



(51) International Patent Classification:
A41D 1/06 (2006.01)

(21) International Application Number:

PCT/US2010/058735

(22) International Filing Date:

2 December 2010 (02.12.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

12/631,492 4 December 2009 (04.12.2009) US

(71) Applicant (for all designated States except US): **MIRACLEBODY, LLC** [US/US]; 500 William Street, Pen Argyl, PA 18072-1772 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WALDMAN, Mark** [US/US]; 6415 Meetinghouse Road, New Hope, PA 18938 (US). **FUA, Claudia** [US/US]; 2516 Deerford Street, Lakewood, CA 90712 (US).

(74) Agent: **RUGGIERO, Charles N. J.**; Ohlandt, Greeley, Ruggiero & Perle, L.L.P., One Landmark Square, 10th Floor, Stamford, CT 06901-2682 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,

[Continued on next page]

(54) Title: GARMENT HAVING SUPPORT

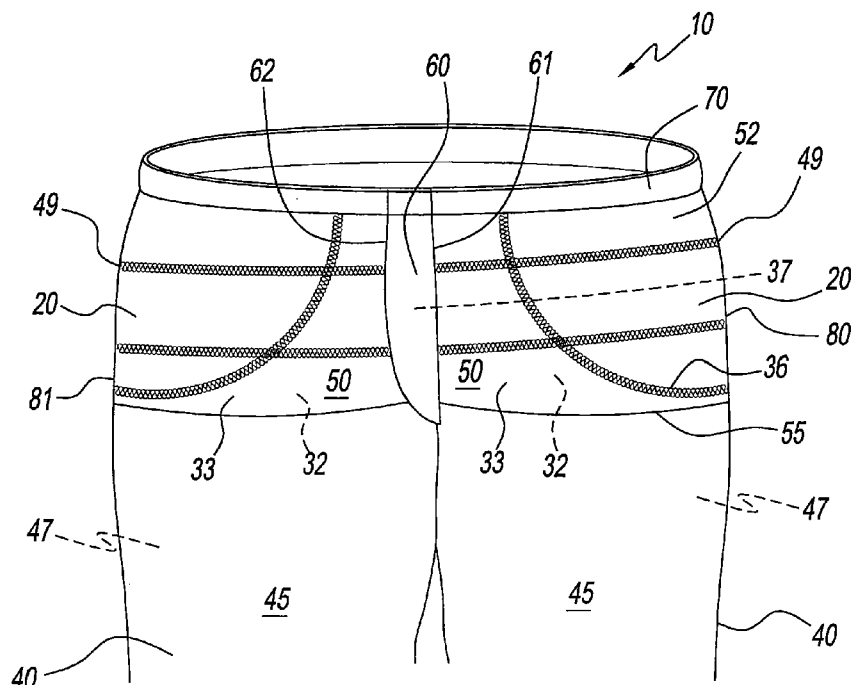


Fig. 1

[Continued on next page]



SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG). **Published:**

— with international search report (Art. 21(3))

(57) Abstract: A garment including a body of fabric having a waistband and at least two seams that extend from the waistband and a support structure that is connected to the at least two seams and the waistband is provided. The support structure further includes a pocket and a tape connected to the pocket that prevents elongation of the support structure between said at least two seams during the wearable life of the body of fabric.

GARMENT HAVING SUPPORT

BACKGROUND OF THE INVENTION

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1. Field of the Invention

The disclosure relates to garments having at least one support at the front of the garment. More particularly, the present disclosure relates to garments having at least one support at the inside and front of the garment that does not shrink or stretch during wearable life of the garment to provide support and control in the abdominal region of the wearer.

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2. Description of the Related Art

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There currently exist numerous garments that offer various degrees of shaping and support to flatter the figure of the wearer. Often such garments have support panels that feature an elastic component that stretches over a desired body part to offer shaping or support.

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Unfortunately, after repeated washing of such garments, the elastic components in the support panels fail due to exposure to detergents and heating. Alternatively, such garments fail because they no longer fit the consumer as they initially did when they were purchased. After repeated washings, the support panel stretches and never regains the initial support and shaping function that provided the garment with the flattering fit.

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Accordingly, there is a need for a garment that has support structure at the front of the garment that maintains shape and neither shrinks nor stretches throughout the wearable life of the garment to which it is connected.

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SUMMARY OF THE INVENTION

The present disclosure provides for a garment having a support structure on the inside of the garment. The support structure includes a non-stretch tape that prevents stretching of a pocket during wear to provide
5 for support at the front of the garment

The present disclosure also provides for a garment having an elastic component. The garment has a pair of support structures at the inside front of the garment to which a non-stretch cotton fabric is connected to
10 each of a pair of pockets to form a support structure that prevents stretching in the lateral direction after repeated washings of the garment. The garment provides tension at the back of the garment to keep the support structure in a taut state over the abdomen of the wearer at the front of the garment.

15 The present disclosure further provides a pair of jeans having support structures that are connected to the inside of the pair of jeans at the waistband, the side seams and the closure. The support structures include a pocket and a non-stretch tape that prevents stretching of the pocket to
20 thereby provide support in the abdominal region of the pair of jeans.

The present disclosure still further provides for a garment that has non-stretch support structures disposed on opposite sides of a closure at the front of the garment to provide support and control to the wearer during
25 the wearable life of the garment. The non-stretch support structures include a 100% cotton twill tape that prevents any stretching of the support structures in the lateral direction across the abdomen. The garment is a pair of pants or a skirt.

30 The present disclosure still yet further provides for an elasticized garment, such as a legging, that has an inner two-ply support structure extending across the front portion of the garment. The two-ply support structure has a tape that extends across a pocket and prevents stretching of the pocket in the lateral direction. During wear, the elasticity of the

garment pulls the two-ply structure across the abdomen of the wearer to ensure a control and support in the abdominal region of the wearer.

5 A garment including a body of fabric having a waistband and at least two seams that extend from the waistband and a support structure that is connected to the at least two seams and the waistband is provided. The support structure includes a pocket having a tape connected to the surface of the pocket that prevents elongation of the pocket between the at least two seams during the wearable life of the body of fabric.

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A garment including a body of elasticized fabric having a waistband and at least two seams that extend from the waistband is provided. The garment includes a support structure that includes a pocket and a tape that is secured to a surface of the pocket. The support structure is secured to
15 the at least two seams and the waistband. The body of elasticized fabric maintains the support structure in a taut configuration when the garment is worn and the tape prevents elongation of the pocket during the wearable life of the garment.

20 These and other benefits, features and advantages will be apparent from the following detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

25 Fig. 1 illustrates a front view of an inside of a fully assembled garment having two support structures, according to a first embodiment of the present disclosures;

Fig. 2 illustrates a front view of the outside of the fully assembled
30 garment of Fig. 1;

Fig. 3 illustrates a close-up view of a support or support structure, of Fig. 1 connected to a front panel of the garment;

Fig. 4 illustrates the support structure of Fig. 1, showing the detail of the tape, according the first embodiment of the present disclosure;

Fig. 5 illustrates the support pocket of Fig. 1, in an unassembled configuration, in which components of the support structure are not connected.

Fig. 6 illustrates a legging garment having a support structure located at the front of the garment, according to a second embodiment of the present disclosure.

DETAILED DESCRIPTION OF THE DISCLOSURE

Referring to the drawings and in particular to Fig. 1, a fully assembled garment or body of fabric, and preferably, jeans are shown and referenced by reference numeral 10. Jeans 10, shown inside-out, include a pocket 50, according to the present invention. Pocket 50 is a two-ply component having an inner pocket material 32 and an outer pocket material 33. Pocket 50 has a rigid tape 20 connected to outer pocket material 33. Jeans 10 includes two legs 45 that each has a front panel 40 and a rear panel 47. Jeans 10 has a waistband 70, side seams 80 and 81, and a closure 60. Closure 60 has two seams 61 and 62 on either side thereof. Each leg 45 has a front panel 40 and a pocket 50; however, for purposes of simplicity a single front panel 40 and a single support panel 50 will be referenced because each individual component is identical in function.

Referring also to Fig. 2, facing side of jeans 10 is shown. Pocket 50 is connected to jeans 10 and is preferably sewn to front panel 40 at side seam 80 and seam 61. Pocket 50 has a free lower edge 55 that is not connected to front panel 40. Therefore, there exists a gap between pocket 50 and front panel 40 that is deepest proximate closure 60 and most shallow proximate side seam 80. Outer pocket material 33 is connected at

three sides to side seam 80, seam 61 and waistband 70. Outer pocket material 33 is connected to visible outer pocket 34 at seam 36.

Visible outer pocket 34 and inner pocket material 32 are connected at seam 35. Inner pocket material 32 is also connected to waistband 70 and side seam 80. However, inner pocket material 32 is only connected to a portion of waistband 70 near closure 60 and a portion of side seam 80. While pocket 50 is free at edge 55, inner pocket material 32 is sewn to front panel 40 thereby restricting movement of pocket 50 away from front panel 40. At free edge closer to closure 60, inner pocket material 32 is only connected to front panel 40 at waistband and seam 61.

Pocket 50 is preferably made from 100% cotton. Further, pocket 50 has a tape 20 secured to outer pocket material 33.

Tape 20 is a twill tape that is woven using a herringbone construction. A herringbone construction is a twill weave that is reversed, or broken, at regular intervals producing a zig-zag pattern. This technique produces an extremely sturdy and consistent tape that maintains the lateral integrity of tape 20. Tape 20 maintains its lateral dimension and rigidity from side seam 80 to closure 60 because of the twill weave construction. In addition to the twill weave construction of tape 20, tape 20 could also be made from other materials with similar functionality. Tape 20 is also made from 100% cotton. Alternatives to tape 20 are cotton webbing, cotton gross grain, or cotton bias tape, for example. Tape 20, due to its twill weave construction and 100% cotton composition prevent elongation of pocket 50 between seams 80 and 61 and seams 81 and 62 (on opposite leg 45) of jeans 10.

Further, the width of tape 20 has a range of sizes so that it covers from approximately 50% to 80% of surface area of outer support material 33 of pocket 50. By covering and being secured to a large surface area of outer support material 33, control offered by pocket 50 is greater than when tape covers a smaller surface area of pocket 50. Further, tape 20 is

centrally located over pocket 50, and in particular, outer support material 33. Tape 20 lies over a horizontal axis that coincides with a midline 37 of outer support material 33 that extends between seams 81 and 61. By being centrally located over midline 37 of outer support material 33, tape 20 is positioned to distribute force against abdomen applied by elasticized component of jeans 10 to optimize fit.

Furthermore, pocket 50 and, in particular, outer pocket material 33, has a reinforced area 52. Reinforced area 52 is sewn to waistband 70, and side seam 80. Reinforced area 52 is also bordered by seam 36 and seam 22 of tape 20. Reinforced area 52 provides greater stiffness to pocket because it is sewn at these four locations. Reinforced area further provides an added degree of stability to pocket 50 and, in particular to outer pocket material, also because it is sewn to tape 20 at seam 22.

Jeans 10 of Fig. 1 are typically made from assembled pieces of denim fabric, such as, a sturdy cotton fabric that preferably contains an elasticized material. An elasticized material, such a Lycra®, enables pair of jeans 10 to stretch during wear and to conform to the figure of the wearer after they have been washed. Depending upon the desired color for jeans 10, the cotton from which jeans 10 are made will shrink from 8% to 13% after they have been washed by manufacturer. The percentage that jeans shrink after the washing is within an acceptable range of a standardized size. Outer pocket material 33 and inner pocket material 32 of pocket 50 and tape 20 do not contain elasticized material.

When pair of jeans 10 of Fig. 1 are washed by manufacturer, they shrink by approximately 8% to 13%, pocket 50 shrinks by approximately 4%-5% and tape 20 shrinks by approximately 4% to 5%. After, repeated washings by wearer, pocket 50, namely outer pocket material 33 and inner pocket material 32 and tape 20 remain stable and will neither stretch or shrink after wear or washings. In contrast, cotton denim from which jeans 10 are made will temporarily shrink by approximately 2% to 3% after washings by wearer, but will quickly regain the original size when

purchased when donned due to the presence of elasticized material. Thus, throughout the wearable life of the jeans 10, taut support is maintained across front panels 40 of jeans 10 in location of pockets 50. The elastic component of jeans 10 provides tension at rear panels 47 that will ensure that pockets 50 will remain taut at front panels 40. The taut support 50 provide support to abdomen of wearer at front of jeans 10.

In garments, and in particular pants and skirts, that have front pockets, the pockets are not typically secured to the garment at the side seam, the closure and the waistband. Pockets of such garments are only secured at the side seam and the waistband and are not secured to the closure. In jeans 10, pockets 50 are secured to three locations, namely to waistband 70, side seam 80 and closure seam 61. Further, the inherently stable material of tape 20 that is secured to pocket 50 fixes the length of pocket 50 in the lateral dimension. When wearer dons jeans 10, the stretch caused by the elasticity at back of jeans 10 due to elasticity ensures that pockets 50 remain taut across abdomen of wearer for a supportive and flattering fit.

Referring to Figs. 3 through 5, the assembly of support structures 49 is shown. Garment 10 of Figs 1 and 2 would have two support structures 49. In Fig. 3, tape 20 is placed on top of outer pocket material 33. In Fig. 4, tape 20 is sewn to outer pocket material 33. Tape 20 is sewn to outer pocket material 33 by two rows of cover stitch 22. Cover stitch 22 further enhances the rigidity of pocket 50 by fixing the inherently stable tape 20 to outer pocket material 33 of support pocket 50. Support structure 49, pocket 50 with tape 20, is sewn to side seam 80, seam 61 and connection near waistband 70.

Referring to Fig. 6, a second embodiment of the support structure according to the present invention is shown and is referenced by reference numeral 149. Support structure 149 includes a pocket 150 and a tape 120. Pocket 150 is connected to a garment 110, such as a pair of leggings, for example, that does not have a front closure. Pocket 150 is connected to

side seams 180 and 181 and waistband 170. Pocket 150 is not connected to garment 110 at a lower free edge 155. There exists a gap between lower free edge and front of garment 110.

5 Pocket 150, similar to the first embodiment, is a two-ply component. Pocket 150 has an outer pocket material 133 and an inner pocket material 132. A tape 120 is connected to outer pocket material 133. Outer pocket material 133 and inner pocket material 132 are made from 100 % cotton. Tape 120 is a twill weave of 100% cotton having the identical construction
10 as the tape 20 of the embodiment of Figs 1 through 5. Alternatives to tape 120 are cotton webbing, cotton gross grain, or cotton bias tape, for example. Alternatives to tape 20 may also include synthetic materials such as for example that are stable after being washed by manufacturer
(Please add such fabrics) Tape 120 prevents elongation of pocket 150
15 between seams side seams 180 and 181 of garment 110.

The inherent rigidity and stability of tape 120 prevents any stretching of pocket 150. The elasticity of legging 110 pulls pocket 150 across abdominal area of wearer to maintain a taut configuration and a supportive
20 fit. Tape 120 of Fig. 6 covers approximately 50% of outer pocket material 133. A wider tape 120 that covers from up to approximately 80% of outer pocket material 132 may be used to provide greater support to the abdomen of the wearer for a firmer fit.

25 While the support structures of the present disclosure has been described with respect to jeans and leggings, the support structure is usable with any garment such as a skirt, leggings, shorts, dress pants, khaki pants or any garment with side seams and a waistband or side seams a central closure and a waistband.

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While the present disclosure has been described with reference to particular embodiments, it should be understood that the embodiments are illustrative and that the scope of the disclosure is not limited to these embodiments. Many variations, modifications, additions and improvements

to the embodiments described above are possible. It is contemplated that these variations, modifications, additions and improvements fall within the scope of the disclosure as detailed within the following claims.

We Claim:

1. A garment comprising:

5 a body of fabric having a waistband and at least two seams that extend from said waistband;
a support structure that is connected to said at least two seams and said waistband; the support structure including a pocket and a tape connected to the pocket;
10 said tape prevents elongation of said pocket between said at least two seams during the wearable life of the body of fabric.

2. The garment of claim 1, wherein said pocket is a two-ply inner pocket.

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3. The garment of claim 1, wherein said pocket is made from 100 % cotton.

4. The garment of claim 1, wherein said tape is made from 100% twill
20 cotton.

5. The garment of claim 1, wherein said at least two seams are two side seams that are disposed on opposite sides of said body of fabric.

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6. The garment of claim 1, wherein said at least two seams are a side seam and a closure seam disposed on one side of a closure.

7. The garment of claim 2, wherein said body of fabric does not have a closure.

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8. The garment of claim 7, wherein said body of fabric is pair of leggings.

9. The garment of claim 6, wherein said body of fabric further comprises a front closure.

10. The garment of claim 9, further comprising a second side seam
5 disposed opposite said side seam and a second closure seam disposed on an opposite said closure.

11. The garment of claim 10, wherein said support structure is two support structures, wherein one of said two support structures is secured to
10 said side seam and said closure seam and the other of the two support structures is secured to said second side seam and said second closure seam.

12. The garment of claim 1, wherein said body of fabric is an
15 elasticized body of fabric that provides tension to said support structure during wear to provide support to the abdomen of the wearer.

13. The garment of claim 9, wherein said body of fabric is a pair of jeans, a pair of dress pants, a skirt or a pair of shorts.

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14. A garment comprising:

a body of elasticized fabric having a waistband and at least two seams that extend from said waistband; and

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a support structure having a pocket and a tape secured to a surface of said pocket, wherein said support structure is secured to said at least two seams and said waistband;

30 wherein said body of elasticized fabric maintains said support structure in a taut configuration when the garment is worn and said tape prevents elongation of said pocket during the wearable life of the garment.

15. The garment of claim 14, wherein said at least two seams are two side seams that are disposed on opposite sides of said body of fabric.

16. The garment of claim 14, wherein said at least two seams are side
5 seam and a closure seam disposed on one side of a closure.

17. The garment of claim 14, wherein said pocket is a two-ply inner pocket.

10 18. The garment of claim 14, wherein said pocket is made from 100% cotton that does not shrink after a first washing.

19. The garment of claim 14, wherein said tape is made from 100% twill cotton that does not shrink after a first washing.

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20. The garment of claim 14 wherein said body of fabric does not have a closure.

21. The garment of claim 20, wherein said body of fabric is pair of
20 leggings.

22. The garment of claim 16, wherein said body of fabric has a front closure.

25 23. The garment of claim 22, further comprising a second side seam opposite said side seam and a second closure seam opposite said closure.

24. The garment of claim 23, wherein said support structure is two support structures, wherein one of said two support structures are secured
30 to said side seam and said closure seam and the other of the two support structures is secured to said second side seam and said second closure seam.

25. The garment of claim 14, wherein said support structure further comprises a horizontal axis along a midline thereof that extends between said at least two seams, and wherein said tape is centrally located on said horizontal axis of said support structure.

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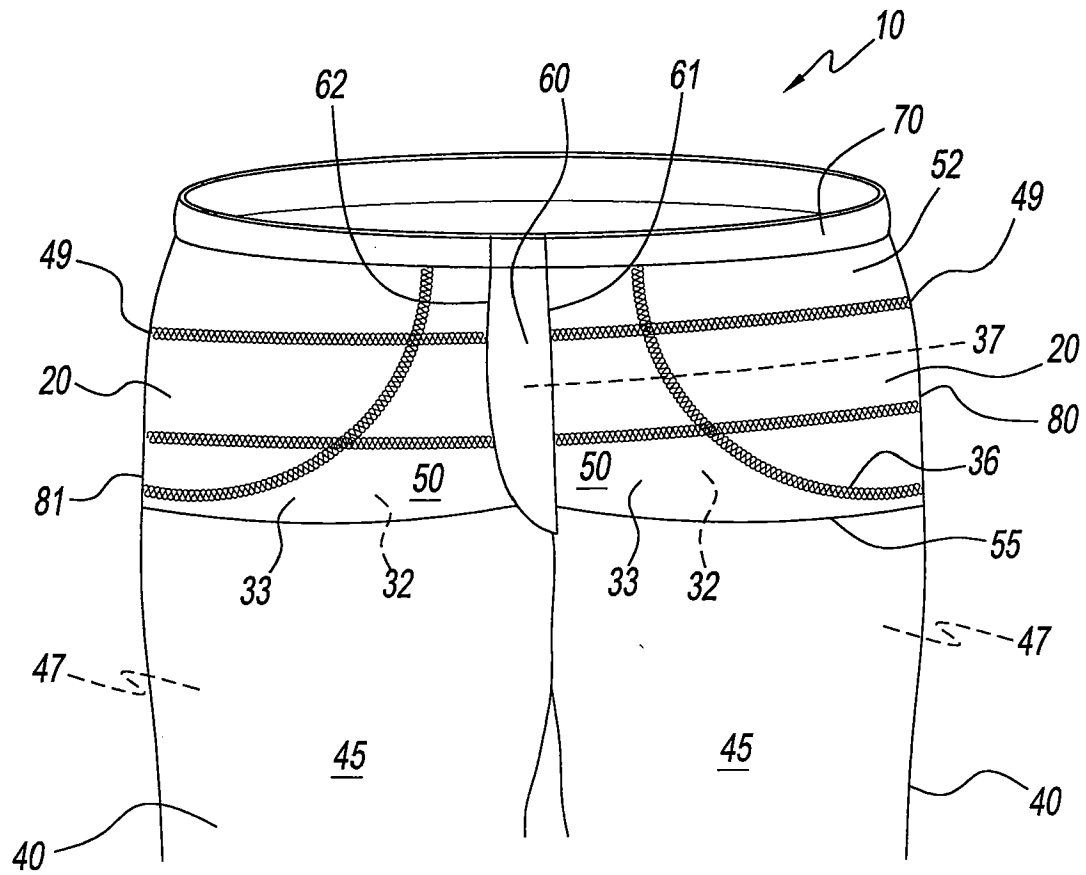


Fig. 1

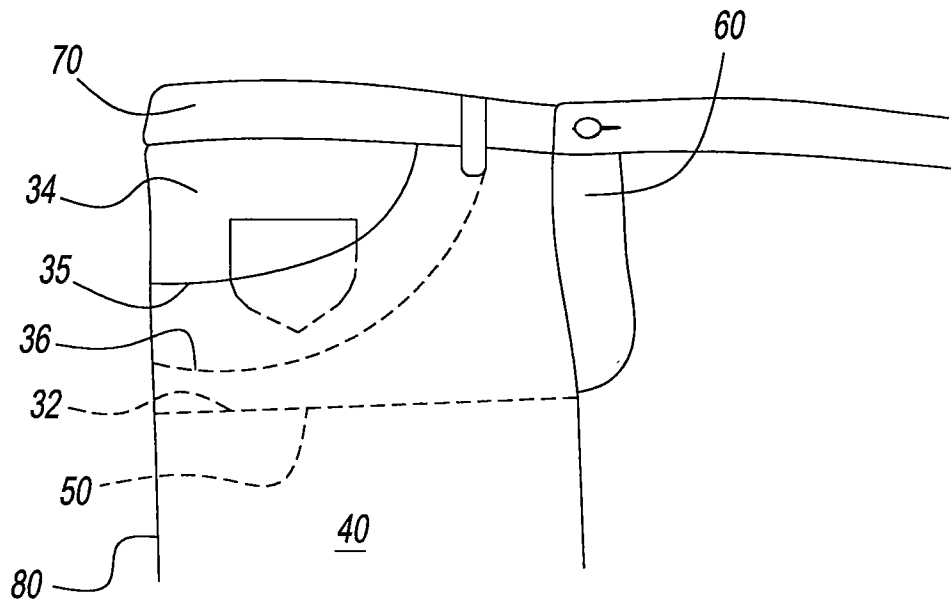


Fig. 2

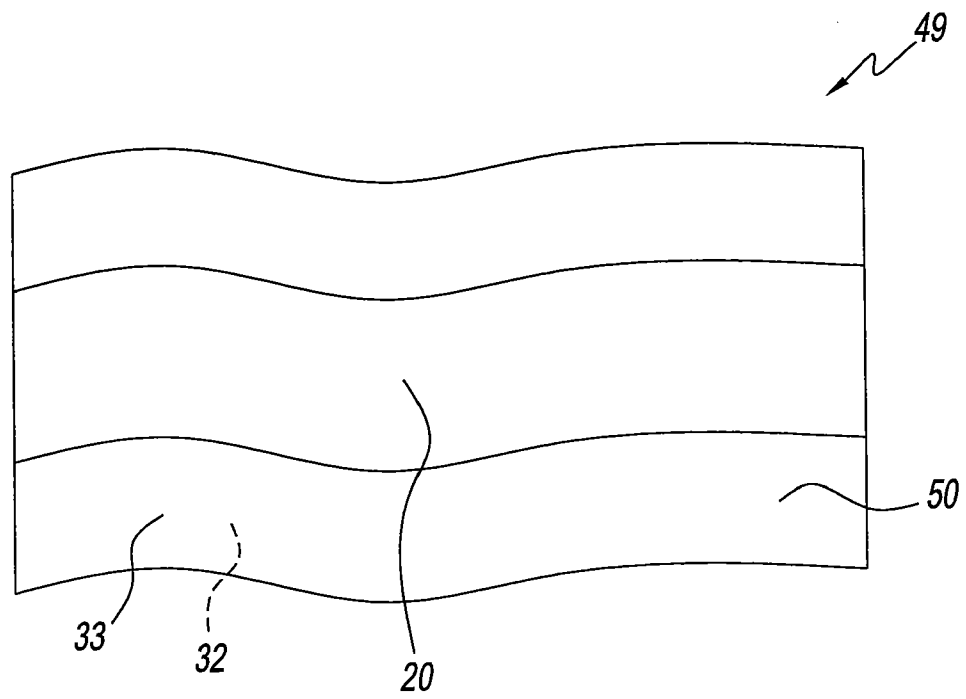


Fig. 3

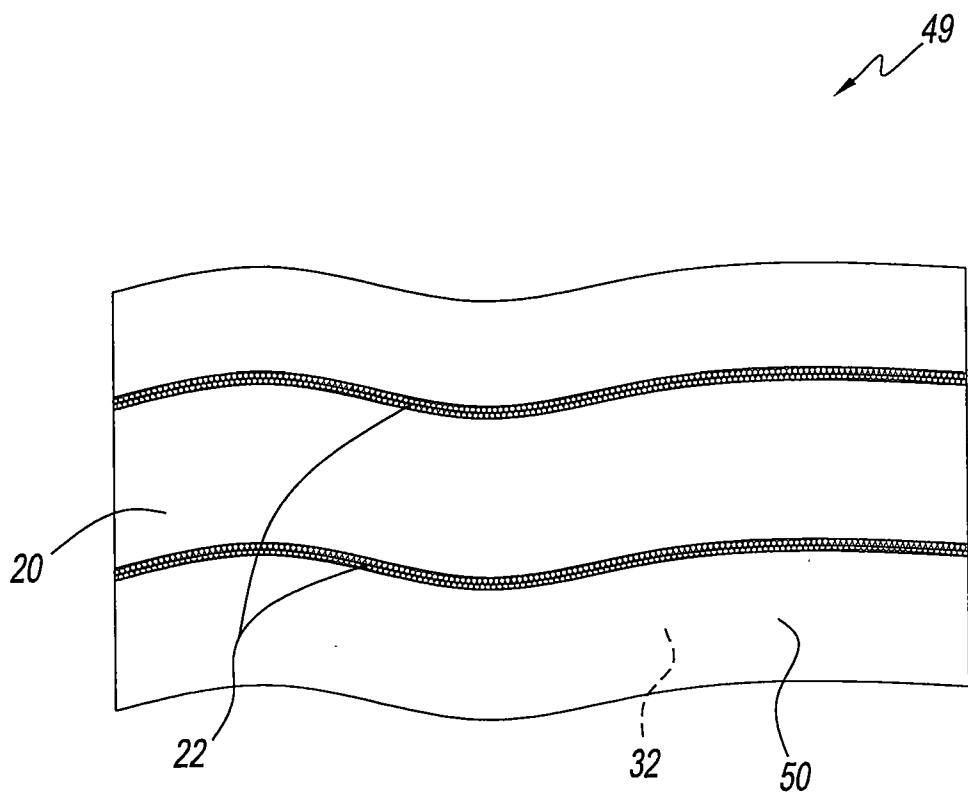


Fig. 4

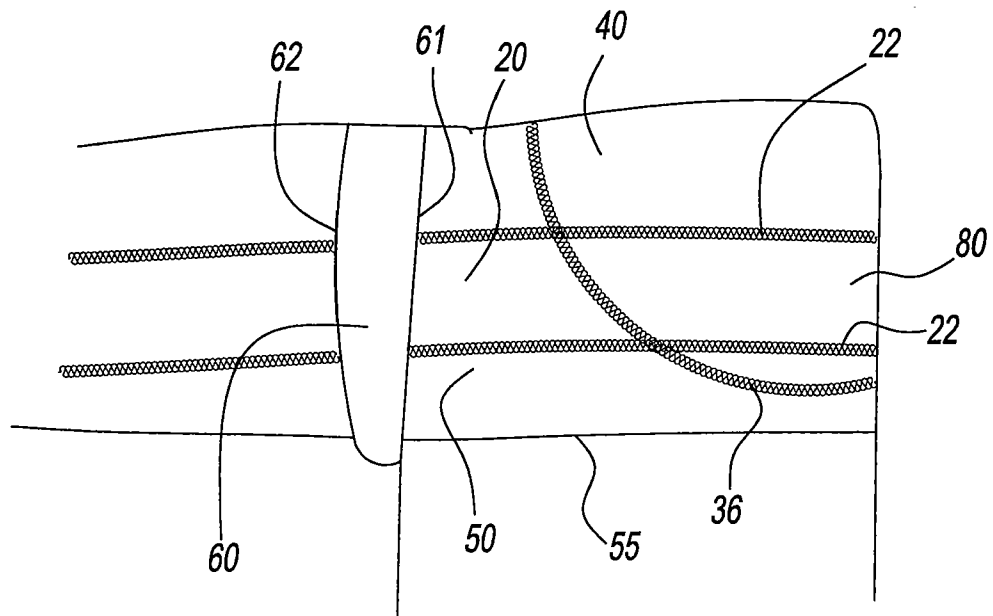


Fig. 5

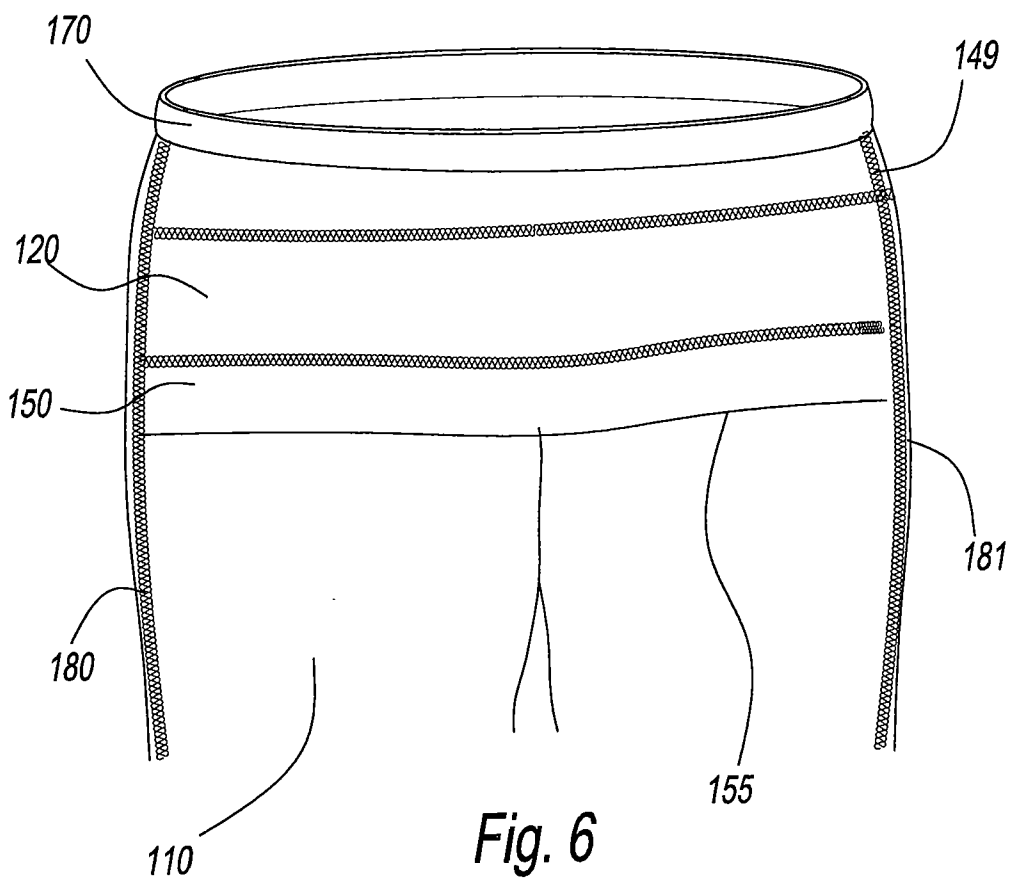


Fig. 6

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2010/058735

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A41D 1/06 (2011.01)

USPC - 2/237

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - A41D 1/06 (2011.01)

USPC - 2/227, 237

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 3,638,242 A (HERTER) 01 February 1972 (01.02.1972) entire document	14, 18, 19, 25
Y	US 2006/0230488 A1 (RUDOLPH) 19 October 2006 (19.10.2006) entire document	1-25
Y	US 2,757,382 A (GEISSMANN) 07 August 1956 (07.08.1956) entire document	1-17, 20-24
Y	US 3,166,763 A (WELLS) 26 January 1965 (26.01.1965) entire document	1-17, 20-24
Y	US 2009/0106874 A1 (SHLUSH) 30 April 2009 (30.04.2009) entire document	3



Further documents are listed in the continuation of Box C.



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document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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Date of the actual completion of the international search

30 January 2011

Date of mailing of the international search report

11 FEB 2011

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Authorized officer:

Blaine R. Copenheaver

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