate weft threads when not required for binding purposes, substantially as specified.

5. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with one or more stuffer warp threads and with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, each of said binding warp threads floating on the inside of the fabric when not required for binding purposes, substantially as specified.

6. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, are combined with stuffer warp threads located between the intermediate weft threads and face weft threads, and binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, each binding warp thread floating between said intermediate weft threads when not required for binding purposes, substantially as specified.

7. A woven fabric in which sets of weft threads, each

comprising opposite face weft threads and one or more intermediate weft threads, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face appearing upon that face only and floating on the inside of the fabric when not required for binding purposes, substantially as specified.

8. A woven fabric in which sets of weft threads, each comprising face weft threads and a plurality of intermediate weft threads, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face appearing upon that face only and floating between the intermediate weft threads when not required for binding purposes, substantially as specified.

9. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with one or more stuffer warp threads and with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the binding warp threads of either face appearing upon that face only and floating on the inside of the fabric when not required for binding purposes, substantially as specified.

10. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, are combined with stuffer warp threads disposed between said intermediate weft threads and face weft threads, and with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the binding warp threads of either face appearing upon that face only and floating between the intermediate weft threads when not required for binding purposes, substantially as specified.

11. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, disposed directly one above or below another, are combined with stuffer warp threads disposed between said intermediate weft threads, and binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, substantially as specified.

12. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, disposed directly one above or below another, are combined with stuffer warp threads interposed between said intermediate weft threads, and also between the latter and the face weft threads, and binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, substantially as specified.

13. A woven fabric, in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face floating on the inside of the fabric when not required for binding purposes, substantially as specified.

14. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, disposed directly one above or below another, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face floating between said intermediate weft threads when not required for binding purposes, substantially as specified.

15. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with one or more stuffer warp threads and with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, each of said binding warp threads floating on the inside of the fabric when not required for binding purposes, substantially as specified.

16. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, disposed directly one above or below another, are combined with stuffer warp threads located between the intermediate weft threads and face weft threads, and binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, each binding warp thread floating between said intermediate weft threads when not required for binding purposes, substantially as specified.

17. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face appearing upon that face only and floating on the inside of the fabric when not required for binding purposes, substantially as specified.

18. A woven fabric in which sets of weft threads, each comprising face weft threads and a plurality of intermediate weft threads, disposed directly one above or below another, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face appearing upon that face only and floating between the intermediate weft threads when not required for binding purposes, substantially as specified.

19. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with one or more stuffer warp threads and with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the binding warp threads of either face appearing upon that face only and floating on the inside of the fabric when not required for binding purposes, substantially as specified.

20. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, disposed directly one above or below another, are combined with stuffer warp threads disposed between said intermediate weft threads and the face weft threads, and with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the binding warp threads of either face appearing upon that face only and floating between the intermediate weft threads when not required for binding purposes, 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:
WALTER CHISM,
JOS. H. KLEIN.