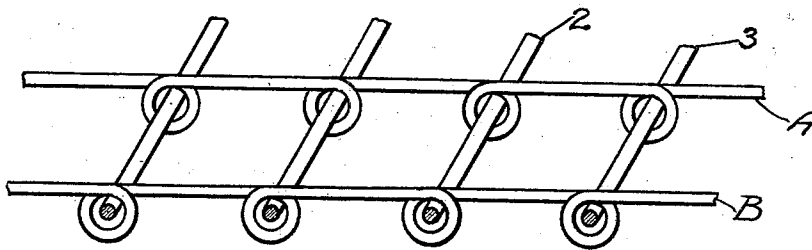
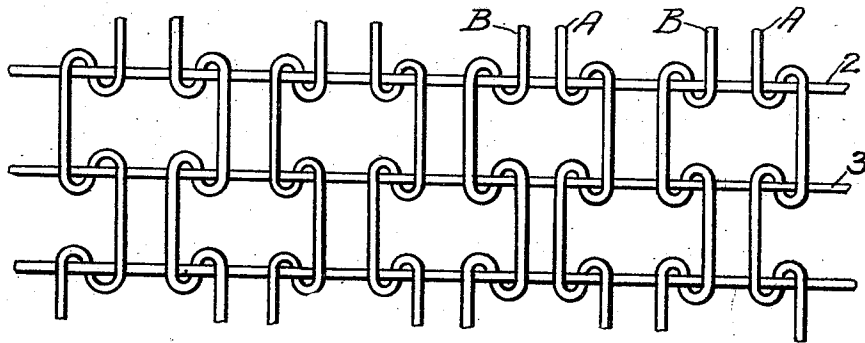
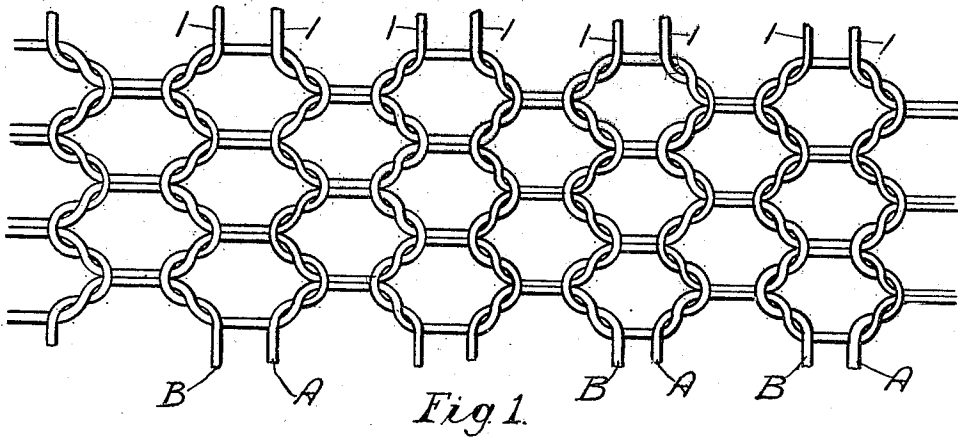


J. T. BOLTON.
WOVEN FABRIC.

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1,059,521.

Patented Apr. 22, 1913.



Witnesses
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WOVEN FABRIC.

1,059,521.

Specification of Letters Patent.

Patented Apr. 22, 1913.

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To all whom it may concern:

Be it known that I, JOHN T. BOLTON, a citizen of the United States, residing at the city of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Woven Fabrics, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to textile fabric and has for its object to produce an open-work fabric of simple construction and of original and handsome design. This fabric is adapted more especially for high-class work, such as lace curtains, bed covers, dresses, and the like.

In order to produce an open-work fabric of a design which will in any way correspond to or compare with my improved fabric it has heretofore been necessary to employ skilled labor of the highest order to operate extremely complicated and expensive machinery which has necessarily made the goods very costly.

My improved fabric is so formed that it may be produced very rapidly by simple attachments applied to the ordinary loom, thus doing away with the expensive machinery and the high-priced help whereby I am enabled to produce my goods at comparatively small expense.

An essential feature in the construction of my fabric is that the warp threads have the appearance of running in pairs, both of the threads of a pair being alternately carried apart and brought toward each other as they are passed around each successive filling thread throughout the fabric, and when the warp threads are drawn taut by the beating up of the lay the mesh takes substantially a hexagon shape, but by drawing out the fabric in different directions a variety of shapes to the mesh may be obtained.

The invention is fully set forth in this specification and more particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is an enlarged view showing the construction of the finished fabric. Fig. 2 shows the appearance of the warp threads as the threads of each pair are carried alternately apart and brought toward each other on being passed around each successive filling thread, the view representing the threads before they have been drawn taut by the

beating up of the lay. Fig. 3 is a perspective view representing in detail the way or direction the warp threads are passed around the filling threads.

Referring to the drawing, 1 indicates the warp threads, and 2, 3, indicate the filling threads. In practice the warp threads are looped to form a shed, whereupon the shuttle carrying the filling threads is passed through in the ordinary manner. After each operation of the shuttle the fabric is beaten up in the usual way, and the warp threads then looped in a reverse direction, after which the shuttle is again operated. This operation is continued until the desired length of fabric is completed, the warp threads being looped alternately in opposite directions, and the filling thread passed through each loop. In the fabric thus woven, the warp threads have the appearance of being run in pairs as A and B, that is, every thread is moved in a lateral direction opposite to the next adjacent thread as it is passed around each successive filling thread. In other words, thread A is set off to the right and passed around the filling thread 2 and then set back again or to the left and passed around the filling thread 3, and so it alternates back and forth as it is passed around each successive filling thread. As the warp thread A is being set to the left the warp thread B is set in the opposite direction and so continues to be moved back and forth in a direction opposite to that of the warp thread A as it is passed around each successive filling thread.

As the threads are subsequently drawn taut by the beating up of the lay, a mesh is formed in substantially a hexagon shape as represented in Fig. 1, but on being drawn out in other directions a square, diamond or other shape of mesh may be obtained. It is found in practice that by the moving of the warp thread in the direction parallel with the filler thread as it is being passed around the same the effect is substantially that of tying a knot whereby when the threads are drawn up they will take the position illustrated in Fig. 1 and thus naturally be retained in the desired position.

I do not confine myself to the passing of the warp but once around each filling thread as this warp may make a number of turns around the same if desired in order to vary the style or appearance of the fabric.

My improved fabric is handsome in appearance and may be very easily produced and placed on the market at a price much less than any other fabric that resembles the same in appearance.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. An open work woven fabric constructed of warp and filling threads, with the warp threads passed around the filling threads, said warp threads being alternately brought toward and away from each other as they engage the successive filling threads of fabric; said warp and filling threads being under tension and intertwining because of said tension.

2. An open work woven fabric constructed of warp and filling threads, with the warp threads passed around the filling threads, the turns of the wrappings of said warp threads being continuously in the same direction, said warp threads being alternately brought toward and away from each other as they engage the successive filling threads of the fabric, said warp and filling threads being under tension and intertwining because of said tension.

3. An open work woven fabric constructed of warp and filling threads, with warp threads passed around the filling threads, said warp threads being alternately brought toward and away from each other as they engage the successive filling threads of the

fabric, said warp and filling threads being under tension and intertwining because of said tension, each pair of filling threads being alternately held together and separated.

4. An open work woven fabric constructed of warp and filling threads, with the warp threads passed around the filling threads, said warp threads being alternately brought toward and away from each other as they engage the successive filling threads of the fabric, said warp and filling threads being under tension and intertwining because of said tension, each pair of warp threads being alternately held together and separated.

5. An open work woven fabric constructed of warp and filling threads, with the warp threads passed around the filling threads, said warp threads being alternately brought toward and away from each other as they engage the successive filling threads of fabric, said warp and filling threads being under tension and intertwining because of said tension, each pair of filling threads being alternately held together and separated and each pair of warp threads being alternately held together and separated.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN T. BOLTON.

Witnesses:

WILLIAM P. CLARK,
HERBERT B. TOWNSEND.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."