July 5, 1927. 1,634,412

J. E. FEFEL

WOVEN FABRIC

Filed March 29, 1926

Fig. 1

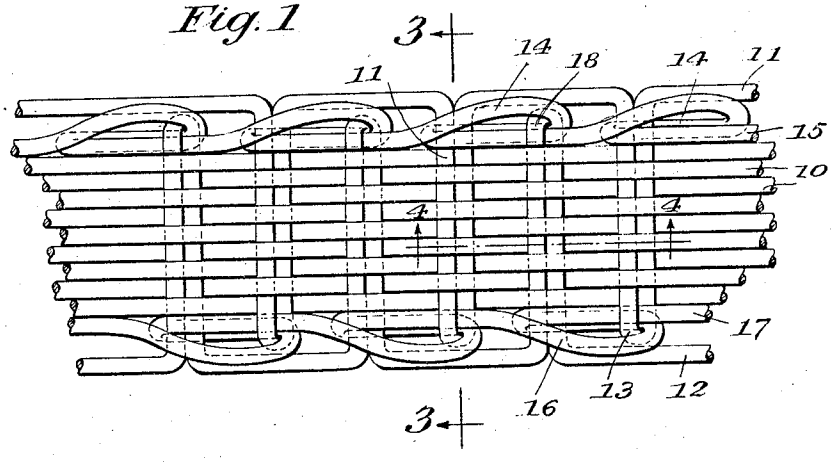


Fig. 2

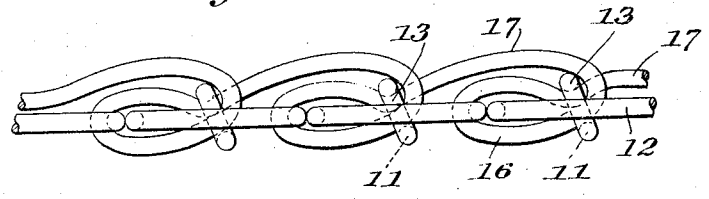


Fig. 3

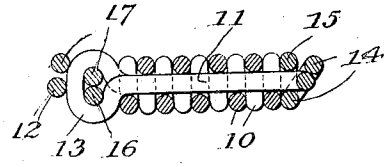
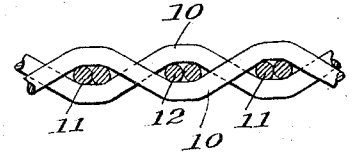


Fig. 4



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UNITED STATES PATENT OFFICE.

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WOVEN FABRIC.

Application filed March 29, 1926. Serial No. 98,066.

The present invention relates to improvements in woven fabric, and particularly a fabric having a reinforced selvedge at each longitudinal edge, and especially ribbon-like fabric, as tape, braid, or the like. An object of the invention is to provide a fabric which may be produced very rapidly, will be relatively strong, and symmetrically formed at each edge, and especially to provide a strengthened selvedge, produced by longitudinally extending edge threads, of the desired texture and strength, adapted to constitute a holding means for the edge portions of the weft threads.

To this end, it is proposed to provide, in the present embodiment of the invention, a fabric structure in which the warp threads are laid in the usual manner, while the weft threads consist of two threads alternately laid in double strands in the warp from opposite sides, and edge threads adapted to be looped with respect to the edge portions of the weft threads to hold them and to constitute selvedge reinforcing means.

With the above and other objects in view, an embodiment of the invention is shown in the accompanying drawings, and this embodiment will be hereinafter more fully described with reference thereto, and the invention will be finally pointed out in the claims.

In the drawings:—

Fig. 1 is a plan view of the fabric, according to the present embodiment of the invention;

Fig. 2 is an edge view thereof;

Fig. 3 is a transverse sectional view, taken along the line 3—3 of Fig. 1; and

Fig. 4 is a longitudinal sectional view, taken along the line 4—4 of Fig. 1.

Referring to the drawings, the warp threads 10 are arranged singly, as shown, although they may, if desired, be laid in pairs or in strands of three or more threads, and the successive sheds of the warp are adapted to enclose the successive pairs of weft threads.

The weft threads consist of two threads 11 and 12, successively worked into the fabric from opposite sides, the laying of each thread being in pairs or double strands, that is, each thread is carried back on itself within a single shed of the warp. Considering Fig. 1 from the right-hand side, the weft thread 11 is laid in the shed of the warp and is carried back on itself in the same shed, forming a bight or loop 13 projecting from the edge of the warp. In entering the warp the thread 11 passes through the forward end of an elongated loop 14 formed in the edge or selvedge reinforcing thread 15 at one edge, while the bight 13 is looped about the rearward end of the elongated loop 16 of the edge or selvedge reinforcing thread 17 at the other edge, and also about the connecting portion of said thread 17 extending between successive loops, said thread 17 being engaged with the thread 11 by projecting it through the projected bight loop 13.

The weft thread 12 is laid in the opposite direction in the next warp shed, being first passed through the forward end of the loop 16, and having the bight or loop 18 at its projected end engaged by the rearward end of the next loop 14 formed in the thread 15 and the connecting portion of said thread. The weaving of the warp and weft threads 10, and 11 and 12, and the looping of the edge selvedge reinforcing threads 15 and 17 is carried on continuously in this manner.

Reinforced selvedges are thus formed at each edge consisting of the bight and connecting edge portions of the weft and the selvedge threads looped and connected to said edge portions, and a tape or braid is produced which is symmetrical at each side, and will withstand pulling strains and wear equally at each edge. The fabric is of very attractive finish, and by providing threads of different colors and textures various ornamental designs and effects may be produced.

I have illustrated and described a preferred and satisfactory embodiment of the invention, but it will be obvious that changes may be made therein, within the spirit and scope thereof, as defined in the appended claims.

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

1. A fabric comprising interwoven warp and weft threads, the weft threads comprising two threads symmetrically laid from opposite sides and each having loop portions at the respective edges alternately arranged with respect to the other weft thread, and selvedge threads having looped portions passing through said loop portions of said weft threads at each edge and embracing the

successive other weft thread at the same edge.

2. A fabric comprising interwoven warp and weft threads, the weft threads comprising two threads each laid in double strands in successive sheds, and a selvedge thread having looped portions engaged between the double strands of one of said weft threads at one edge and embracing the double strands of the successive other weft thread at the same edge.

3. A fabric comprising interwoven warp and weft threads, the weft threads comprising two threads successively laid from opposite sides in double strands in successive sheds, and each having projected loop portions at one edge and projected connecting portions at the other edge, and selvedge threads having looped portions passing through said projected loop portions of the weft at each edge and embracing the double strands of the successive other weft thread at the same edge.

4. A fabric comprising warp and weft threads and a selvage reinforcing thread, at each edge of the fabric said weft threads occurring in pairs in the same shed and each alternate pair have loops at opposite edges of the fabric, said selvage reinforcing thread extending through the loops of the weft threads and passing in reversed direction through the next adjacent loop formed by a second successive pair of weft threads and then looping around the adjacent or alternate pair of wefts.

5. A fabric comprising warp and weft threads and a selvage reinforcing thread, at each edge of the fabric said weft threads occurring in pairs in the same shed and each alternate pair have loops at opposite edges of the fabric, and projected connecting portions at the other edge, said selvage reinforcing thread extending through the loops of the weft threads and passing in reversed direction through the next adjacent loop formed by a second successive pair of weft threads and then looping around the adjacent or alternate pair of wefts.

6. A fabric comprising warp and weft threads and a selvage reinforcing thread, at each edge of the fabric said weft threads occurring in pairs in the same shed and each alternate pair have loops at opposite edges of the fabric, said selvage reinforcing thread extending through a loop of the weft and around the adjacent pair or successive pair of weft threads and then passing in reverse direction again through the first mentioned weft loop.

7. A fabric comprising warp and weft threads and a selvage reinforcing thread, at each edge of the fabric said weft threads occurring in pairs in the same shed and each alternate pair have loops at opposite edges of the fabric, one of said selvage threads extending through the loops of the weft threads upon one edge and the other through the loops of the alternate weft threads upon the other edge and each passing in reversed direction through the next adjacent loop formed by a second successive pair of weft threads and then looped around the adjacent or alternate pair of weft threads.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 27th day of March A. D. 1926.

JOHN E. FEFEL.