

[54] **PANTY GIRDLE WITH STRETCHABLE LEG SUPPORT**

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[57] **ABSTRACT**

[21] Appl. No.: **434,658**

An article of intimate wearing apparel for females of the panty girdle type, wherein a vertically stretchable elastic back panel supports the back leg portions of the article and provides extensibility to the back leg portions relatively independently of the main body portion of the article upon flexing of the article by the wearer. The main body portion of the article is adapted to extend over the buttocks of the wearer and preferably normally covers the elastic back panel when the article is in use in an unflexed condition.

[52] U.S. Cl. **128/547**

[51] Int. Cl. **A41c 1/00**

[58] Field of Search 128/539, 528, 546, 524, 128/536, 544, 518, 541, 547, 555

[56] **References Cited**

UNITED STATES PATENTS

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9 Claims, 5 Drawing Figures

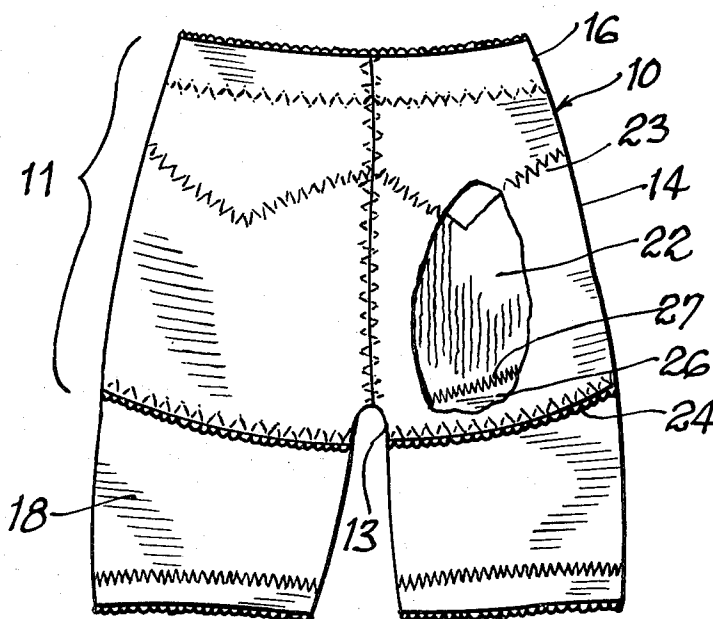


FIG. 1

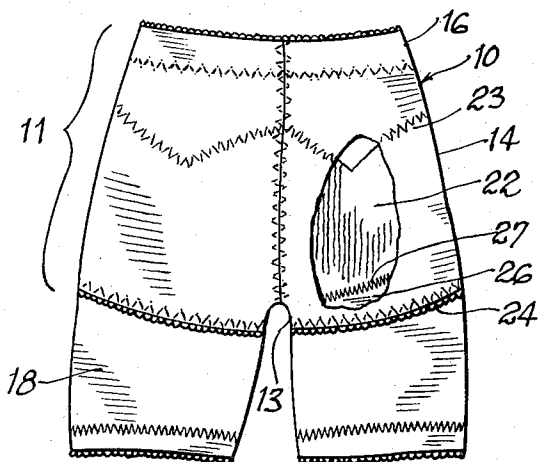


FIG. 2

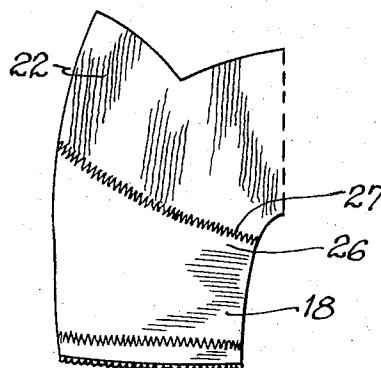


FIG. 3

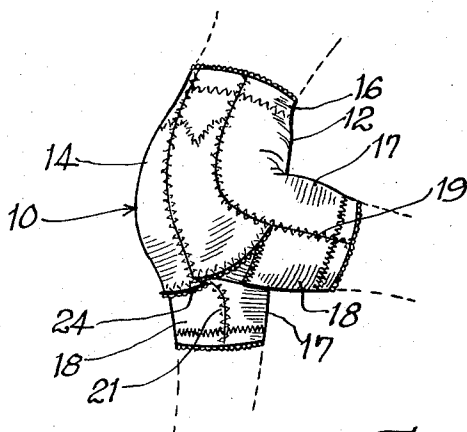


FIG. 4

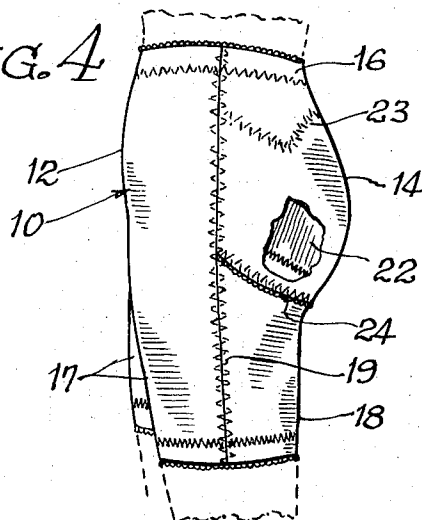
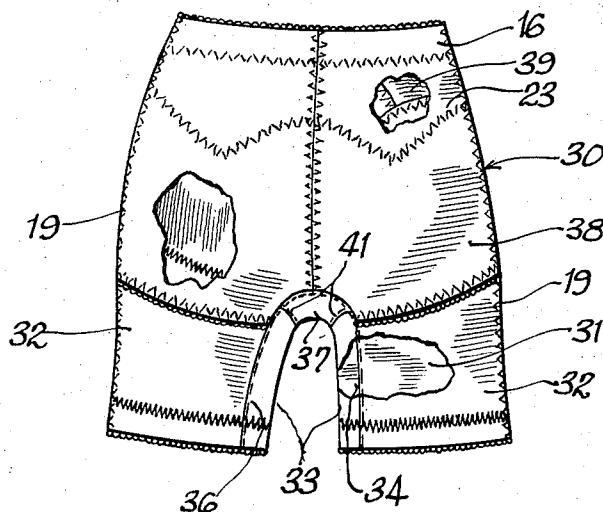


FIG. 5



PANTY GIRDLE WITH STRETCHABLE LEG SUPPORT

BACKGROUND OF THE INVENTION

The present invention relates to an article of intimate female wearing apparel, known in the trade as a panty girdle, and more specifically to a panty girdle having stretchable leg support means to permit at least the back portion of the leg enclosures to extend relatively independently of the main body portion upon flexing of the girdle.

A common defect in most ordinary girdles is their tendency to "ride up" on the body upon sitting, bending or engaging in any form of physical activity which involves even moderately strenuous muscular movements of the thighs and back. While the tendency of the girdle to slide or ride up on the torso is limited to some extent in a garment of the panty girdle type, particularly in the area of the main body portion of the garment, the tendency is still present in the leg portions of the garment after such physical activity. The sliding or bunching of the leg portions of the girdle, often initiated in the back leg portions where extension of the thighs in relation to the buttocks of the wearer occurs to the greatest extent, frequently causes discomfort and embarrassment to the wearer, who is required for comfort to grasp the lower edges of the leg portions of the girdle and pull them down. The tendency of the leg portions to slip and slide upwardly on the thighs of the wearer occurs even though the girdle may be of two-way stretch fabric.

BRIEF SUMMARY OF THE INVENTION

An object of the invention, therefore, is the provision of a girdle construction in which the back leg portions are extensible relatively independently of the main body portion of the garment upon the bending of the body or muscular flexing of the legs without the leg portions slipping and sliding as the bending or flexing occurs.

Another object of this invention is to provide in a panty girdle a vertically stretchable elastic panel for supporting the back leg portions of the girdle so as to be generally extensible in a vertical direction with respect to the other portions of the girdle.

Still another object is to provide a panty girdle in which the back leg portions of the girdle are generally extensible in a vertical direction with respect to the other portions of the girdle while the body constricting effects of the girdle are maintained about the buttocks of the wearer irrespective of the position of the leg portions of the girdle.

Further objects and advantages of this invention will become apparent from the following description when the same is considered in connection with the accompanying drawings.

In accordance with the present invention there is provided a panty girdle having a main body portion, a pair of back leg portions of two-way stretch fabric and a vertically stretchable elastic back panel securing the back leg portions to the main body portion. The main body portion comprises a front portion, a crotch portion, and a back portion adapted to extend over the buttocks of the wearer. The front portion of the main body portion has a pair of front leg portions, similarly of two-way stretch fabric, extending downwardly there-

from. The pair of back leg portions are each affixed to one of the pair of front leg portions along the vertical side margins thereof and together comprise leg encircling enclosures. The vertically stretchable elastic back panel is secured to the back portion substantially upwardly of its lowermost marginal edge, to the front portion along its vertical side margins, and to the uppermost marginal edge portions of the pair of back leg portions to provide the latter with general extensibility in a vertical direction with respect to the other portions of the girdle. With such construction, the back leg portions of the girdle are extensible, particularly during bending, sitting or other muscular activity of the wearer, thus substantially eliminating the slipping and sliding of the leg portions upwardly on the thighs of the wearer during such activities.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan view showing the rear of a panty girdle embodying the present invention, with parts broken away to show details of construction.

FIG. 2 is a plan view showing one-half of the elastic back panel construction of the present invention secured to a back leg portion of a panty girdle.

FIG. 3 is a side perspective view showing the panty girdle of FIG. 1 on a figure in action.

FIG. 4 is a side perspective view of the girdle of FIG. 1 as seen on a female figure in an attitude of repose, with a part broken away to show details of construction.

FIG. 5 is a view generally similar to FIG. 1 illustrating another embodiment of the present invention.

BRIEF DESCRIPTION OF PREFERRED EMBODIMENTS

Referring to FIGS. 1-4 of the drawings, the numeral 10 indicates, generally, a panty girdle embodying the present invention. The girdle as shown, is formed of a pair of allochiral sections forming main body portion 11 generally of two-way stretch fabric, such as that known in the trade as "spandex power net" and having a front portion 12, a crotch portion 13 and a back portion 14. Back portion 14 is adapted to extend over the buttocks of the wearer as more particularly shown in FIGS. 3 and 4. As is common to other panty girdles, body portion 11 can include an elastic waistband 16 and decorative or body restricting front panels (not shown).

Extending downwardly from front portion 12 and preferably integral therewith such as by being a continuation of the same panel, is a pair of front leg portions 17, preferably of a two-way stretch fabric, such as "spandex power net." Girdle 10 further includes a pair of back leg portions 18 similarly of a two-way stretch fabric such as "spandex power net." Back leg portions 18 are each secured to one of the pair of front leg portions 17 along the vertical side marginal edges thereof, for example by lines of stitching 19 and 21, line 19 being extended upwardly to secure front portion 12 to back portion 14. Together, each of front portion 17 and a back portion 18 comprise leg encircling enclosures adapted to restrictively enclose and shape the thighs of the wearer.

The girdle 10 of the present invention includes a vertically stretchable elastic back panel 22, one-half of which is illustrated in FIG. 2. Panel 22 is secured to back portion 14 by a line of stitching 23 which can be

of any of several shapes or directions, but preferably is of the upwardly angled or scalloped shape shown in FIG. 1. Line of stitching 23 which secures panel 22 to back portion 14 is positioned substantially upwardly of the lowermost marginal edge 24 of back portion 14 for a purpose to be hereinafter described. Preferably, back panel 22 is secured to the upper half of the interior of back portion 14 so as to provide panel 22 with a substantial vertical length, preferably greater than one-half of the vertical length of portion 14. As the stretchability of a fabric is most frequently directly dependent, in part, upon its length, positioning line of stitching 23 within the upper half of portion 14 and preferably substantially nearer the uppermost edge of the portion, i.e., near waistband 16, than edge 24, will provide the maximum vertical stretchability for the material selected. Back panel 22 is also secured to front portion 12 along the vertical side marginal edges of the front portion, preferably by being stitched along line of stitching 19 together with back portion 14. Back panel 22 is further secured to the uppermost marginal edge portions 26 of back leg portions 18, for example by a line of stitching 27, as best shown in FIG. 2. Securing back panel 22 to main body portion 11 and back leg portions 18 in this manner provides the back leg portions 18 with general extensibility in a vertical direction with respect to the other portions of the girdle as will be hereinafter described.

Referring to first FIG. 4 and then FIG. 3, the panty girdle 10 of the present invention is shown on a female figure first in a position of repose and then in a position of at least moderate muscular activity, i.e., having one leg raised and the torso forwardly bent with respect to the other leg. In a position of repose, that is, with girdle 10 in a normally unflexed position, back panel 22 is covered by back portion 14 and lies interiorly thereof. In this position, leg portions 17 and 18 are stressed to the same extent in shaping the thighs of the wearer. In the stretched or flexed position, as shown in FIG. 3, at least one leg portion 18 of girdle 10 is being pulled into an extended position with respect to back panel 14 as the distance of the back of the thigh of the wearer from her lower back is extended in comparison to the same distance in a position of repose. In this position, normally without the construction of the present invention, the back leg portions of an ordinary panty girdle would resist the pulling motion and ride or slide upwardly along the thigh of the wearer. Upon next reaching a position of repose with the ordinary girdle, the leg portion and particularly the back leg portion, would be gathered or bunched at the top of the thighs near the buttocks. However, in the construction of the present invention, panel 22 permits back leg portion 18 to maintain its position with respect to front portion 17 on the thigh of the wearer and continues to shape her thigh without sliding or riding on the thigh, as shown in FIG. 3. In this position, elastic back panel 22 has vertically extended or stretched to permit back portion 18 to maintain its position on the thigh of the wearer, and may even become exposed beneath the lowermost marginal edge 24 of back portion 14. Exposure of a portion of panel 22 in this manner is not disadvantageous as panel 22 and the uppermost marginal portion of back leg portion 18 will return to its position covered by back portion 14 upon return of the wearer to the position of repose.

Another embodiment of the present invention is illustrated in FIG. 5 where a panty girdle generally indicated by numeral 30 is shown. As many of the portions and elements of girdle 30 are identical to those found in girdle 10, identical reference numerals have been utilized without further description. Panty girdle 30 differs from girdle 10, by having leg enclosures each formed by a front leg portion 31, a back leg portion 32 stitched thereto along their outer side edges by line of stitching 19, and one of a pair of inner leg portions 33 formed of a two-way stretch fabric, such as "spandex power net" which extends between the inner marginal edges of leg portions 31 and 32 and is secured thereto along its vertical marginal portions by lines of stitching 34 and 36, respectively. Inner leg portions 33 are also secured to a crotch piece 37 which is stitched to the lowermost center marginal edges of back portion 38 and front portion 39 to form a crotch portion. Inner leg portions 33 are secured to crotch piece 37 by lines of stitching 41. Crotch piece 37 can be formed of any suitable material, but is preferably formed of a knitted fabric such as a nylon tricot fabric. The embodiment shown in FIG. 5 is generally preferred both for its ease of construction and comfort to the wearer of the garment.

Preferably, in the construction of the present invention, elastic back panel 22 is secured to each of the pair of back leg portions 18 or 32 along a line of stitching 27 extending transversely from the crotch portion 13 to a side portion of the girdle formed by the juncture of front portion 12 or 39 and back portion 14 or 38. Additionally, it is preferred that line of stitching 27 along which each of the pair of back leg portions 18 or 32 is secured to panel 22 extends from crotch portion 13 to the side portion of the girdle as described above, and the lowermost edge 24 of back portion 14 or 38 extends below line of stitching 27 in overlapping relation thereto upon elastic back panel 22 being in its normal relaxed condition. Furthermore it is preferred to secure back portion 14 to the rearward vertical marginal edges of inner leg portions 33 for a distance of substantially less than half of length of the inner leg portions extending downwardly from the juncture of inner leg portions 33 with crotch portion 13.

The panty girdle construction of the present invention is particularly useful for its intended purpose when the main body portion and leg portions of the girdle are formed of a two-way stretch fabric having substantially greater horizontal stretchability than vertical stretchability and the elastic back panel, which supports the back leg portions of the garment, is formed of a material having substantially greater vertical stretchability than horizontal stretchability. The usefulness of the girdle construction of the present invention is even more improved by forming the main body portions and leg portions of the girdle with a fabric having elastic yarns extending in a horizontal direction, while the elastic back panel which supports the back leg portions have elastic yarns positioned predominately or solely in the vertical direction. In this manner, the respective portions and panel can exhibit stretchability or elongation to as much as 200 times its normal size in the direction in which the elastic yarns extend and a substantially smaller elongation, for example up to 100 times its normal dimension, in the transverse direction along which few, if any, elastic yarns extend. Naturally the degree of elongation described represents an optimum

or ideal condition, the achievement of which is limited by the necessary cross fibers and the warp and fill required in knitting stretchable fabrics.

Various changes coming within the spirit of my invention may suggest themselves to those skilled in the art; hence, I do not wish to be limited to the specific embodiments shown and described or uses mentioned, but intend the same to be merely exemplary, the scope of my invention being limited only by the appended claims.

I claim:

1. A panty girdle comprising

a. a main body portion formed predominantly of a two-way stretch fabric having a front portion, a crotch portion, and a back portion adapted to extend over the buttocks of the wearer, said front portion having a pair of front leg portions of a two way stretch fabric extending downwardly therefrom,

b. a pair of back leg portions of a two-way stretch each affixed to one of said pair of front leg portions along the vertical side marginal edges thereof and comprising leg encircling enclosures therewith, and

c. a vertically stretchable elastic back panel secured to said back portion substantially upwardly of its lowermost marginal edge, to said front portion along its vertical side marginal edges, and to the uppermost marginal edges of said pair of back leg portions, whereby said back leg portions are generally extensible in a vertical direction with respect to the other portions of the girdle.

2. A girdle as defined in claim 1, wherein said elastic back panel is secured to the interior of said back portion of the main body portion at the upper half thereof.

3. A girdle as defined in claim 2, wherein the lowermost edge of said back portion of the main body portion is free of attachment to the girdle, and said elastic back panel is secured to said back leg portions upwardly of said lowermost edge of the back portion of said main body portion, whereby in its normal relaxed condition said elastic back panel is normally covered by the back portion of said main body portion.

4. A girdle as defined in claim 1, wherein said elastic

back panel is secured to the back portion of said main body portion substantially nearer the uppermost edge thereof than the lowermost edge thereof, and is secured to each of the pair of back leg portions along a line extending transversely the crotch portion of said main body portion to a side portion of the girdle formed by the juncture of the front and back portions of the main body portion.

5. A girdle as defined in claim 1, wherein each of the leg enclosures formed by said front and back leg portions includes an inner leg portion of two-way stretch fabric which extends between said front and back leg portions, secured thereto along the vertical marginal edges of said inner leg portion, and is secured to the crotch portion of said main body portion along the upper marginal edges of said inner leg portion.

6. A girdle as defined in claim 5, wherein said pair of back leg portions are each secured to said elastic back panel along a line extending transversely from said crotch portion of said main body portion to a side portion of the girdle formed by the juncture of the front and back portions of the main body portion.

7. A girdle as defined in claim 6, wherein the back portion of said main body portion is secured to the rearward vertical marginal edges of said inner leg portions for a distance extending downwardly from the juncture of said inner leg portions with said crotch portion.

8. A girdle as defined in claim 1 wherein each of said back leg portions is secured to said elastic back panel along a line of stitching extending from said crotch portion to a side portion of the girdle formed by the juncture of the front and back portions of the main body portion, and the lowermost edge of the back portion extends below said line of stitching in overlapping relation thereto upon said elastic back panel being in its normal relaxed condition.

9. A girdle as defined in claim 1 wherein said main body portion and said leg portions are formed of a two-way stretch fabric having substantially greater horizontal stretchability than vertical stretchability and said elastic back panel is formed of a material having substantially greater vertical stretchability than horizontal stretchability.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,835,866

Dated September 17, 1974

Inventor(s) Juanita L. Brooks

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below: .

In the Claims: Column 6, add Claim 10:

10. A panty girdle comprising

- a) a main body portion having a front portion, a crotch portion, and a back portion adapted to extend over the buttocks of the wearer, said front portion having a pair of front leg portions extending downwardly therefrom,
- b) a pair of back leg portions each affixed to one of said pair of front leg portions along the vertical side marginal edges thereof and comprising leg encircling enclosures therewith, and
- c) a vertically stretchable elastic back panel secured to said back portion substantially upwardly of its lowermost marginal edge, and to the upper marginal edges of said pair of back leg portions, whereby said back leg portions are generally extensible in a vertical direction with respect to the other portions of the girdle.

Signed and sealed this 26th day of November 1974.

(SEAL)

Attest:

MCCOY M. GIBSON JR.
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents