

April 21, 1970

S. Z. SALISKY

3,507,286

DIFFERENTIAL STRETCH GIRDLE

Filed June 15, 1967

3 Sheets-Sheet 1

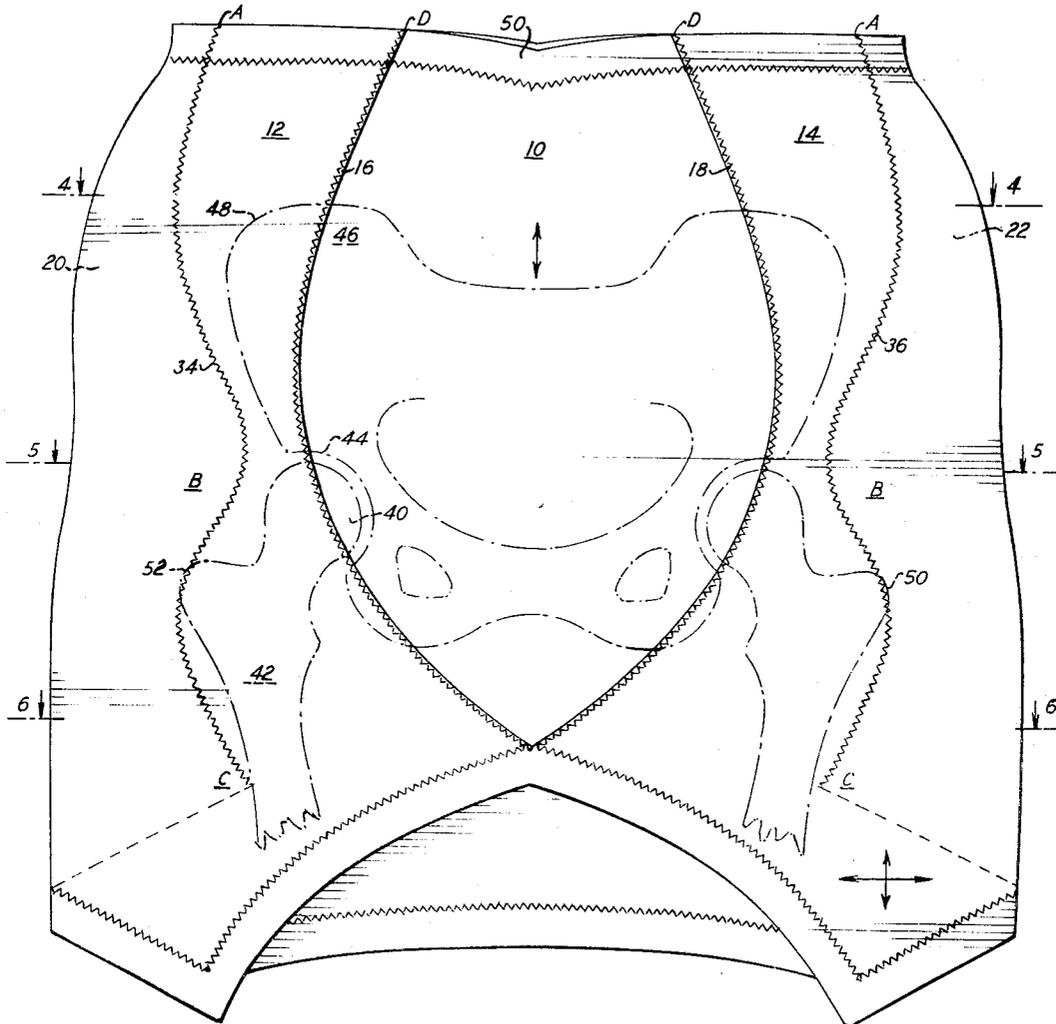


Fig. 1

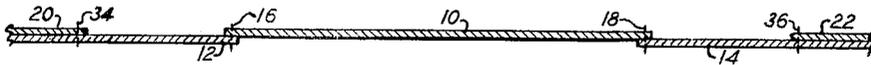


Fig. 4

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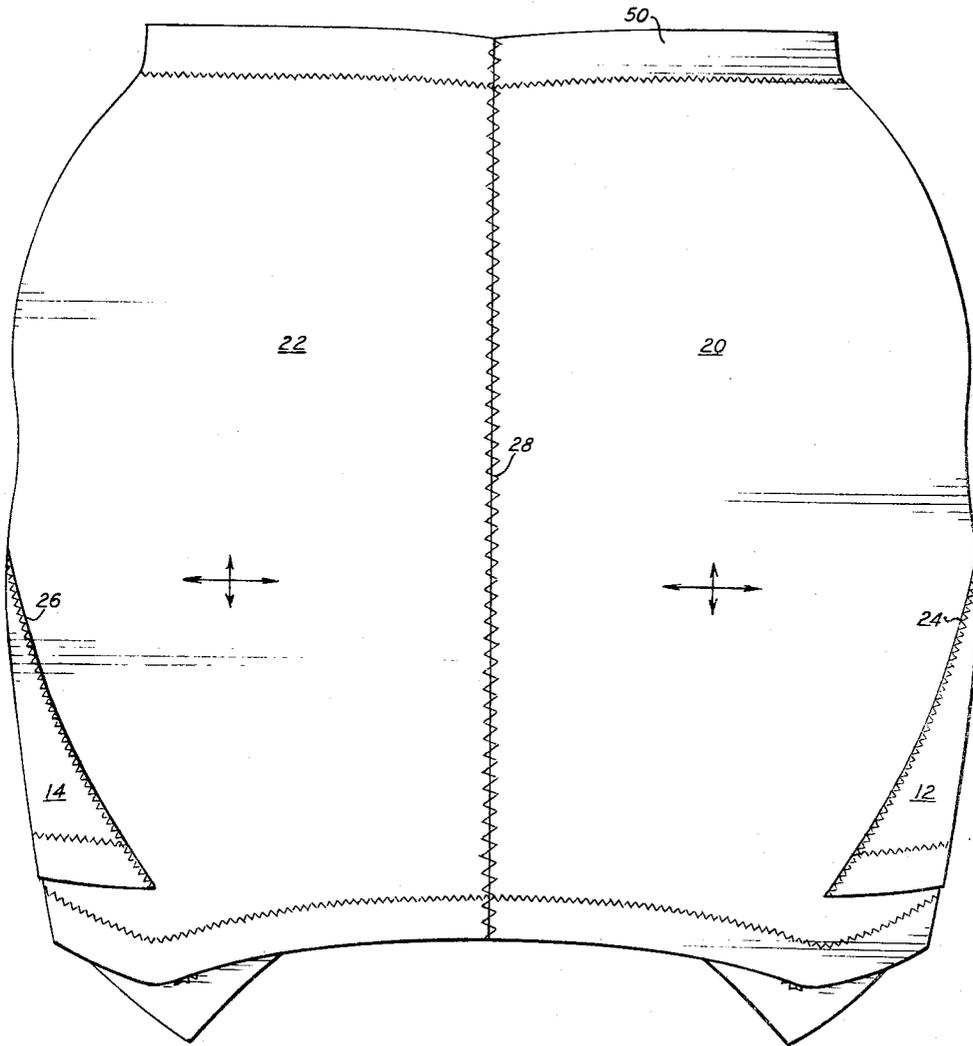


Fig. 3

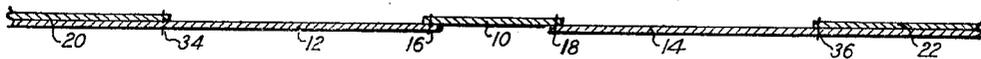


Fig. 6

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DIFFERENTIAL STRETCH GIRDLE

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7 Claims

ABSTRACT OF THE DISCLOSURE

A girdle having overlapping side portions which include free bottom edges. The overlapping side portions are joined by affixation of the vertical edges of each side portion to a portion of the body which it overlaps. The line of affixation of the forward facing edge defines a compound curve which bows substantially markedly in a somewhat laterally forward direction along an area vertically intermediate the ends of the compound curve.

This invention is an improved elastic girdle that encircles the hips to shape and restrain the flesh of the body. My improvement is in providing desired differential stretch characteristics by particular configuration of overlapping elastic panel portions. This configuration simultaneously gives advantageously great accommodation to thigh variations and freedom for leg motions.

It is known in the girdle art to use elastic panels that overlap at the side region, and to reversely slope their bottom edges upwardly and leave them free of each other. That gives at the side relatively solid hold and at the bottom freedom for the thigh. The present invention makes use of those known features but goes on to vary the overlap contour in an advantageous manner.

Examples of the heretofore known features are seen in U.S. Patents 3,012,556; 3,012,559; and 3,221,750 (though I prefer to omit the flared upper end feature of the first two of these).

My invention encompasses the way the horizontal stretch characteristics vary down the length of the girdle and the way the front edge of the side section is contoured.

I have observed that when the knee is raised, the muscular system including the gluteus medius muscle tightens up and tends to bunch outwardly, in the skeletal concavity between the prominence of the ilium and the greater trochanter of the femur. At the same time, the raising of the leg increases the effective circumference around the bottom of the girdle, requiring sufficient freedom of give there to prevent the edge of the garment from digging into the flesh.

At the regions of the two bone prominences considerable freedom for stretch can and should be accorded, because relatively shallow coverings of flesh over these bones would be easily discomforted and chafed. Another requirement needing to be met simultaneously is that, particularly when garters are attached and exert downward pull, the bottom edge of the girdle shall not wrinkle and pucker up. Since the leg cannot bend very far back, but can bend very far forward and up, there is a difference in requirements here.

I meet all of these requirements simultaneously, together with providing the greatest amount of stretch where the radius of curvature around the body is largest and therefore the chafing effect will be smallest, by the following constructional features.

First I provide the usual and desirable generally oval abdominal panel of material which does not stretch horizontally. This accords with where on most wearers the tautest pull is needed, according not only in location but shape as well. Then I provide a single thickness vertical

portion of elastic material in a somewhat hour-glass shape, namely with greater width of single thickness stretchable material in the upper portion and again in the lower portion with the narrowing in of the material between them at the region of the skeletal concavity between the prominence of the ilium and the greater trochanter. Progressing rearwardly on the girdle I have the single thickness of material overlapped with another single thickness of stretchable material, giving a double thickness of material at the side of the hip, which double thickness is twice as resistant to stretch. The rear edge of the double thickness material describes an essentially straight generally vertical line. The front contour of this double thickness extends closer to the non-stretch abdominal panel in the concavity region of the skeletal silhouette as seen from the front. The two single thicknesses where they overlap along the side flare to a greater width toward the bottom of the garment but in each case stop short of the bottom and turn sharply back in, crossing each other downwardly and freely of each other to constitute bottom edge portions of the garment. The layer that extends back from the front has a sloping bottom edge which has no substantial concavity downwardly, being preferably a straight line. The other single thickness that extends from the back forward along the side and overlaps the first has its bottom edge concave downwardly.

The above construction provides for the somewhat greater stretch needed for comfort at the bone prominences, the somewhat greater resistance to stretch needed in the muscular region at the skeletal concavity, and provides for the necessary freedom but without wrinkling at the thigh. This avoids excess material that would pucker up in the front, where the immediately localized dimension is under less strain and may even be reduced, while providing the extra fullness for the portion a little more to the rear to cup under the buttock and provide the extra stretch that is needed at this localized dimension which is quite considerably increased. When the knee is raised the greater downward pull is on the garter that is to the rear of the side, which has a straight line of double thickness material extending up from it to the waistline. This provides a solid rear anchor for the relatively high tension pull over the muscular system at the concavity of the skeleton just where it is needed. On the other hand, when the leg is straightened and the muscles are relaxed, a greater proportion of the downward pull comes on the front garters and this is transmitted up to an undulatory line which gives mechanical relief to lessen the tension when it is not needed up at the aforesaid muscular region.

The preferred construction of this invention is illustrated in the accompanying drawings in which:

FIGURE 1 is a front elevation of a girdle made in accordance with the invention with the pelvic and part of the femur bones shown in phantom;

FIGURE 2 is a side elevation of the girdle of FIG. 1; FIGURE 3 is a rear elevation of the girdle of FIG. 1; FIGURE 4 is a view taken on line 4—4 of FIG. 1; FIGURE 5 is a view taken on line 5—5 of FIG. 1; and FIGURE 6 is a view taken on line 6—6 of FIG. 1.

The invention is applicable to open bottom girdles and panty girdles and the term girdle as used herein is intended in its generic sense.

FIG. 1 shows a girdle on the body of a wearer in relation to a part of the wearer's skeleton. Central front part 10, which is of generally oval shape and overlies the abdomen, is made of material that is stretchable vertically but not circumferentially. In some applications this part can be made of non-stretch material. Right and left lateral front panels 12 and 14 respectively are made of two-way stretch material, preferably that which is known as power-

net. These panels extend from top to bottom of the girdle and are sewn to front part 10 by lines of stitching 16 and 18. They extend rearwardly where they overlap and are connected to right and left rear sections 20 and 22 respectively by means of stitching 24 and 26. FIGS. 2 and 4 show that right lateral front panel 12 has its front edge connected to the central part 10 by stitching 16 and its rear edge connected to rear section 20 by stitching 24. Rear sections 20 and 22 are similarly made of two-way stretch material and are joined together by a line of stitching 28. Sections 20 and 22 can have a seat panel or be made as a single piece of material if desired.

Right rear section 20 partly underlies right lateral front panel 12 and has a free bottom edge 30 which is concave downwardly. Panel 12 which extends back from the front has a sloping bottom edge 32 which has no substantial concavity downwardly and is preferably a straight line. Bottom edges 30 and 32 cross each other at upwardly inclined angles. This arrangement allows the girdle to adjust to individual thigh size for increased comfort without loss of control. Although not shown, left rear section 22 and left lateral front panel 14 are correspondingly but reversely arranged and also have freely crossing bottom edges.

As may be seen from FIGS. 2, 3, and 4, right rear section 20 begins at the rear vertical midline 28 of the girdle and extends forwardly to the front area of the girdle where its front edge underlies and is sewn to the under surface of right lateral front panel 12 along curved seam line 34. The front edge of section 20 defines a compound curve 34. Left rear section 22 is similarly but reversely arranged and has its front edge sewn to the under surface of left lateral front panel 14 along curved seam line 36. The front edge of section 22 defines a compound curve 36. The overlapping areas of panel 12 and section 20 between seams 24 and 34, and of panel 14 and section 22 between seams 26 and 36, constitute in general the side panels of the girdle. They have greater resistance to stretch than immediately adjoining front single panel 12 and rear single section 20 for the right side and immediately adjoining front single panel 14 and rear single section 22 for the left side.

The upper part of irregularly curved seam line 34 in the vicinity of waistband 50, is spaced from the upper part of the right edge of front central part 10. Curve 34 proceeds downwardly and projects markedly forward toward the front central part 10 at a height which is below the prominence 48 of the ilium bone 46 and above the greater trochanter area 52 of the femur and which is at about the top of the joint where the femur is socketed into the pelvic bones. FIG. 1 shows this forward projection to be in the region of concave silhouette that occurs where the upper part of the femur bone angles in and up and then the ilium bone immediately above it angles out and up. This forward projection is the closest that seam 34 comes to the front part 10. In other words, if a lineal axis were to be drawn from point A to C, area B would define that portion of the compound curve 34 most forwardly spaced apart from such axis. Curve 34 then continues downwardly and rearwardly and then swings forwardly again where it ends at point C, which is spaced above the bottom edge of the girdle. Point C coincides with the most forward point of bottom edge 30. Curve seam line 36 is reversely corresponding.

The girdle has different resistance to horizontal stretch at different horizontal lines in the front half of its periphery when the girdle is on the wearer. The girdle has greatest resistance to horizontal stretch in the area which includes the forward projection B. As is evident from FIG. 5, the horizontal line at this height indicated by 5-5 of FIG. 1 comprises a long segment of horizontally non-stretchable material in central part 10, short segments of

single thickness all-way stretch fabric in lateral front panels 12 and 14, and intermediate length segments of double thickness all-way stretch fabric. The resistance to horizontal stretch is less along the horizontal lines indicated by lines 4-4 and 6-6 of FIG. 1.

It is to be understood that the embodiment of the invention shown and described is for the purpose of illustration only and that changes can be made therein without departing from the spirit and scope of the invention.

I claim:

1. A girdle for encircling the hips comprising a front section including laterally extending side portions, and a rear section including laterally extending side portions, corresponding side portions of said rear section and said front section crossing, with each of said side portions of said front section overlapping its respective rear section side portion along the side area of said girdle, the edge of each of the side portions of said front section affixed to its corresponding rear section side portion along a substantially straight line, the edge of each of the rear section side portions affixed to its corresponding front section side portion along a line defining a vertically extending compound curve, wherein said front section side portions and said rear section side portions include upwardly inclined free bottom edges; said compound curve is spaced apart from said substantially straight line and said compound curve bows substantially markedly in a somewhat laterally forward direction along an area vertically intermediate the ends of said compound curve.

2. The girdle as claimed in claim 1 wherein said bowed area defines the greatest forward deviation of said compound curve beyond the lineal axis between the ends of said curve.

3. The girdle as claimed in claim 1 wherein the portion of said compound curve below said bowed area extends downwardly in first a rearwardly and then a forwardly direction.

4. The girdle as claimed in claim 1 wherein the lower end of said compound curve is spaced from the bottom of said girdle.

5. The girdle as claimed in claim 1 wherein said front section and said rear section are laterally narrower along their respective upper edges than along their respective lower edges.

6. The girdle as claimed in claim 1 wherein the portions of said girdle between the lines of affixation of said front section and said rear section have greater resistance to circumferential stretch than those areas of said girdle in immediate juxtaposition to said aforesaid portions.

7. The girdle as claimed in claim 1 wherein the lowermost edge of each of said side portions of said front section are substantially straight and the lowermost edge of each of said side portions of said rear section are substantially concave.

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