

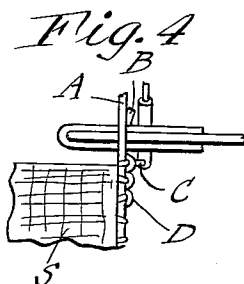
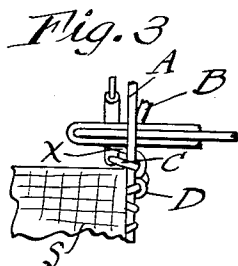
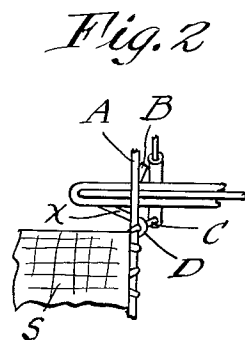
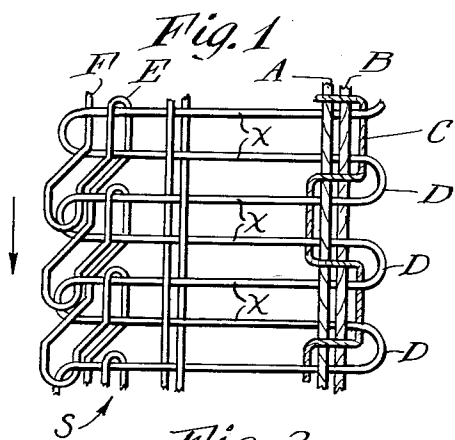
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NARROW FABRIC

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NARROW FABRIC

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This invention relates to narrow fabrics and more particularly to a narrow fabric having a special marginal construction and to a method for making this fabric.

In United States patent application Serial No. 691,459, filed October 21, 1957, now U.S. Patent No. 2,986,171 the disclosure of which is hereby incorporated by reference, a narrow fabric is disclosed having a special selvage which will not run. The present invention may be applied to a narrow fabric of the type disclosed in the prior application or to other narrow fabrics as will be understood by the following description.

In terms of the narrow fabric of the prior application, the present invention relates to the formation of a special marginal construction at the opposite edge of the fabric to that on which the non-run selvage is formed. The fabric includes a plurality of parallel weft thread loops extending thereacross and interconnecting loops connecting adjacent weft thread loops at one side of the fabric. According to the invention, a first cord is provided which is woven into the fabric and thus extends over alternate weft loops, i.e., over one loop, under the next loop. A second cord is laid on one side of the fabric on top of the first cord. A special locked thread is interwoven with the weft of the fabric and the cords, the locked thread extending under a first weft loop outside the cords, up through an interconnecting loop and over the cords, then under the next weft loop, over the cords again and down through the next interconnecting loop and so on, so that the cords are locked in place. In a similar manner a conventional narrow fabric without the special non-run selvage can be provided with the marginal construction of the present invention.

The formation of the fabric is accomplished by a method in which a needle in a perpendicular plane to the warp threads, carrying the special locked threads is adapted to be moved in a manner that it crosses over and under on both side of the special marginal cord warp threads of the invention. In laying loops around the weft thread loops and through the interconnecting loops it binds the last cord threads to each other and to the fabric.

This method may be applied to woven corded fastener tapes, and in so doing, not only secures both cords in place, but also adds to the strength of the tape. For the purpose of anodizing scoops of the fastener tape, a stencil thread can be used as the special locked thread, this insuring a proper electrical contact in addition to the above-mentioned properties.

The invention has just been generally described and it will now be referred to in more detail by reference to the accompanying drawings which show preferred embodiments and in which:

FIGURE 1 is a diagram of a preferred weave according to the invention.

FIGURES 2 to 4 are diagrams showing the movement of the needle carrying the special locked thread in conjunction with the needle carrying the weft thread.

Referring more particularly to FIGURE 1, a fabric or tapes according to the invention is shown. The selvage at the left hand side of the fabric is constructed by loops E formed in locking thread F in accordance with patent application Serial No. 691,459, now U.S. Patent No. 2,986,171. However, for the purposes of the present

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invention, this fabric can be formed in some other manner, but is preferably formed in accordance with the method of the earlier application.

The present invention relates to the formation of the selvage of the other or right hand edge of the fabric as the fabric moves in the direction of the arrow in FIG. 1. As will be seen from the drawings, the weft of the fabric S comprises a plurality of parallel weft thread loops X extending across the fabric and interconnecting loops D connecting adjacent weft thread loops at one side of the fabric to form a continuous weft. According to the invention, a marginal cord B passes over alternate weft thread loops X, i.e., over one loop and under the next. A companion cord A extends along one surface of the weft, that is over all of the weft thread loops, on top of the cord B. In the drawings the cord A has been shown alongside the cord B for facility in illustration. In actual practice, however, the cords A and B would be juxtaposed, i.e., one on top of the other with alternate weft loops intervening them. C is a locked thread which extends, starting from the bottom in FIG. 1 in the manner in which the fabric S is formed, down through an interconnecting loop D outside the cords A and B and under the first weft thread loop X, up through the next interconnecting loop D, over the cords A and B, then under the next weft thread loop X, back over the cords A and B and down through the next interconnecting loop and so on. The upper cord A is securely tied to the lower cord B and the fabric S by the same number of loops holding the cord B through the use of the special locked thread C crossing over the cords A and B and around the weft thread loops X.

The way in which the fabric is formed according to the invention is shown in FIGURES 2 to 4. In FIG. 2 a loop of the locking thread C is shown in position, after passing over cords A and B, as interconnecting loop D is formed therearound by the insertion of the next weft thread loop X in the shed to form the far selvage. In FIG. 3 the weft thread loop X has been completely inserted in the shed and the locking thread C is shown after being passed under the weft thread loop outside the cords and back over the cords A and B as the next weft thread loop is about to be inserted in the shed. FIG. 4 shows the fabric S after the next weft thread loop has been formed and the locking thread C has been passed thereunder inside the cords A and B and then back over the cords to repeat the cycle. It should be noted that alternate weft thread loops pass over or under the cord B as the loops are inserted in the shed.

The warp threads A and B may be warp, rubber, or cord threads. An application for which the present invention is particularly useful is for the making of fastener tapes for slide fasteners. In this case the threads A and B are cord threads fed from a spool separately from the warp.

I claim:

1. A narrow fabric comprising warp yarn constituting the length of the fabric, weft yarn forming loops running back and forth across the length of the fabric in a textile weave, the margin of the fabric at one edge having a first cord extending along said margin and extending under some of the loops of the weft threads, a second cord close to the first cord and extending along the surface of the weft thread loops, and a locking thread extending weftwise along the margin of the tape and interlaced with the ends of the weft thread loops and with the cords to hold the cords in place.

2. A narrow fabric comprising warp yarn constituting the length of the fabric, weft yarn forming loops running back and forth across the length of the fabric in a textile weave, a marginal portion at one edge of the the fabric

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made up of a first cord extending along the margin of the weft threads and extending over alternate loops of said weft threads, a second cord close to the first cord and juxtaposed to it and extending along the surface of said loops, and a locking thread extending westwise along the margin of the tape to lock the said cords in place, said locking thread extending under a weft thread loop outside the cords across the cords then down under the next weft thread loop inside the cords, across the cords and down under the next following weft thread loop and so on throughout the length of the fabric margin thereby binding the said cords in place.

3. A method of forming a narrow fabric including warp ends, weft ends and first and second cord threads at a margin of the fabric, and a locked thread, comprising, 15 moving a weft thread loop across the shed and at the same time passing it under the first cord thread by moving the first cord thread up to allow the weft thread loop to pass it, running-in the second cord straight, and at the same time passing the weft thread loop through a loop 20

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of the locking thread on one side of the cord threads and on the next pass moving the next following weft thread loop across the shed and at the same time passing it over the first cord by moving the first cord down to allow the weft thread loop to pass it, continuing running-in the second cord straight, and at the same time passing the weft thread loop through a loop of locking thread on the other side of the cord threads.

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