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⑤④ Loop pile knitted fabric.

⑤⑦ A warp knit, weft inserted lap side loop pile fabric (10), for use as a female member to receive hooks (14) on an article of manufacture (15) which to hold the article in a pre-selected position, comprises spaced wales of chain stitches on the technical face of the fabric, spaced wales of tricot loop stitches (12) on the back of the fabric and inserted weft yarn retained by the chain stitches.

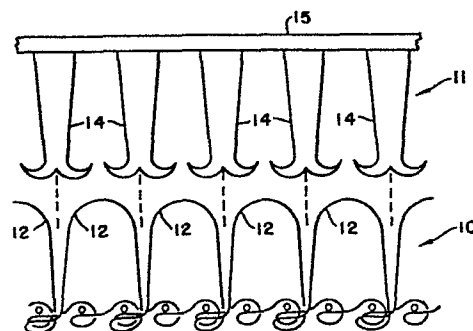


FIG. -1-

LOOP PILE KNITTED FABRIC

This invention relates generally to a warp knit, weft inserted fabric which can be employed as a female fabric for securing an article of manufacture in a pre-selected position.

5 It is an object of the invention to provide a loop pile fabric which can be employed as the female member of a securing means, for example by receiving hook members attached to the article to be secured.

10 In accordance with this invention, there is provided a warp knit weft inserted fabric, characterised in that the face side of the fabric has a plurality of spaced wales of chain stitches, the back side of the fabric has a plurality of spaced wales of tricot stitches with a lap portion of the tricot stitches
15 projecting therefrom to form loops, and weft yarn is inserted in the weft direction between the face side and the back side of the fabric and held therein by the said chain stitches. In the accompanying drawings:

20 Figure 1 is a schematic representation of hook fasteners in relation to the loop pile fabric of this invention;

 Figure 2 is a top view of the lap (technical back) side of the warp knit fabric of this invention;

25 Figure 3 is a point diagram of the action of the guide bars of a knitting machine to produce the fabric of Figures 1 and 2; and

 Figure 4 is a point diagram of the guide bars of a knitting machine to produce a modification of the fabric of Figures 1-3.

30 Looking now to Figure 1, the new and improved fabric 10 has upstanding loops 12 which are shown in position where they can be engaged by a hook member 11 which consists of hooks 14 connected to a support member 15. In practice, the fabric 10 would be connected to a

supporting structure (not shown) so that when the article to be secured in a fixed position, to which the hook member 11 is attached, is projected towards the loops 12, the hooks 14 will engage the latter and be secured therein. The hook member 11 is not, per se, a part of the invention and can be of any suitable type, such as that formed by the molding or casting of nylon to form the desired configuration shown in Figure 1.

10 The fabric 10 of this invention, as represented in Figures 1-4, is a warp knit, weft inserted fabric knit on a two-bar, weft insertion warp knitting machine. As indicated in Figures 1 and 2, the loops 12 are lap loops formed by the front bar of the knitting machine while the weft inserted yarn 16 is held therein by and between the chain stitch wales 18 formed by the back bar. The fabric 10 thereby presents a surface of loops 12 which can be readily manufactured on a warp knitting machine and at the same time provides added strength due to the insertion of the weft yarn 16.

15 Figures 1-3 shows one form of the novel fabric constructed with the pattern wheel for the front bar 70 denier polyester yarn set to knit a 1-0, 2-1 tricot stitch 17 and the pattern wheel for the back bar 150 denier polyester yarn set to knit a 0-1, 1-0 chain stitch. The weft inserted filling yarn 16 is a 150 denier polyester yarn. This form of the fabric provides a lap side loop the height of which is slightly less than the spacing between adjacent wales of the chain stitch yarn 18.

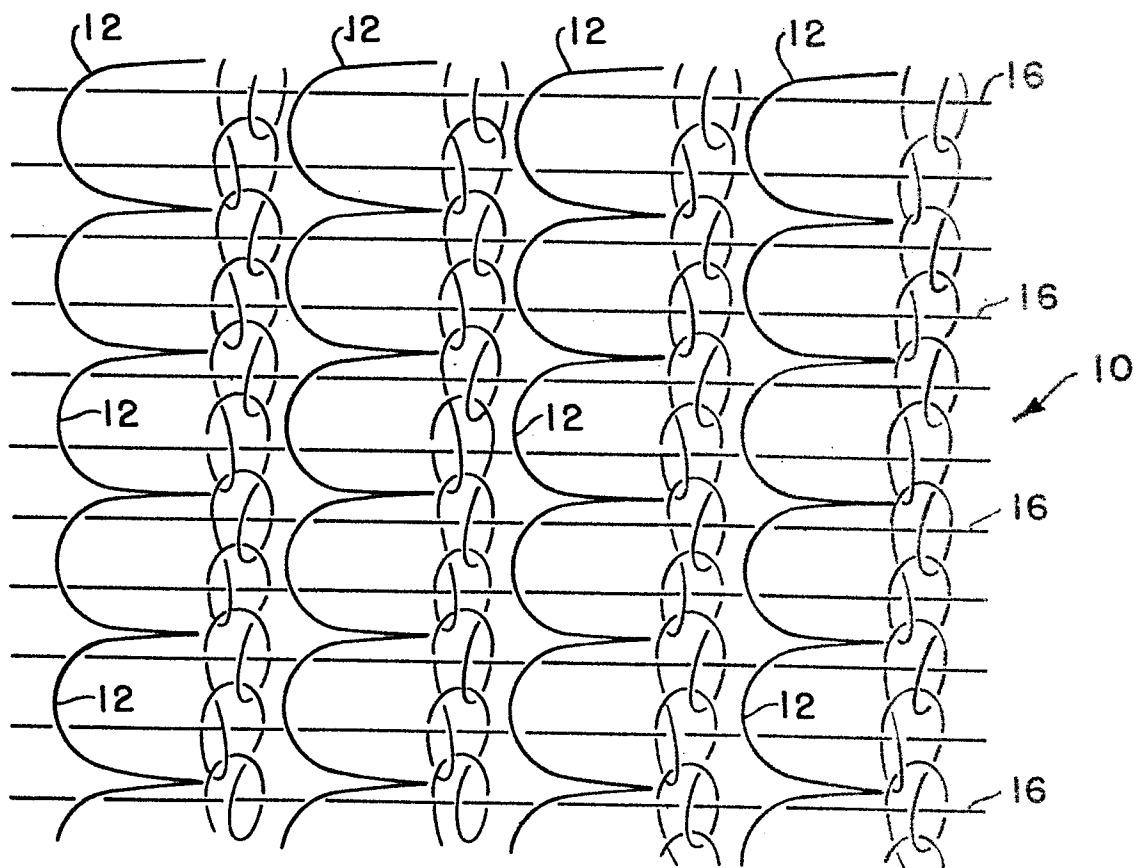
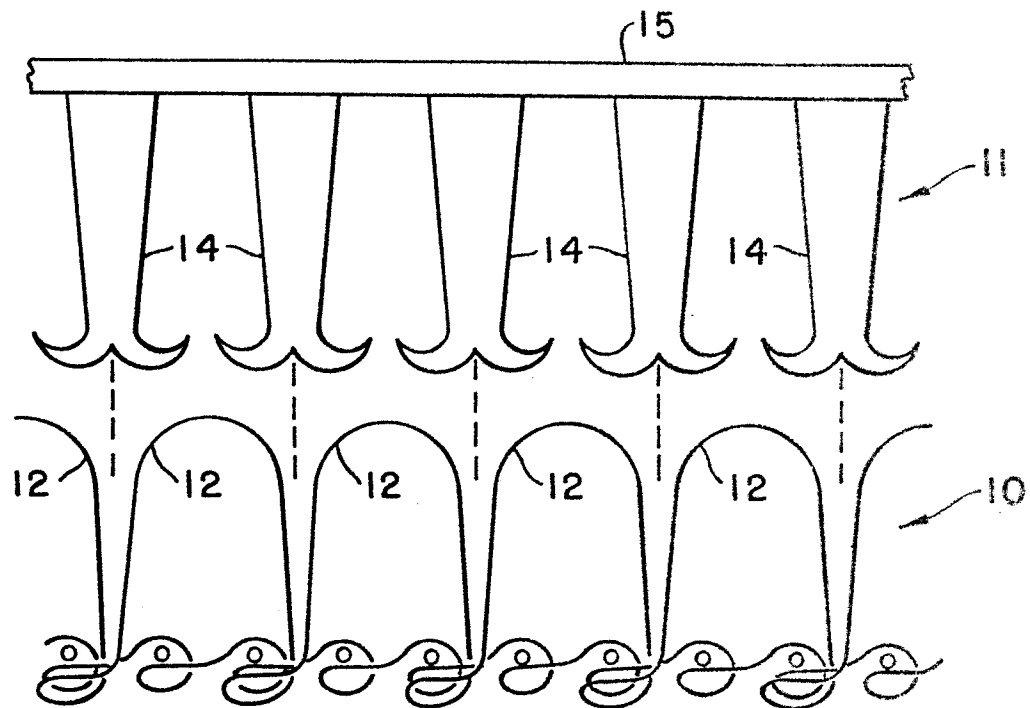
20 If it is desired to provide a fabric with a longer lap side loop, the construction shown in Figure 4 can be employed with the pattern wheel for the front bar set to knit a 1-0, 4-3 tricot stitch and the pattern wheel for the back bar set to knit a 0-1, 1-0 chain stitch. In this form of the invention the lap loop 12 for engagement by the hooks 14 will have a

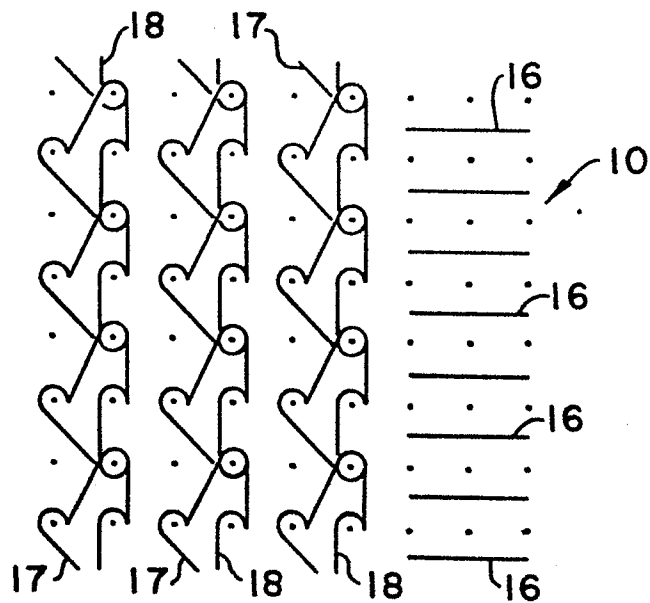
potential height greater than the distance between adjacent wales in the fabric.

5 It can be be readily seen that the invention provides a knitted fabric which can readily function as the female member of a hook and loop connection and which does not readily tear, owing to the weft inserted yarn that provides stability in the weft direction of the fabric.

CLAIMS

1. A warp knit weft inserted fabric, characterised in that the face side of the fabric has a plurality of spaced wales of chain stitches, the back side of the fabric has a plurality of spaced wales of tricot
5 stitches with a lap portion of the tricot stitches projecting therefrom to form loops, and weft yarn is inserted in the weft direction between the face side and the back side of the fabric and held therein by the said chain stitches.
- 10 2. A fabric according to claim 1, characterised in that the said weft yarn is located between the courses formed by the said chain stitches.
- 15 3. A fabric according to claim 1 or 2, characterised in that the height of a majority of the lap loops is less than the distance between adjacent wales of chain stitches.
- 20 4. A fabric according to claim 1 or 2, characterised in that the height of a majority of the lap loops is greater than the distance between adjacent wales of chain stitches.



**FIG. -3-****FIG. -4-**