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CORDED WOVEN FABRIC
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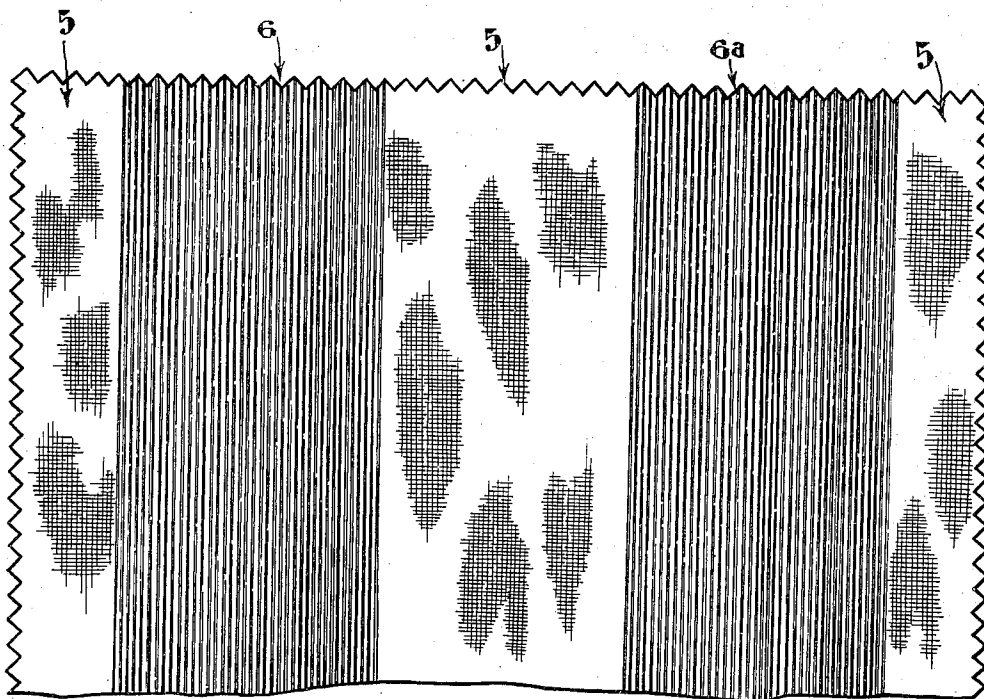


FIG. 1

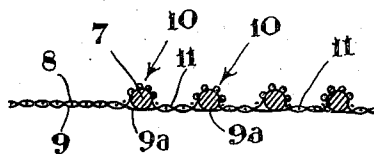


FIG. 2

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CORDED WOVEN FABRIC

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Application December 2, 1935, Serial No. 52,536

1 Claim. (Cl. 139—417)

This invention relates to the manufacture of fabrics and particularly woven fabrics in which reinforcing cords are laid to give the fabric a required degree of stiffness.

The object of the invention is to provide an improved cord-stiffened fabric which, in addition to other applications, is particularly useful as a stiffening material in the bust section of a brassière, corset or other foundation garment.

The fabric produced in accordance with this invention comprises plain batiste or similar flexible sections alternating with integral stiffened sections in which the stiffening cords are incorporated in a novel manner so that the back of the fabric is smooth and flat, while the face portion of the stiffened section presents closely spaced cord-reinforced ribs which have a substantial stiffening effect.

Proceeding now to a more detailed description reference will be had to the accompanying drawing, in which:

Figure 1 is a face view of a section of stiffened fabric woven in accordance with this invention;

Figure 2 is a section along line 2—2 of Figure 1.

Referring more particularly to the drawing, my improved fabric comprises flexible sections 5, 5^a and 5^b alternating with stiffened sections 6 and 6^a in which the stiffening cords 7 are incorporated. The stiffening cords 7 are laid between top and bottom warps of the fabric to form a series of outstanding stiffening ribs on the faces of the stiffened sections 6 and 6^a, while leaving the backs of such sections substantially as smooth and flat as the backs of the flexible sections 5, 5^a and 5^b. In order to accomplish this the fabric is woven on a loom with two warps 8 and 9, hereinafter termed the top and bottom warps. Both warps are used in weaving the first flexible section 5, and the bottom warp 9 is then permitted to lie idle while the top warp 8 is employed in weaving a covering 10 for the first stiffening cord 7 which is then inserted between said covering and the idle bottom warp portions 9^a. Both warps are then again employed in the weaving of two or three picks of plain cloth 11 which serves to bind the first stiffening cord in place between its covering 10 and the bottom warp portion 9^a. After similar incorporation of the remaining cords required to make up the first stiffened section 6, both of the warps 8 and 9 are again employed in the weaving of the second plain or flexible section 5^a. Following this, the second stiffened section 6^a and the third flexible section 5^b are respectively woven as described in

connection with the corresponding sections 6 and 5^a.

In practice, my improved fabric may be made with a single stiffened section integral with one or more flexible sections or with any desired number of stiffened and flexible sections in any desired alternation.

In weaving the fabric described herein it is necessary to beat up the rib covering 10 so that the stiffening ribs formed by the cords 7 will stand out on the face of the fabric and leave the back of the fabric substantially smooth and flat throughout its entire area. To this end the loom is equipped with a special attachment to release the take-up pawl so that the cloth, instead of being taken up in the usual manner, is permitted to remain stationary on the front of the loom at intervals during which the beating up of the cord or rib covering is accomplished. In this connection it may be explained that, at every third pick during the weaving of a rib or cord covering the take-up pawl is released so that the picks may be beaten home. For example, during the formation of the first two or three stiffening ribs, the take-up pawl is released entirely for approximately 24—5 picks but this is gradually reduced, during the formation of a certain number of succeeding ribs, to a suitable minimum which is maintained for all the remaining ribs.

As described in my copending application Serial No. 423,271 panels made of the stiffened fabric described herein may be incorporated in the breast pockets of a brassière or corset, so that the stiffening ribs formed by the cords 10 serve to hold up and support the breast in a more comfortable and desirable manner than the stiffening bones and starched materials heretofore used for this purpose.

What I claim is:

A stiffened woven fabric including closely spaced parallel stiffening cords incorporated in the fabric during the weaving thereof so that the back of the fabric is substantially smooth and flat throughout its area whereas the face of the fabric is provided with outstanding stiffening ribs formed by said cords, each of said cords being bound in place between a bottom warp of the fabric and a woven rib covering formed by interweaving the weft threads and a top warp of the fabric while permitting the bottom warp to lie idle, said bottom warp being interwoven with the weft threads and with the top warp at opposite sides of each cord so that the cords are covered at the back of the fabric solely by the warp threads.

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