

12

EUROPEAN PATENT APPLICATION

21 Application number: 80303856.1

51 Int. Cl.³: **A 41 B 9/00**

22 Date of filing: 30.10.80

30 Priority: 31.10.79 JP 150958/79 U
18.12.79 JP 165370/79

43 Date of publication of application:
13.05.81 Bulletin 81/19

84 Designated Contracting States:
BE CH DE FR GB IT LI NL SE

71 Applicant: Hashimoto, Kenji
130-2, Higashi-machi Shimo-o-ichi
Nishinomiya Hyogo(JP)

71 Applicant: Yabumoto, Kenji
6, Aza-Miyanomae Kukuchi
Amagasaki Hyogo(JP)

72 Inventor: Hashimoto, Kenji
130-2, Higashi-machi Shimo-o-ichi
Nishinomiya Hyogo(JP)

74 Representative: Drever, Ronald Fergus et al,
Swindell & Pearson 44, Friar Gate
Derby DE1 1DA(GB)

54 Panties, briefs or like underwear and method of making same.

57 Panties, briefs or like underwear includes a buttock covering rear piece (3) formed with an elongated depression (6) extending vertically along its centre line and conforming to the gluteal cleft between the buttocks. On the opposite sides of the depression, the rear piece (3) has rounded portions in conformity with the bulges of the buttocks.

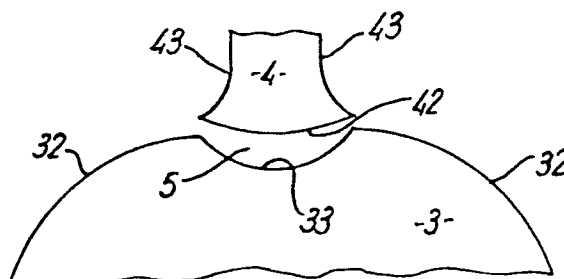


FIG. 5

Panties, Briefs or like Underwear
and Method of Making Same

This invention relates to underwear, such as panties and briefs, and to a method of making the same.

Throughout the specification and the appended claims, the terms "upper" or "upward" and "lower" or "downward" are used with reference to Figs. 1 and 2.

Panties, briefs and like undergarments heretofore known have the drawback that when they are worn, the portion of the undergarment covering the buttocks extends merely in a planar fashion over the gluteal cleft between the buttocks and hangs loosely at its lower part to form wrinkles, thus failing to present attractive hip lines. Conventional undergarments further have the drawback of being uncomfortable to wear since the garment is unable to fit over the buttocks and the gluteal cleft in intimate contact therewith for enclosing and supporting these body portions.

The present invention provides panties, briefs and like undergarments which are comfortable to wear and capable of presenting attractive hip lines, and a method of making such underwear.

According to the present invention there is provided panties, briefs or like underwear comprising a front part for covering the lower abdomen, a rear part for covering the buttocks and a connector part interconnecting the front part and the rear part for covering the crotch, the front part and the rear part being stitched together each at its upper opposite side portions, and

the connector part being joined at one end to the lower end of the front part, characterised in that the join between the lower end of the rear part is stretched most greatly on the centre line thereof.

The invention further provides panties, briefs or like underwear comprising a front piece for covering the lower abdomen, a rear piece for covering the buttocks and a connector piece interconnecting the front piece and the rear piece for covering the crotch, the front piece and the rear piece being stitched together each at its upper opposite side portions, the connector piece being stitched at one end to the lower end of the front piece, characterised in that the other end of the connector piece and the lower end of the rear piece, when placed in butting relation to each other, define therebetween a space shaped symmetrically with respect to the centre line of the space and having a progressively increasing width toward the centre line, the rear piece being stitched at its lower end to the other end of the connector piece while being stretched most greatly on the centre line of the rear piece.

The underwear therefore has an elongated depression extending on the centre line of the rear piece and conforming to the gluteal cleft between the buttocks. On the opposite sides of the depression, the rear piece has rounded portions in conformity with the bulges of the buttocks. Accordingly the underwear of this invention, when worn, snugly fits to the curves of the buttocks and the gluteal cleft, assuming graceful hip lines. Because the rear piece covers and supports the buttocks in intimate contact therewith, the underwear feels smooth and comfortable.

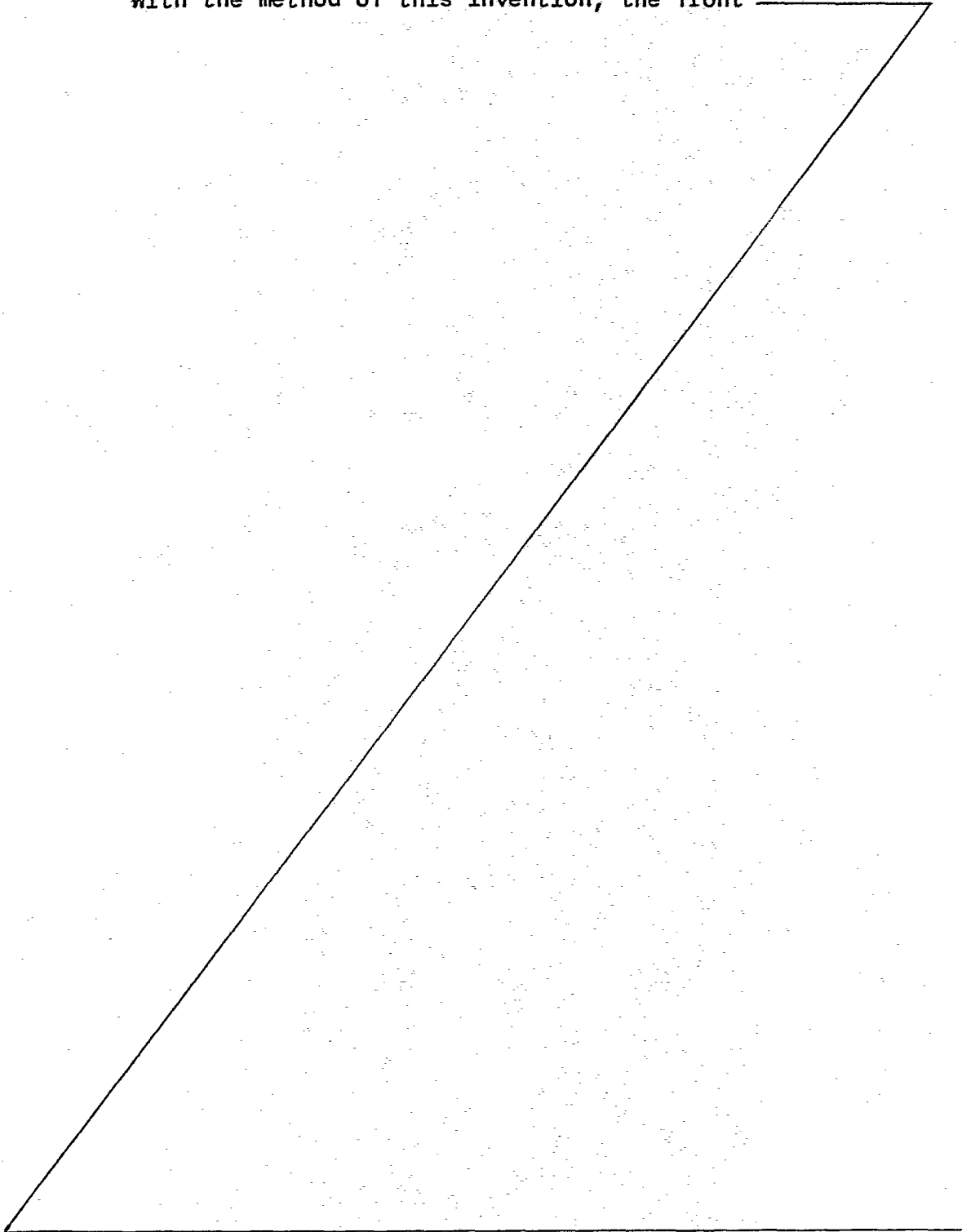
The underwear of this invention is made preferably from stretchable knitted fabrics. The other end of the connector piece and the lower end of the rear piece can be shaped variously as will be described with reference to the embodiments to be given later.

The present invention also provides a method of making panties, briefs or like underwear comprising a front part for covering the lower abdomen, a rear part for covering the buttocks and a connector part for covering the crotch, characterised by stretching the rear part, at the junction of the rear part and the connector part toward the connector part most greatly along the centre line of the rear part and to a progressively lesser extent from the centre line toward the opposite sides thereof to form an elongated depression on the centre line of the rear part and a bulged portion on each side of the depression.

Further the invention provides a method of making panties, briefs or like underwear by stitching together at suitable portions a front piece for covering the lower abdomen, a rear piece for covering the buttocks and a connector piece for covering the crotch, characterised by stitching the rear piece and the connector piece together at adjoining portions thereof while stretching the rear piece toward the connector piece most greatly along the centre line of the rear piece and to a progressively lesser extent from the centre line toward the opposite sides thereof to form an elongated depression on the centre line of the rear piece and a bulged portion on each side of the depression.

Accordingly underwear comfortable to wear and presenting graceful hip lines can be fabricated with extreme ease without necessitating any special procedure or material for cutting the fabric or for sewing.

With the method of this invention, the front



piece, the rear piece and the connector piece may be cut out from a fabric separately. Alternatively the rear piece and the connector piece may be cut out as an integral piece.

5 The present invention is useful not only for panties and briefs but also for corsets, girdles, etc. for covering the lower trunk of the human body. The invention is similarly useful for the lower trunk portions of leotards, bathing suits, sportswear, foundation garments
10 such as all-in-ones, etc. for covering both the upper and lower trunks of the body.

With reference to the drawings, the preferred embodiments of the invention will be described below.

BRIEF DESCRIPTION OF THE DRAWINGS

15 Fig. 1 is a rear view showing panties worn on the human body;

Fig. 2 is a side elevation of the same;

Fig. 3 is a view in section taken along the line III-III in Fig. 1;

20 Fig. 4 is a plan view showing cut out front piece, rear piece and connector piece; and

Fig. 5 is a fragmentary plan view showing cut out rear piece and connector piece according to another embodiment of the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Panties, briefs or like underwear 1 comprises a front piece 2 for covering the lower abdomen, a rear piece 3 mainly for covering the buttocks, and a connector piece 4 interconnecting the front piece 2 and the rear piece 3 for covering the crotch. Most preferably these pieces 2 to 4 are prepared from a stretchable knitted fabric. However, other knitted fabrics, woven fabrics or nonwoven fabrics are also usable.

10 The front piece 2 has projections 21 at its upper opposite side portions. The front piece 2 has a width progressively decreasing downward, and opposite side edges 22 each curved in conformity with the groin between the thigh and the abdomen or with a part slightly above the groin. The front piece 2 has a lower end 23
15 conforming to one end 41 of the connector piece 4. These ends 23 and 41 are stitched together.

The rear piece 3 also has projections 31 extending outward from its upper opposite side portions obliquely upward. The projections 31 are bent toward
20 the front piece 2 and stitched at their ends 34 to the opposed ends 24 of the projections 21, whereby a portion is formed for covering the waist. The rear piece 3 has edges 32 extending from its lower portion toward the
25 side projections and conforming to the curves of the

buttocks. The area and shape of the portion of the rear piece 3 surrounded by the edges 32 are determined in accordance with the bulging degree and contours of the buttocks.

5 The other end 42 of the connector piece 4 is defined by two edges slanting outward toward its longitudinal center line. The central lower end 33 of the rear piece 3 to be stitched to the end 42 is defined by two edges slanting upward toward its center line. These
10 ends 33 and 42 differ in the angle of inclination, such that the ends 33 and 42 define a space 5 therebetween when placed in butting relation to each other before the rear piece 3 and the connector piece 4 are stitched
15 together, as seen in Fig. 4. The space 5 has a progressively increasing width toward the center line thereof.

 The rear piece 3 and the connector piece 4 are stitched together at the opposed ends 33 and 42 while the lower end portion 33 is being stretched toward the connector piece 4 most greatly along the center line of
20 the rear piece 3 and to a progressively lesser extent from the center line toward the opposite sides thereof. Since the rear piece 3 is thus stretched most greatly on its center line, the underwear 1 formed has an elongated depression 6 extending vertically on the center line of
25 the rear piece 3 and conforming to the gluteal cleft

between the buttocks. On the opposite sides of the depression 6, the rear piece 3 has rounded portions in conformity with the bulges of the buttocks. Consequently the rear piece 3 of the underwear 1 covers and supports
5 the buttocks in intimate contact therewith, feels smooth and comfortable, and fits snugly to the curves of the buttocks and gluteal cleft, giving a graceful appearance.

The lower end 33 of the rear piece 3 and the end 42 of the connector piece 4 to be stitched thereto
10 may be arcuated as shown in Fig. 5. In this case, the space 5 formed between the ends 33 and 42 also has an increasing width toward its center and resembles a crescent in shape. Alternatively the depression 6 can be formed in an integral seamless piece of fabric
15 including the rear piece 3 and the connector piece 4, by drawing the integral piece into a fold at the portion thereof corresponding to the junction of the above-mentioned ends 33 and 42 so that the rear piece portion of the integral piece will be stretched most greatly on
20 its center line, and fixing the folded portion suitably by stitching. In this case, the front piece 2 may be integral with or separate from the connector piece 4.

When desired, a stretchable and decorative tape 7 may be stitched to the upper edges 25, 35 of the
25 front and rear pieces 2, 3 to be fitted around the

9

waist, and also to the side edges 22, 32, 43 of the front
and rear pieces 2,3 and the connector piece 4 to be
fitted around the legs. The tape 7 is made partially
or entirely from stretchable yarns, such as rubber yarns
5 or spandex yarns, by knitting or weaving.

1. Panties, briefs or like underwear comprising a front part for covering the lower abdomen, a rear part for covering the buttocks and a connector part interconnecting the front part and the rear part for covering the crotch, the front part and the rear part being stitched together each at its upper opposite side portions, and the connector part being joined at one end to the lower end of the front part, characterised in that the join between the lower end of the rear part (3) and the other end of the connector part (4) is so arranged that the rear part (3) is stretched most greatly on the centre line thereof.
2. Panties, briefs or like underwear comprising a front piece for covering the lower abdomen, a rear piece for covering the buttocks and a connector piece interconnecting the front piece and the rear piece for covering the crotch, the front piece and the rear piece being stitched together each at its upper opposite side portions, the connector piece being stitched at one end to the lower end of the front piece, characterised in that the other end (42) of the connector piece (4) and the lower end (33) of the rear piece (3), when placed in butting relation to each other, define therebetween a space shaped symmetrically with respect to the centre line of the space and having a progressively increasing width toward the centre line, the rear piece (3) being stitched at its lower end (33) to the other end (42) of the connector piece (4) while being stretched most greatly on the centre line of the rear piece (3).

//

3. Panties, briefs or like underwear according to claim 1, characterised in that the other end (42) of the connector piece (4) is defined by two edges slanting outward toward its longitudinal centre line, and the lower end (33) of the rear piece (3) is defined by two edges slanting upward toward its centre line.

4. Panties, briefs or like underwear according to claim 1, characterised in that the other end (42) of the connector piece (4) and the lower end (33) of the rear piece (3) are arcuate.

5. Panties, briefs or like underwear according to any one of the preceding claims, characterised by being made of a knitted fabric.

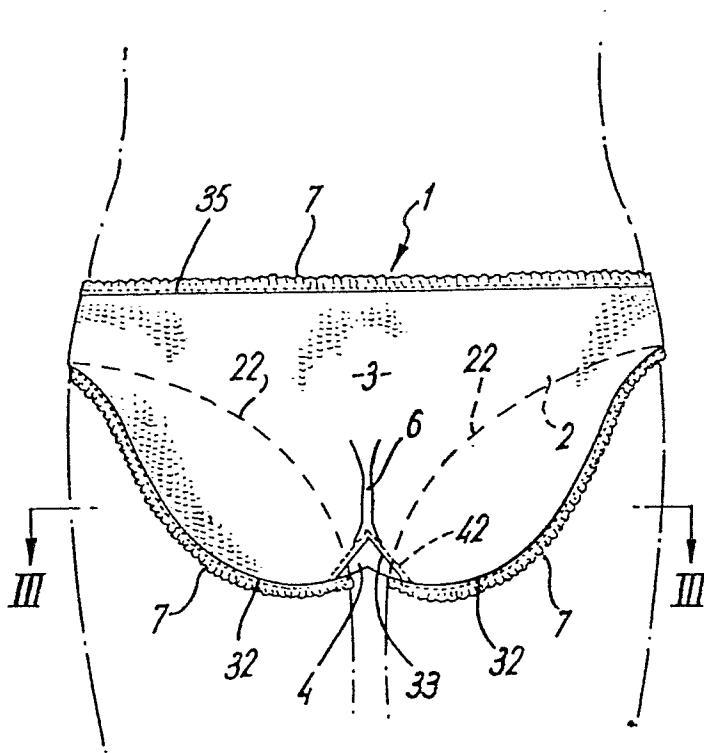
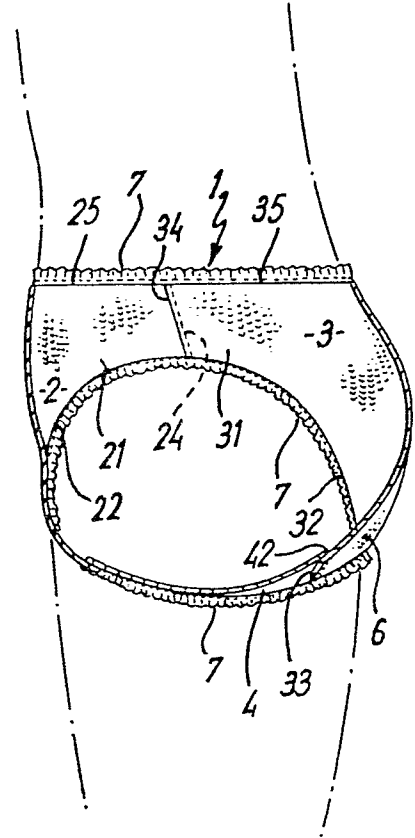
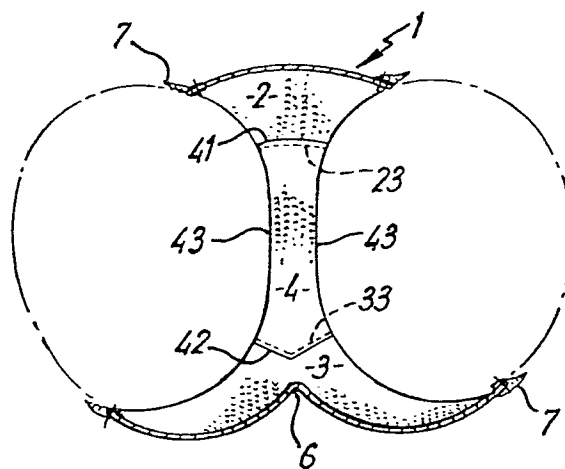
6. A method of making panties, briefs or like underwear comprising a front part for covering the lower abdomen, a rear part for covering the buttocks and a connector part for covering the crotch, characterised by stretching the rear part (3), at the junction of the rear part (3) and the connector part (4), toward the connector part (4) most greatly along the centre line of the rear part (3) and to a progressively lesser extent from the centre line toward the opposite sides thereof to form an elongated depression on the centre line of the rear part (3) and a bulged portion on each side of the depression.

7. A method of making panties, briefs or like underwear by stitching together at suitable portions a front piece for covering the lower abdomen, a rear piece for covering the buttocks and a connector piece for covering the crotch,

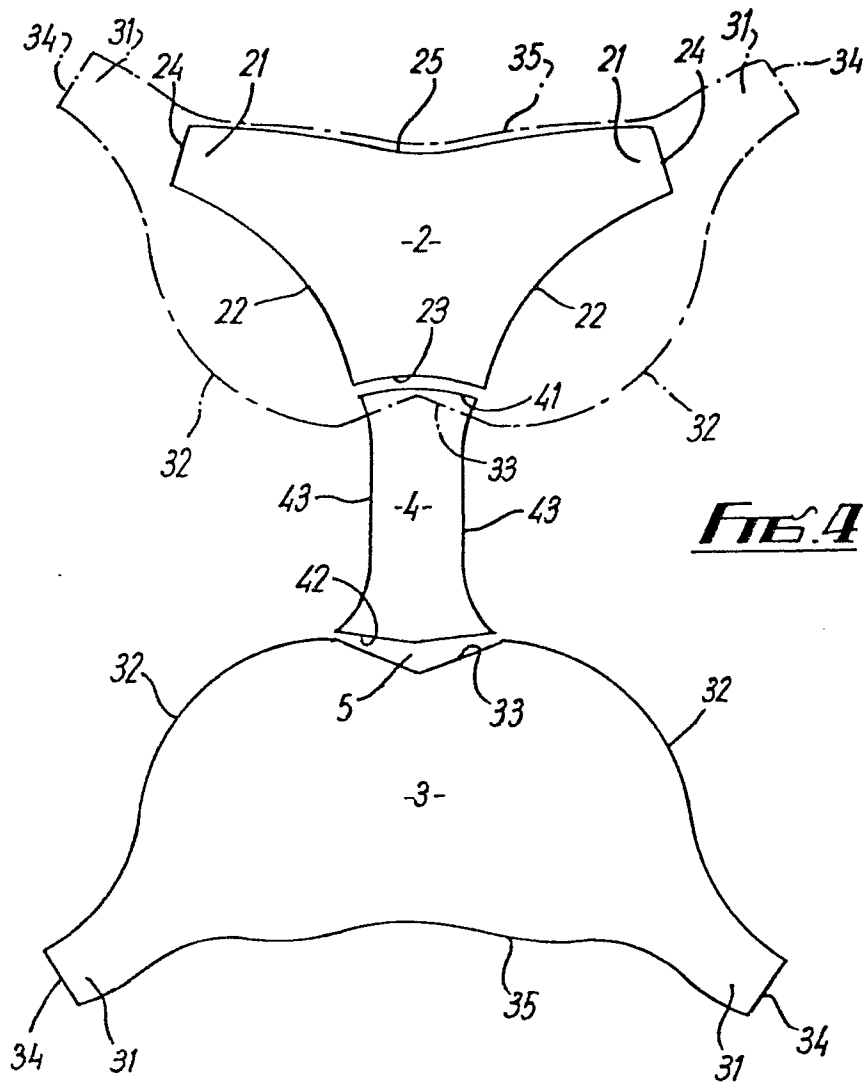
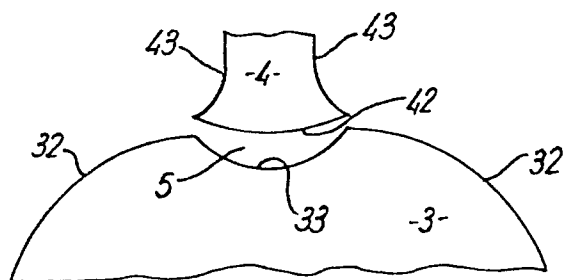
characterised by stitching the rear piece (3) and the connector piece (4) together at adjoining portions thereof while stretching the rear piece (3) toward the connector piece (4) most greatly along the centre line of the rear piece (3) and to a progressively lesser extent from the centre line toward the opposite sides thereof to form an elongated depression on the centre line of the rear piece (3) and a bulged portion on each side of the depression.

8. A method according to claim 7, characterised in that the front piece (2), the rear piece (3) and the connector piece (4) are separately cut out from a fabric material.

9. A method according to claim 7, characterised in that at least the rear piece (3) and the connector piece (4) are integrally cut from a fabric material.

$\frac{1}{2}$ FIG. 1FIG. 2FIG. 3

2/2

**FIG. 4****FIG. 5**



European Patent
Office

EUROPEAN SEARCH REPORT

0028505

Application number

EP 80 30 3856

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
	<p><u>GB - A - 779 595</u> (J. ARKUS)</p> <p>* In its entirety *</p> <p>--</p> <p><u>US - A - 3 016 900</u> (J. TITLE)</p> <p>* Column 1, last paragraph; column 2, lines 16-44; figures *</p> <p>--</p> <p><u>US - A - 3 344 438</u> (J. TITLE)</p> <p>* Column 2, lines 1-42 *</p> <p>----</p>	<p>1,4,8</p> <p>2,4,5,8</p> <p>8,9</p>	<p>A 41 B 9/00</p> <p>TECHNICAL FIELDS SEARCHED (Int.Cl. ³)</p> <p>A 41 B</p> <p>CATEGORY OF CITED DOCUMENTS</p> <p>X: particularly relevant A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: conflicting application D: document cited in the application L: citation for other reasons</p> <p>&: member of the same patent family, corresponding document</p>
<p>X The present search report has been drawn up for all claims</p>			
Place of search		Date of completion of the search	Examiner
The Hague		27-01-1981	GARNIER