April 26, 1949. M. J. RAYDEN 2,468,346

PANTIE GIRDLE CROTCH PIECE

Filed Jan. 11, 1949 2 Sheets-Sheet 1

Fig. 1.

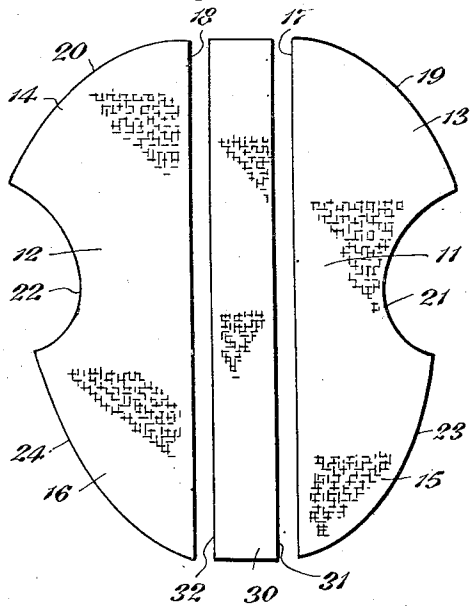


Fig. 4.

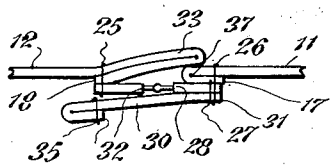


Fig. 3.

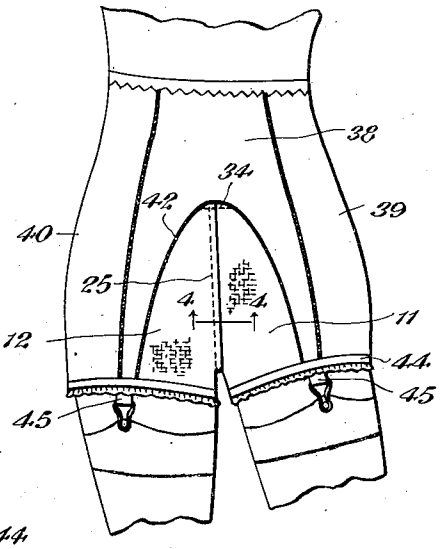
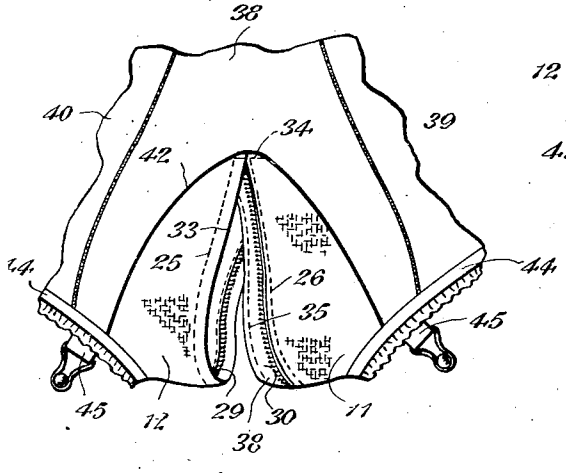


Fig. 2.



INVENTOR
MURRAY J. RAYDEN
BY Stanley Weber
ATTORNEY

April 26, 1949. M. J. RAYDEN 2,468,346

PANTIE GIRDLE CROTCH PIECE

Filed Jan. 11, 1949 2 Sheets-Sheet 2

Fig. 5.

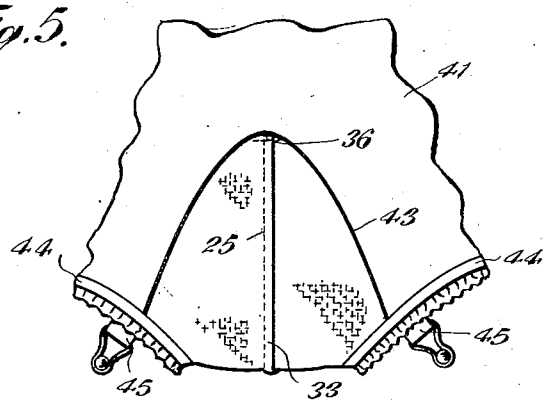


Fig. 6.

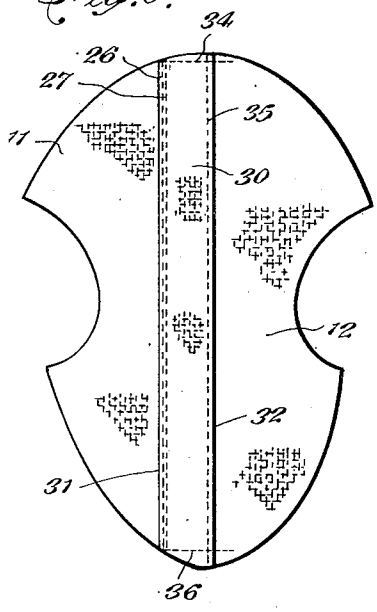


Fig. 7.

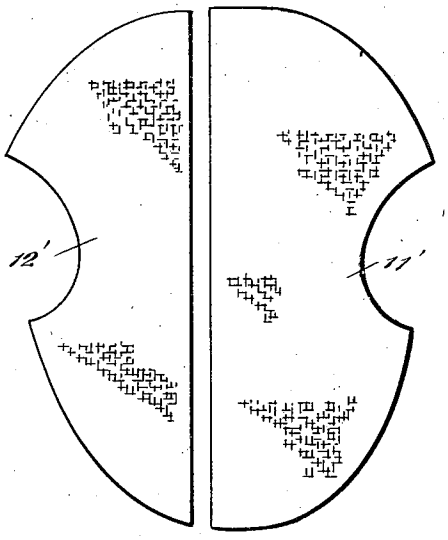
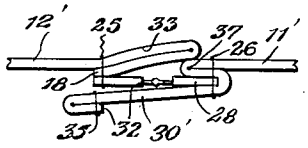


Fig. 8.



INVENTOR
MURRAY J. RAYDEN
BY Stanley Weller
ATTORNEY

Patented Apr. 26, 1949

2,468,346

UNITED STATES PATENT OFFICE

2,468,346

PANTIE GIRDLE CROTCH PIECE

Murray J. Rayden, New York, N. Y.

Application January 11, 1949, Serial No. 70,209

5 Claims. (Cl. 2—43)

1

The present invention relates to improvements in crotch pieces employed in connection with panty girdles and more particularly to an improved non-elastic crotch piece having a slightly off-center opening therein which is normally maintained in a closed position by a slide fastener.

Crotch pieces having slit openings are not novel. However, those disclosed by prior patents are uncomfortable to the wearer by reason of the centrally disposed slide fasteners they employ, because they are constructed of elastic sections which stretch unevenly, causing slide fasteners to stick and buckle and because they are lacking in means to adequately protect a wearer from contact with the slide fastener.

An object of my invention is to provide a panty-girdle crotch piece which while having a slit opening to enable the wearer to perform natural functions without removing the entire garment in which the crotch piece is incorporated, will yet be comfortable to wear and easy to open and close.

A further object of my invention is to provide a crotch piece having a closeable slit opening to enable the wearer to perform natural functions which is adaptable to incorporation in such garments as panty-girdles, playsuits, and bathing suits.

Another object of my invention is the provision of a panty-girdle crotch piece having a slit opening which may be conveniently opened and closed by slide fastener means and which is nevertheless comfortable to wear.

Other objects and a fuller understanding of my invention may be had by referring to the following description and claims, taken in conjunction with the accompanying drawing which illustrates the preferred embodiment thereof, it being understood that the foregoing statement of the objects of my invention is intended to generally explain the same without limiting it in any manner.

Fig. 1 is a plan view of the outer surfaces of the unassembled members, exclusive of the slide fastener, which are combined to form a crotch piece embodying my invention.

Fig. 2 is a fragmentary front view in perspective of a panty-girdle in which is incorporated the said crotch piece with the slit thereof in an open position.

Fig. 3 is a front elevation of a panty-girdle in which is incorporated the said crotch piece with the slit closed showing the adaptation thereof with respect to a fragmentary simulation of the body of a wearer.

Fig. 4 is a section on line 4—4 of Fig. 3.

Fig. 5 is a fragmentary rear elevation of a panty-girdle in which is incorporated the said crotch piece with the slit closed.

2

Fig. 6 is a plan view of the inner surface of the assembled crotch piece.

Fig. 7 is a plan view of the outer surfaces of the unassembled members of another embodiment of my invention, exclusive of the slide fastener.

Fig. 8 is a view of said embodiment, similar to the view of the first embodiment in Fig. 4.

Referring to the drawings and particularly the embodiment shown in Figs. 1 through 6, the crotch piece therein illustrated comprises a conventional slide fastener having a slide (not shown) and left and right sides respectively 28 and 29 each side consisting of a flexible tape carrying a row of teeth, said left side being secured by a line of stitching 27 along the upper surface of the inner edge 31 of inner flap 30 which flap and said left side 28 in turn is secured by a line of stitching 26 to the inwardly folded inner edge 17 of the right panel 11 and a left panel 12 in which is formed an outer flap 33 by inwardly folding its inner edge 18, the said outer flap being secured in place and at the same time having secured thereto the right side 29 of the slide fastener by a line of stitching 25. Assembly of the crotch piece is completed by fastening together the panels 11 and 12 and the inner and outer flaps 30 and 33 at the front and rear portions thereof by a line of reinforcing stitching 34 at the front ends and a similar line of reinforcing stitching 36 at the rear ends. Of course, closing the slide fastener brings together the panels along their inner sides.

Panels 11 and 12 and inner flap 30 are constructed in accordance with the patterns therefor in Fig. 1 which shows that right panel 11 and left panel 12 each comprise front portions respectively 13 and 14, and rear portions respectively 15 and 16, and that each panel has substantially linear inner edges respectively 17 and 18, and outer edges, each such outer edge being divided into three parts, an outwardly curved front outer edge respectively 19 and 20, an inwardly curved middle outer edge respectively 21 and 22, and an outwardly curved rear outer edge respectively 23 and 24. The inner flap 30 consists of a substantially rectangular piece having an inner edge 31 and an outer edge 32.

The panels are substantially mirror images of each other except that left panel 12 is broader from its outer to its inner edges than is right panel 11.

The panels and inner flap are preferably made of a durable non-elastic material. It has been found that if the crotch piece is made of an elastic material, the application of pressure to the slide of the slide fastener in order to open or close the same will result in a sticking or buckling of the fastener.

In assembling the left side of the crotch piece, the first step is to finish inner flap 30 by folding the outer edge 32 thereof back underneath the said flap along its entire length and securing the fold in place by the line of stitching 35. The slide fastener's left side 28 is then secured along the upper surface of the inner edge 32 of inner flap 30, the teeth of said side extending toward the folded outer edge 32, thereof. The inner edge 17 of right panel 11 is then folded inwardly along its entire length to form fold 37 and both the inner edge 31 of the inner flap 30 and the slide fastener's left side 28 are secured to the fold 37 by a line of stitching 26, the said left side 28 of the slide fastener being secured intermediate the said fold and flap and positioned so that the teeth thereon extend out from the fold.

The right side of the crotch piece is assembled by folding the inner edge 18 of left panel 12 inwardly a sufficient distance along its entire length to form the outer flap 33 and securing the same in place, as well as attaching the right side 29 of the slide fastener along the length of the underside of said outer flap, by a line of stitching 25. The said right side of the slide fastener being positioned so that the teeth thereon extend toward the fold of said outer flap. Left panel 12 is broader than right panel 11 primarily to permit the formation of outer flap 33.

The two assembled sides are then brought together, so that the right and left sides 28 and 29 of the slide fastener are oppositely positioned and a slide (not shown) is inserted and pulled the length of said fastener thus joining the two assembled sides. Assembly of the crotch piece is completed by joining the front portions thereof by a line of reinforcing stitching 34 across the frontmost part thereof and by similarly joining the rear portions thereof by a like line of reinforcing stitching 36. It is important to note at this point that when the lines of reinforcing stitching 34 and 36 are made, they completely cut across the front and rear ends of the inner flap 30. This may best be observed in Fig. 6. The importance of this step with respect to the inner flap lies in the fact that by securing the ends transversely the flap will fall back into place between the slide fastener and the wearer's body as the wearer closes the slide fastener.

The crotch piece may then be incorporated in a panty-girdle, such as the one illustrated in Figs. 2, 3 and 5. Such a panty-girdle has a front portion consisting of front center panel 38 to which is sewn left and right front panels respectively 3, 9 and 40 on either side thereof to all of which is affixed rear panel 41 in conventional fashion to form a body-encircling garment. The assembled crotch piece is incorporated into the garment by securing the front outer edges 19 and 20 the right and left panels 11 and 12 to the front center panel 38 thereof, by a line of stitching 42 and by securing rear outer edges 23 and 24 of said panels to the rear panel 41 by a line of stitching 43.

To form the left leg opening of the garment a preferably decorative tape 44 is sewn to the middle outer edge 21 of the right panel 11 of the crotch piece, and continued around the lower edges of the front center panel 38, the left front panel 39 and the lower left edge of the rear panel 41 to the place of beginning. The right leg opening is formed in similar fashion. Garter elements 45 may be sewed to the lower portion of the garment to act as hose supporters.

An important element of my invention resides in so placing the slit in the crotch, or since it borders the slit, in so placing the sides 28 and 29 of the slide fastener that when the crotch is incorporated in a garment and worn, the closed slide fastener along its length is slightly off center in either direction. This may be accomplished in variety of ways. For instance, the fold 37 in the inner edge of right panel 11 may be made deeper and so pull the left side 28 of the slide fastener to the left. Or the outer flap 33 may be folded more deeply and thus pull the right side 29 of the slide fastener to the right. In any event, this departure has greatly increased the comfort to the wearer. In practice it has been found that a displacement of substantially one-quarter of an inch to either side is sufficient to produce the desired degree of comfort.

Another important element of my invention lies in the manner of securing inner flap 30 to right panel 11. The lines of stitching 26 and 27 extend along the entire edge 31 thereof. This feature in conjunction with the lines of reinforcing stitching 34 and 36 across the front and rear edges of inner flap 30 insures that when the wearer dons a garment incorporating the crotch piece the flap will always fall back in a position to cover the slide fastener and protect the wearer from contact with the same.

The crotch piece is dimensioned to be incorporated in a snug-fitting garment. There is no baggy lower portion thereof to depend between the wearer's legs and interfere with the wearer's movement or comfort.

For purposes of convenience, the slide of the slide fastener is so placed as to be positioned to the top of the front portion of the crotch piece when the same is in a closed position.

In Figs. 7 and 8 I have illustrated another embodiment of my invention. The sole change from the prior embodiment is that the inner flap is now integral with the right panel 11. As shown in Fig. 7 which illustrates the pattern for the two panels, right panel 11' is now much broader than left panel 12' in order to permit the formation of inner flap 30' by folding and tacking down as shown in Fig. 8. What was edge 17 of right panel 11 has now been looped around the left side 28 of the slide fastener and brought to what was the inner edge 31 of inner flap 30, making the said inner flap integral with right panel 11. This modification has the advantage that the pattern is then formed from two instead of three pieces of material. Otherwise the two forms of my invention are identical.

I have shown preferred embodiments of my invention, but it is obvious that numerous changes, omissions and alterations may be made without departing from its spirit. Thus the outer flap 33 might be placed on the wearer's left, in which event the inner flap 30 might be positioned on either side, provision being made that both flaps be long enough to cover the slide fastener. Then, too, the particular design of the garment in which the crotch piece is incorporated is not important. It is suggested, however, that a snug-fitting type will make best use of my invention.

When in the claims, reference is made to a panty-girdle, the term shall be deemed to include playsuits and bathing suits as well as panty-girdles.

Although I have described my invention with a certain degree of particularity, it is understood that the present disclosure has been made only

by way of example and that numerous additional changes in the details of construction, combination and arrangement of parts may be resorted to without transcending the scope of the invention as hereafter claimed.

I claim as my invention:

1. A crotch piece for incorporation in panty girdles, comprising left and right panels, each such panel having substantially linear inner edges and each having an outwardly curved front outer edge, an inwardly curved middle outer edge, and an outwardly curved rear outer edge, said panels being united at their front and rear portions and forming a slit therebetween, said slit being slightly axially displaced, a slide fastener affixed to the portions of the crotch piece constituting the margins of said slit whereby said margins may be united or separated and an inner flap secured underneath one of said margins underlying said slide fastener and extending the length thereof, thereby protecting the wearer of such panty-girdle against contact with said slide fastener.

2. A crotch piece for incorporation in panty girdles, comprising left and right panels, each such panel having substantially linear inner edges and each having an outwardly curved front outer edge, an inwardly curved middle outer edge, and an outwardly curved rear outer edge, the rear portions of said panels being slightly longer and slightly narrower than the front portions thereof, said panels being united at their front and rear portions and forming a slit therebetween, said slit being slightly axially displaced, a slide fastener affixed to the portions of the crotch piece constituting the margins of said slit whereby said margins may be united or separated and an inner flap secured underneath one of said margins underlying said slide fastener and extending the length thereof, thereby protecting the wearer of such panty-girdle against contact with said slide fastener.

3. A form-fitting crotch piece for incorporation in form-fitting panty girdles, comprising left and right panels, each such panel having substantially linear inner edges and each having an outwardly curved front outer edge, an inwardly curved middle outer edge, and an outwardly curved rear outer edge, said panels being united at their front and rear portions and forming a slit therebetween, said slit being slightly axially displaced, a slide fastener affixed to the portions of the crotch piece constituting the margins of said slit whereby said margins may be united or separated and an inner flap secured underneath one of said margins underlying said slide fastener and extending the length thereof, thereby protecting the wearer of such panty girdle against contact with said slide fastener, said inner edges being sufficiently great in length so that when the crotch piece is incorporated in a panty girdle, the said slit so formed between said inner edges will extend vertically to at least the centers of the back and front portions of said panty girdle.

4. A crotch piece for incorporation in panty girdles as described in claim 3 hereof, said inwardly curved middle outer edges of said panels each comprising a part of one leg portion of said panty girdle.

5. A form-fitting crotch piece for incorporation in form-fitting panty girdles comprising left and right panels, each such panel having substantially linear inner edges and each having an outwardly curved front outer edge, an inwardly curved middle outer edge, and an outwardly curved rear outer edge, said panels being united at their frontmost and rearmost portions and forming a slit between their inner edges, said inner edges being sufficiently great in length so that when the crotch piece is incorporated in a panty girdle, the said slit so formed between said inner edges will extend vertically to at least the centers of the back and front portions of said panty girdle, a slide fastener affixed to the portions of the crotch piece constituting the margins of said slit whereby said margins may be united or separated, and an inner flap being an extension of one of said panels and secured along substantially its entire inner edge to the inner edge of said panel, said flap underlying said slide fastener and extending the length thereof, thereby protecting the wearer of such panty girdle against contact with said slide fastener.

MURRAY J. RAYDEN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,277,068	Bulloch	Mar. 28, 1942
2,411,129	D'Aprile	Nov. 12, 1946
2,437,830	McAllister	Mar. 16, 1948
2,453,063	Cohen	Nov. 2, 1948