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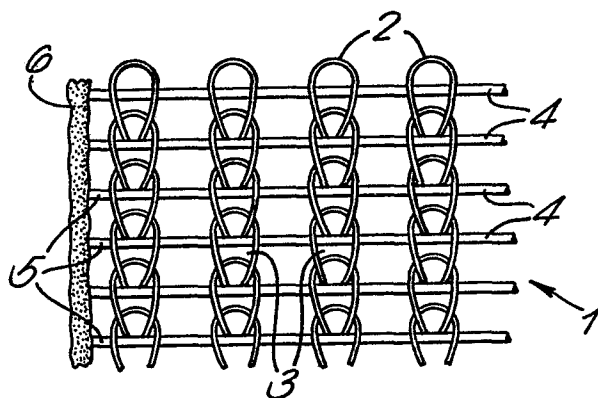
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Waistbands.

A warp-knit weft-inserted fabric, particularly for use as a stiffening strip for waistbands, has a weft (4) of monofilament thermoplastic material anchored to a warp (2) by the loops (3) formed in the warp. The ends (5) of the weft yarns may be retained in a continuous bead (6) of a plastisol material.



WAISTBANDS

This invention relates to waistbands, and especially to fabric inserts which are used to stiffen waistbands, and waistbands including such stiffening inserts.

5 We have for many years manufactured and sold a stiffening fabric known under the Trade Mark "BAN-ROL". This material is a woven fabric strip which is comparatively rigid in the narrow or weft direction but flexible in the warp direction, and is utilised to prevent rolling over of the edge of the garment at which the
10 waistband incorporating the strip is located. The strip has transverse curvature which, combined with the rigid weft, exerts a force on the waistband fabric in a direction towards the wearer. Thus, "roll-over" of the garment, for example trousers or a skirt, is
15 resisted. The woven fabric of the stiffening strip suitably comprises a monofilament in the weft and usually a staple spun yarn in the warp. The initially flat strip may be moulded under heat into the desired curved transverse cross-section. The strip is suitably
20 obtained by slitting it from a wide fabric or by weaving it to the required width on a narrow loom. The initial broad width fabric may be treated to bond the warp and weft, but the bonding material may become degraded during laundering and dry cleaning. In consequence the weft threads may work out at the edges of
25 the strip, and can abrade and puncture the waistband fabric, with undesirable results. In order to overcome this problem it has been proposed, according to United Kingdom Patent Specification 1,213,957, to cover the
30 edge of the stiffening strip, or both edges, with a continuous bead, for example of a polymeric plastics composition.

It has been standard practice, both with the original product and with the product modified in

accordance with U.K.Specification No:1,213,957, to
"finish" the stiffening strip by coating it with, or
dipping it into, a solution of a suitable resinated
or thermoplastics material. This finish serves to
5 anchor the weft threads to the warp threads.

There are problems associated with the use of
such a "finish", however, especially with the configura-
tion of stitching used in modern fashions. For example,
the plastics "finish" not only holds the weft to the
10 warp, but also tends to fill the interstices between
the threads. With modern "jeans" waistbands, it is
usual to have three lines of stitching; the needles
may penetrate the interstices of the stiffening fabric,
and if those interstices are in fact filled with poly-
15 meric "finish", the result is rucking of the waistband.

It is clearly desirable therefore to avoid the
use of such a "finish" if at all possible, although it
is equally important that the weft should be "anchored"
to the warp, and remain vertical in use. It is an
20 object of the present invention to supply a waistband
stiffening strip which meets these requirements.

According to the invention we provide a warp-knit,
weft-inserted fabric wherein the weft is of monofilament
thermoplastic material and is anchored to the warp by
25 the loops formed in the warp.

Such a knitted material is particularly suitable
for use as a stiffening strip for waistbands, and has
a much softer feel than the woven products used hitherto.

In the fabrics of the invention, the warp may be
30 of cotton but is preferably a multi-filament polyester.
The weft is preferably a polyamide monofilament weft
of 300 - 1100 denier, most preferably of a denier at
the lower end of that range. Suitably, there are
between 30 and 36 picks of weft per inch.

35 The fabric of the invention may if desired be
treated with a "finish" as previously, but this is no

longer such an essential component of the fabric, since the weft threads are mechanically held in the loops knitted into the warp.

One or both edges of the stiffening strip of the invention may be provided with a continuous bead, to provide a smooth edge, in the manner described in U.K. Patent Specification 1,213,857.

The knitted fabric of the invention may consist solely of wales knitted independently of each other, and separated only by the inserted weft, or it may contain additional or "floating" threads which traverse between the wales to form a fabric independent of the inserted weft. The addition of floating threads assists in the application of a plastisol smooth edge to the stiffening strip by providing extra anchorage.

A stiffening fabric in accordance with the invention is illustrated schematically in the accompanying drawings, in which:-

Figure 1 is a diagram of a small portion of a stiffening strip, near to one edge;

Figure 2 is a rear view of one of the wales shown in Figure 1; and

Figure 3 is a diagram, similar to Figure 1, showing a modified fabric with floating threads.

With reference to Figures 1 and 2, a stiffening strip is made from a warp-knit weft-inserted fabric 1 comprising a warp formed of threads 2, suitably of cotton or spun polyester, containing loops 3. A monofilament weft 4 suitably of 400 denier polyamide, is inserted into the loops 3 of the warp 2, and is anchored thereto by pulling the warp and thereby closing the loops 3. The ends 5 of the weft yarns 4 are retained in a continuous bead 6 of a plastisol material which may be applied in the manner described in U.K. Specification 1,213,957.

The embodiment shown in Figure 3 is similar to that of Figures 1 and 2, but a "floating" thread 7

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traverses between the wales 2 and forms a fabric there-
with independent of the weft 4. The ends of the
threads 7 are also retained in the plastisol bead 6.

5 The stiffening strips are suitably formed by
slitting from a wide fabric, and are particularly
suitable for use in the stiffening of waistbands. One
particular advantage of the strips is that they have a
natural tendency to curve in one direction, thus com-
pletely obviating the need to mould transverse curvature
10 into them, as was necessary with the prior art stiffen-
ing fabric described above.

CLAIMS

1. A warp-knit, weft-inserted fabric wherein the weft is of monofilament thermoplastic material and is anchored to the warp by the loops formed in the warp.
2. A fabric as claimed in claim 1 wherein the warp is of cotton or is a multi-filament polyester.
3. A fabric as claimed in claim 1 or 2 wherein the weft is a polyamide monofilament weft of 300 - 1100 denier.
4. A fabric as claimed in any of claims 1 to 3 comprising 30 to 36 picks of weft per inch.
5. A fabric as claimed in any of claims 1 to 4 containing additional threads which traverse between the wales to form a fabric independent of the inserted weft.
6. A fabric as claimed in claim 1, substantially as described with reference to the drawings.
7. A waistband stiffening strip comprising a fabric as claimed in any of claims 1 to 6.

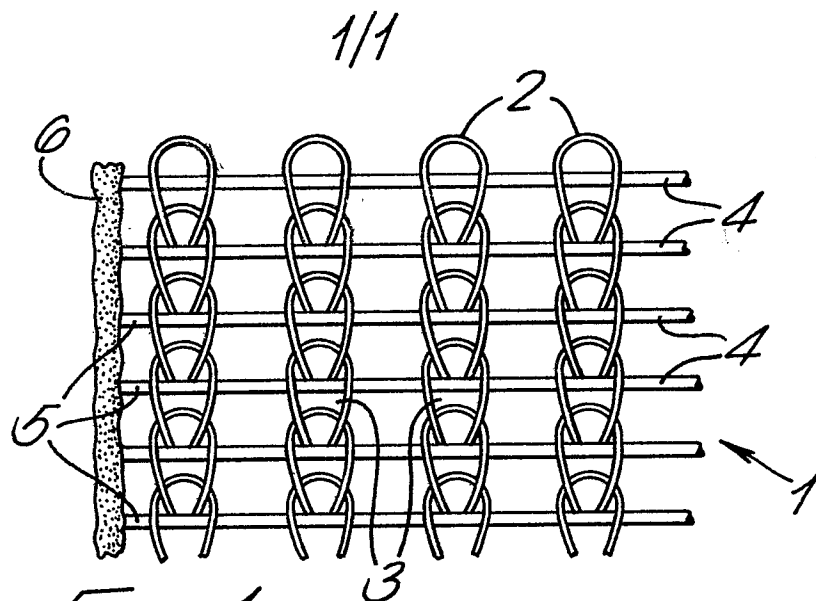


FIG. 1.

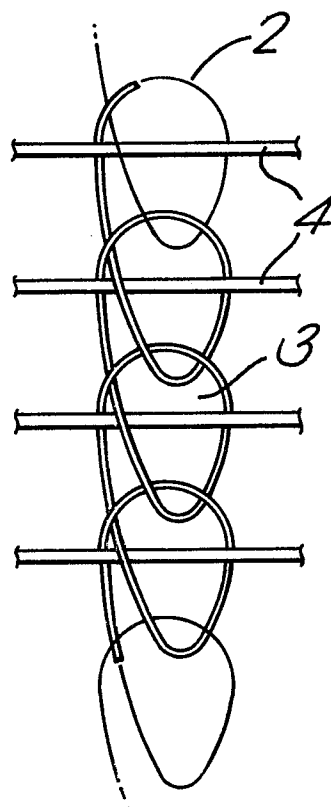
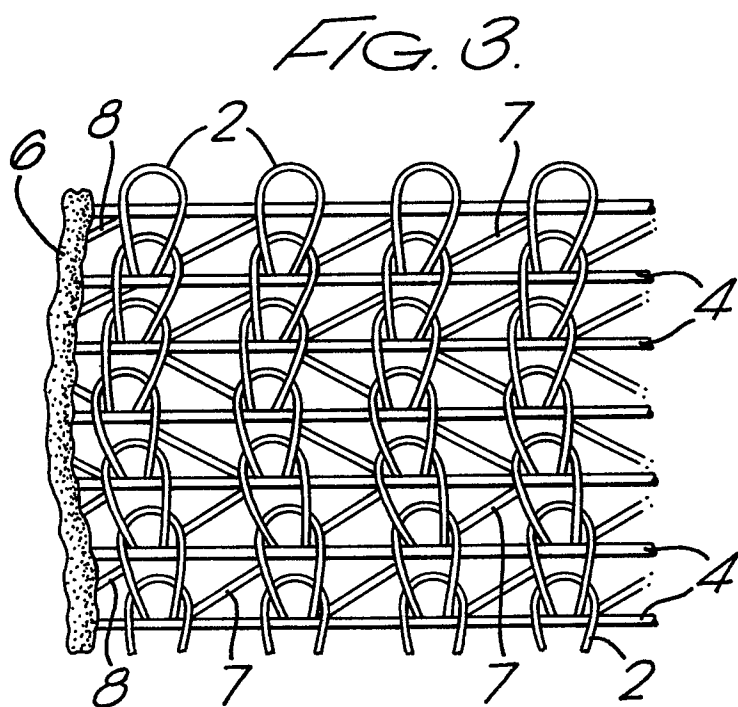


FIG. 2.





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EUROPEAN SEARCH REPORT

0161823

Application number

EP 85 30 2728

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	FR-A-2 399 496 (SOCIETE LAINIERE) * Page 3, line 28 - page 4, line 24; page 8, lines 3-12; claim 11; figures 1-3 *	1,3,5-7	D 04 B 21/16 // A 41 F 9/00
A	FR-A-2 283 972 (LAINIERE DE PICARDIE)		
A	DE-A-2 439 894 (ROYAL PICARDIE FIXIEREINLAGEN)		
A	FR-A-2 241 979 (NIJVERDAL-TEN CATE)		
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			D 04 B A 41 D A 41 F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 26-07-1985	Examiner VAN GELDER P.A.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	