

Jan. 29, 1963

L. W. GARROU ETAL

3,075,375

FASHIONED TUBULAR GIRDLE AND METHOD OF MAKING SAME

Filed Dec. 5, 1960

3 Sheets-Sheet 1

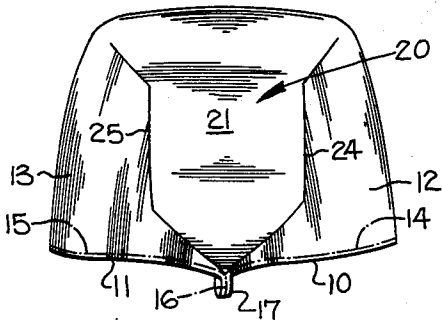


Fig-1

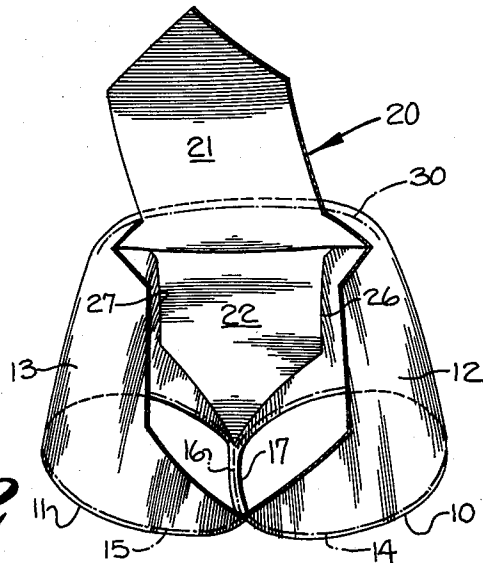


Fig-2

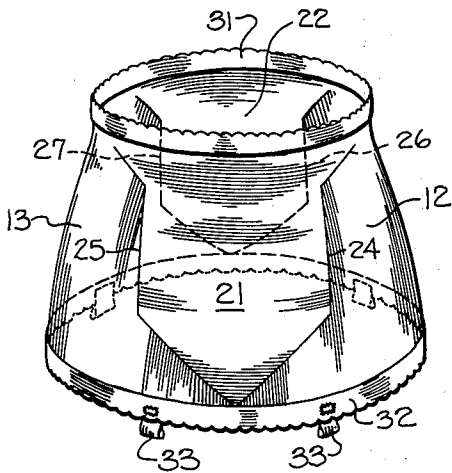


Fig-4

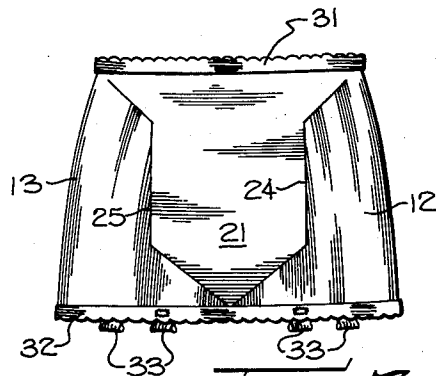


Fig-3

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3 Sheets-Sheet 2

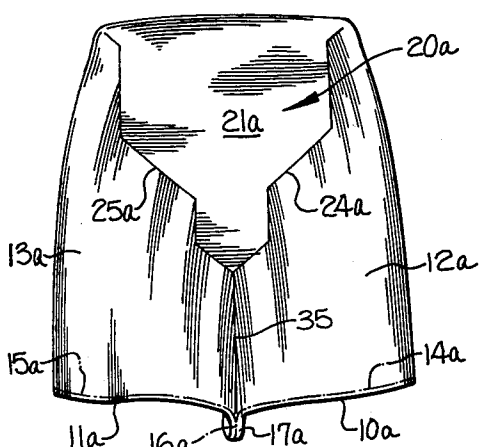


FIG-5

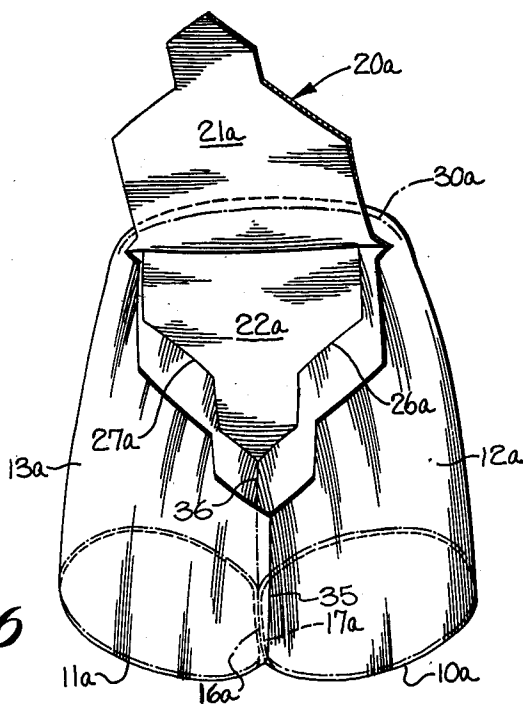


FIG-6

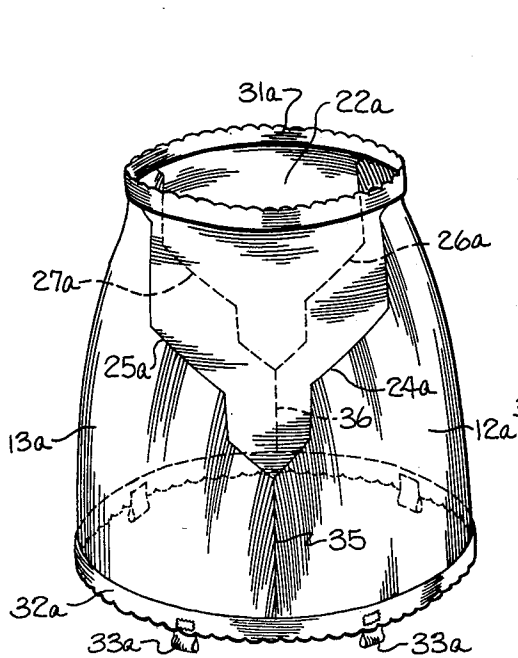


FIG-8

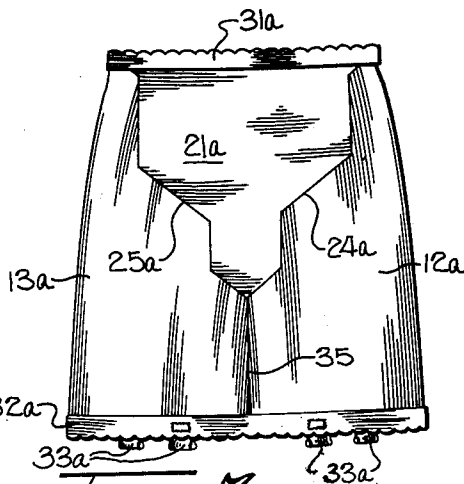


FIG-7

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Filed Dec. 5, 1960

3 Sheets-Sheet 3

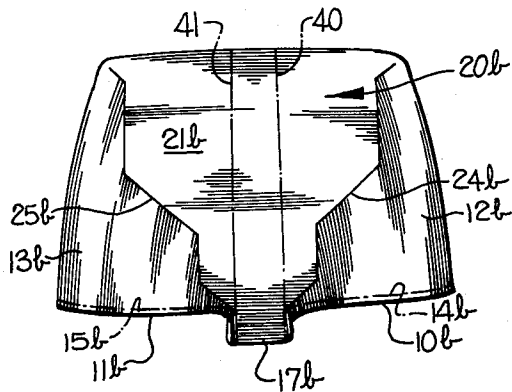


Fig-9

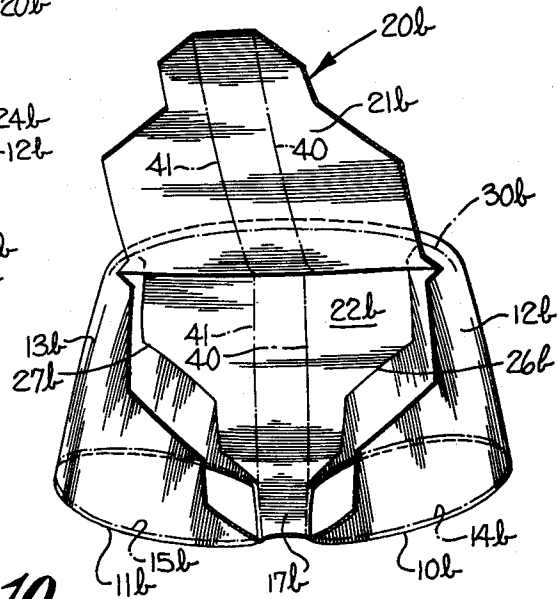


Fig-10

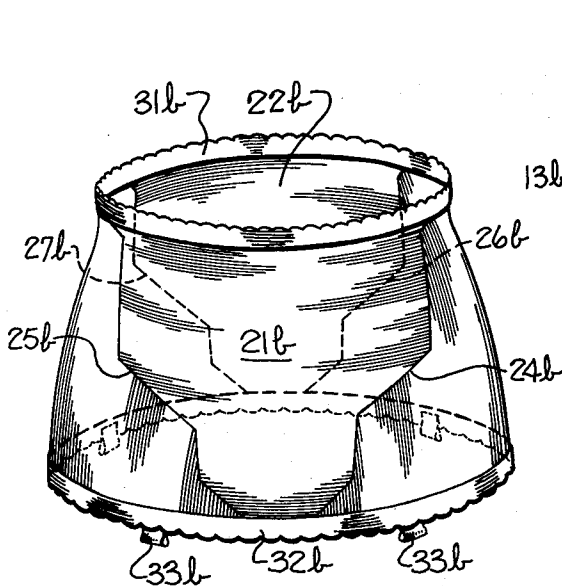
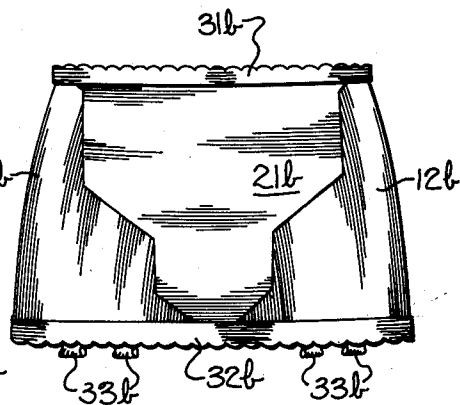


Fig-11

Fig-12

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FASHIONED TUBULAR GIRDLE AND METHOD OF MAKING SAME

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Filed Dec. 5, 1960, Ser. No. 73,577

9 Claims. (Cl. 66-177)

This invention relates generally to seamless knit fashion-
ed tubular girdles and to a method of knitting the
same. More particularly, the present invention relates
to girdles of the type which have a waist opening, a single
opening for the legs and a plurality of integrally knit
fashioned body panels which are joined together along
suture or gore lines to provide the desired shape to the
finished girdle.

The present application is a continuation-in-part of
our copending applications, Serial Number 840,407, filed
September 16, 1959, now Patent No. 2,962,884; Serial
Number 55,302, filed September 12, 1960; and Serial
Number 60,456, filed October 4, 1960, each of which
discloses seamless knit lower body garments having a pair
of legs integrally knit with the fashioned body panels.
The two-legged lower body garments disclosed in these
copending applications are similar in some respects to
the tubular girdle of the present invention. For example,
the two-legged garments shown in the above-noted
copending applications and the tubular girdles disclosed
in the present application each has fashioned front and rear
body panels in which the knit wales extend in substan-
tially horizontal directions or transversely of the garment,
the front and rear panels are connected along suture or
gore lines to integrally knit fashioned side panels and
the knit wales of the side panels extend in substantially
vertical directions or longitudinally of the garment.

There are two general types of tubular knit girdles pre-
sently being produced. One type is known as a seamless
girdle which is formed of a substantially straight circular
knit tube to which some small amount of fashioning may
be imparted by varying the length of stitches drawn in
certain portions of the girdle. In this type of tubular
girdle, the amount of fashioning which may be obtained
is not always sufficient and the knit wales all extend lon-
gitudinally of the girdle so that all parts of the girdle have
substantially the same amount of stretchability. The
other type of girdle is known as a cut and sewed girdle
which is formed by cutting various body panels from
knit piecegoods and then sewing these separate panels to-
gether to form the girdle. Because of the skilled labor
required to cut the panels and sew them together, this
type girdle is expensive to produce and the thickened
seams at the junctures of the panels often cause dis-
comfort to the wearer.

With the foregoing in mind, it is a primary object of
the present invention to provide a seamless knit tubular
girdle and method of making the same in which a plural-
ity of integrally knit fashioned body panels are joined to
each other along suture or gore lines formed during the
knitting of the girdle blank and in which the fashioning
of the various panels may be varied to thereby change
the overall configuration or shape of the girdle.

It is a more specific object of the present invention to
provide a fashioned seamless knit tubular girdle of the
type described which includes front and rear fashioned
panels that terminate at the upper waist opening and
gradually reduce in width as they extend downwardly
therefrom and fashioned side panels that terminate at the
lower leg opening and gradually reduce in width as they
extend upwardly therefrom.

It is another specific object of the present invention to
provide a fashioned seamless knit tubular girdle of the

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type described in which the knit wales of the front and
rear body panels extend transversely of the girdle and
the knit wales of the integrally knit side panels extend
longitudinally of the girdle.

Some of the objects of the invention having been
stated, other objects will appear as the description pro-
ceeds, when taken in connection with the accompanying
drawings, in which:

FIGURE 1 is a front elevation of one type of seamless
girdle blank which may be knit in accordance with the
present invention, showing the blank after it is removed
from the knitting machine and prior to finishing the same,
and illustrating the front and rear body panels extending
to substantially the lower edge of the blank;

FIGURE 2 is a perspective view of the girdle blank
shown in FIGURE 1 with the blank cut along the suture
lines joining the front panel to the side panels and with
the front panel raised to illustrate the appearance of the
inside of the blank;

FIGURE 3 is a view similar to FIGURE 1, but show-
ing the girdle in finished condition;

FIGURE 4 is a perspective view of the finished girdle
shown in FIGURE 3;

FIGURE 5 is a view similar to FIGURE 1 except
showing a modified form of girdle blank in which the
side panels are connected to each other below the lower
ends of the front and rear panels;

FIGURE 6 is a perspective view of the girdle blank
shown in FIGURE 5 with the blank cut along the suture
lines joining the front panel to the side panels and with
the front panel raised to illustrate the appearance of the
inside of the blank;

FIGURE 7 is a view similar to FIGURE 5, but show-
ing the girdle in finished condition;

FIGURE 8 is a perspective view of the finished girdle
shown in FIGURE 7;

FIGURE 9 is a view similar to FIGURES 1 and 5
except showing another modified form of girdle blank in
which the lower portions of the front and rear panels are
joined together in the crotch area of the girdle blank;

FIGURE 10 is a perspective view of the girdle blank
shown in FIGURE 9 with the blank cut along the suture
lines joining the front panel to the side panels and with
the front panel raised to illustrate the appearance of the
inside of the blank;

FIGURE 11 is a view similar to FIGURE 9, but show-
ing the girdle in finished condition;

FIGURE 12 is a perspective view of the finished girdle
shown in FIGURE 11.

Referring to the first form of girdle shown in FIG-
URES 1-4, it will be noted that the girdle blank, shown
in FIGURES 1 and 2, includes a pair of seamless tubu-
lar portions 10 and 11 which are formed by a few com-
plete knit courses. The lower edges of the tubular por-
tions 10, 11 define the lower edge of the girdle blank and
the outermost portions of the upper edges of the tubular
portions are connected to the lowermost partial courses
of respective side panels 12 and 13 along the dash-dot
lines 14 and 15, respectively. It will be noted that the
innermost portions of the tubular portions 10, 11 are
joined together along a dash-dot line 16 to form a narrow
crotch 17. The side panels 12, 13 are integrally knit with
the tubular portions 10, 11 and their inner edges gen-
erally taper outwardly from the center of the blank as
they extend upwardly from the respective dash-dot lines
14, 15.

The side panels 12, 13 are knit of successive partial
courses which extend around opposite sides of the girdle
blank and terminate in the front and rear thereof to define
the tapered inner edges of the side panels 12, 13. The
lines on the panels forming the girdle blank extend in the

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direction of the knit wales and in the side panels 12, 13, the knit wales extend substantially vertically or longitudinally of the girdle.

As shown in FIGURES 1 and 2, the lowermost partial courses of the side panels 12, 13 extend substantially half-way around the girdle blank and opposite ends thereof terminate in substantially the center of the front and rear of the girdle blank. On the other hand, the uppermost partial courses of the side panels 12, 13 are very short and opposite ends thereof terminate very close to the centers of opposite sides of the girdle blank. Thus, the width of the side panels 12, 13 is progressively reduced from the lowermost portions to the uppermost portions thereof.

The inner edges of the side panels 12, 13 are joined to opposite sides of an integrally knit body gusset or panel, broadly indicated at 20. The body gusset 20 is formed of partial courses of varying lengths which extend over the top of the girdle blank and terminate at the front and back thereof. The body gusset 20 includes respective front and rear body panels 21 and 22 (FIGURE 2) which extend downwardly from the top of the blank and progressively reduce in width to their lower ends. The inner edges of the body panels 12, 13 are connected to corresponding sides of the front and rear panels 21, 22, during the knitting operation and in a manner to be later described, along respective front and rear gore or suture lines 24, 25 and 26, 27.

After knitting of the girdle blank is completed, the upper medial portion thereof is slit or cut along the dash-dot line 30 (FIGURE 2) to provide a waist opening. It will be noted that the fabric is slit in a walewise direction and divides the upper portions of the front and rear panels 21 and 22 while opposite ends of the slit terminate adjacent the juncture of the upper portions of the side panels 12 and 13 with the body gusset 20. The tubular portions 10, 11 and the crotch piece 16 are then cut away from the lower edges of the side panels 12 and 13 to provide a single opening for the legs of the wearer.

If desired, only the crotch piece 16 may be cut at opposite ends to provide a single opening for the legs and the remaining portions of the tubular knit portions 10, 11 may be retained. The edges of the fabric at the upper waist opening and at the lower leg opening of the tubular blank may be finished by hemming the same or by sewing suitable stretchable band thereto. As shown in FIGURES 3 and 4, an elastic band 31 is sewed to the edge of the fabric around the waist opening and an elastic band 32 is sewed to the edge of the fabric around the leg opening. The lower edge of the girdle may also be provided with suitable loops 33 for attaching hosiery supporting clips, not shown.

The body of the finished girdle (FIGURE 4) is completely devoid of any seams, except the front and rear suture or gore lines 24, 25 and 26, 27 which are formed during the knitting of the girdle blank. The girdle includes fashioned side panels 12 and 13 in which the knit wales extend longitudinally of the girdle with the lower edges of the side panels 12 and 13 defining the single leg opening at the lower edge of the girdle. The knit wales of the front and rear body panels 21, 22 extend substantially horizontally or transversely of the girdle and from the inner edges of one side panel to the inner edges of the opposite side panel.

It is preferred that the girdle blank be knit of a stretchable yarn or a stretchable yarn in combination with a non-stretchable yarn so the girdle will have the desired amount of stretchability. Of course, the stretchability of the girdle will depend upon the type of yarn used and the manner in which the various portions of the girdle are knit. Also, the front and rear panels 21, 22, or any desired portions thereof, may be knit of different yarns than the side panels 12, 13 to correspondingly vary the amount of stretchability of the different portions of the blank.

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The girdle blank of the present invention will be described as being knit on a circular knitting machine which is capable of rotary and reciprocatory knitting although it is to be understood that the girdle may also be knit on other types of machine capable of knitting a tubular fabric, such as the Lamb type knitting machine in which a pair of angularly disposed needle beds are provided.

In order to knit the girdle blank shown in FIGURES 1 and 2 on a circular knitting machine, the needle cylinder will be of the proper size and supplied with the proper number of needles necessary to produce the desired diameter of tubular fabric in the tubular knit portions 10 and 11. Knitting of the girdle blank may be started at the lower edges of either of the tubular portions 10, 11 and will be described starting with the lower edge of the tubular portion 10. Through conventional pattern control means, the needle cylinder will be rotated continuously in one direction with all of the needles in active or knitting position so that when the yarn is fed to the needles, the tubular seamless portion 10 will be formed. The only purpose for forming the tubular portions 10, 11 is to form a make-up and this may be completed in, for example, four circular courses.

When the four circular courses forming the tubular portion 10 are completed, at the dash-dot line 14, the machine switches into reciprocatory knitting and a group of the needles in the cylinder, that group of needles which knit the crotch 17, are moved to idle position with the remainder of the needles remaining in active position to start knitting the first partial course of the side panel 12. During the reciprocatory knitting of the side panel 12, partial courses are formed with each swing of the needle cylinder and the narrowing instrumentalities of the machine are in operation so that needles are progressively removed from action at the ends of succeeding partial courses. As the needles are removed from action, their stitch loops are retained on the needles in the well known manner in what is generally known as a narrowing operation.

As knitting of the side panel 12 continues, the fabric thereof gradually narrows until only a predetermined number of needles remain active at the upper end of the side panel 12. It is preferred that the fabric of the side panel 12 be narrowed at a relatively slow rate, for example, by removing one needle from action during the knitting of each pair of partial courses.

Upon completion of the last reciprocatory partial course at the upper end of the side panel 12, the conventional widening mechanism of the machine is brought into action to begin progressively increasing the length of the partial courses during the knitting of the front and rear panels 21, 22. As the first few widened partial courses of the body gusset 20 are knit, their opposite ends are connected to opposite ends of the last partial courses of the body panel 12 along the inclined upper portion of the respective front and rear gore lines 24, 26. After a few widened partial courses are knit, groups of needles adjacent each side of the active needles are brought into action at one time to simultaneously join a plurality of the end-most loops of the partial courses of the side panel 12 to single partial courses of the front and rear panels 21, 22 and form the vertical portions of the gore or suture lines 24, 26. With succeeding partial courses of the front and rear panels 21, 22, gradual widening is continued to join the ends of the partial courses to the ends of partial courses of the body panel 12 along the lower inclined portions of the gore or suture lines 24, 26.

When the proper number of widened partial courses have been knit, at the lower junctures of the front sutures 24, 25 and rear sutures 26, 27, the number of needles knitting in succeeding partial courses is progressively reduced in a gradual narrowing operation. After a few gradually narrowed partial courses are knit, groups of needles at each side of the active needles are rendered in-

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active at one time, those needles which later form the vertical portions of the front and rear suture lines 25 and 27. The number of needles knitting in succeeding partial courses is again progressively reduced in a gradual narrowing operation until the front and rear panels 21, 22 are completed on a small group of needles.

The needle cylinder continues to reciprocate to knit partial courses as the first partial course of the side panel 13 is knit on the small group of needles which were active in knitting the last partial course of the front and rear panels 21, 22. At the beginning of the side panel 13, the number of needles knitting in succeeding partial courses is progressively increased to thereby gradually increase or widen the fabric. During the knitting of the side panel 13, the end stitches of the partial courses thereof are connected to the end stitches of the narrowed partial courses of the front and rear panels 21, 22 along the inclined portions of the suture lines 25, 27 and connected to the medial stitches of the partial courses which form the vertical portion of the suture lines 25, 27.

The last partial course of the side panel 13 is knit at the dash-dot line 15 and at this point, all of the inactive needles in the cylinder are again activated and the machine switches into rotary knitting to again produce seamless tubular fabric to form the tubular portion 11. Here again, the tubular portion 11 preferably includes only four courses. When all of the needles in the cylinder are again moved to active position to knit the tubular portion 11, the groups of needles which had been holding their stitch loops since the completion of the first tubular portion 10 are again activated to thereby join the two tubular portions 10 and 11 together along the dash-dot line 16 in the crotch 17 of the blank.

After knitting of the girdle blank is completed, the upper end is split along the dash-dot line 30 (FIGURE 2) and then the lower portion is cut to remove the crotch portion 17 and the tubular portions 10, 11, if desired. Then, the girdle may be finished in the manner heretofore described.

Referring to FIGURES 5 through 8, a second form of girdle is shown in which the manner of knitting has been changed slightly to provide a girdle which is longer from the upper waist opening to the lower single leg opening than the girdle disclosed in the first form of girdle shown in FIGURES 1 through 4. However, the girdle blank shown in FIGURES 5 and 6 is knit in the same manner as the first form of girdle blank and includes substantially the same parts, therefore, parts of the second form of girdle which are similar to corresponding parts of the first form of girdle will bear like reference characters with the small letter "a" added.

In the girdle shown in FIGURES 5 through 8, the inner edges of the upper portions of the side panels 12a and 13a are joined to opposite edges of the respective front and rear panels 21a and 22a along the generally diverging front suture lines 24a, 25a and the diverging rear suture lines 26a, 27a. It will be noted that the side panels 12a and 13a extend below opposite lower ends of the front and rear panels 21a and 22a and the inner edges of the side panels 12a and 13a are connected directly to each other along respective front and rear gore or suture lines 35 and 36 (FIGURE 6). In order to join the end stitches of the lowermost partial courses of the side panels 12 and 13a together along the respective front and rear suture lines 35 and 36, the needles which are moved to inactive position during the knitting of the partial courses of the lower portion of the side panel 12a hold their stitch loops and remain inactive until the knitting of the front and rear panels 21a and 22a and the upper portion of the side panel 13a is completed and then these needles are brought back into action during the knitting of the partial courses of the lower portion of the side panel 13a to thereby join together the ends of the partial courses at the lower ends of the panels 12a and 13a.

It will also be noted that the shape or configuration of

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the front and rear panels 21a and 22a is slightly different from the front and rear panels 21 and 22 of the first form of girdle. This difference in shape or configuration is accomplished by changing the fashioning of the partial courses in the body gusset 20. In knitting the body gusset 20a (FIGURES 5 and 6), the first few partial courses of the front and rear panels 21a and 22a are gradually widened and joined to the endmost stitches of the last few narrowed partial courses of the side panel 12a. Then, a group of needles adjacent each side of the active needles are brought into action at one time to simultaneously join a plurality of the endmost loops of the narrowed partial courses of the side panel 12a to single partial courses of the front and rear panels 21a, 22a and form the upper vertical portions of the sutures 24a, 26a.

Then, the partial courses of the front and rear panels 21a, 22a are again gradually widened and joined to the ends of the narrowed partial courses of the side panel 12a along the medial inclined portions of the front and rear sutures 24a, 26a. Then, groups of needles adjacent each side of the active needles are again brought into action at one time to simultaneously join a plurality of the endmost loops of the narrowed partial courses of the side panel 12a to single partial courses of the front and rear panels 21a, 22a and form the lower vertical portions of the front and rear sutures 24a, 26a.

After gradually widening and then narrowing the medial partial courses of the front and rear panels 21a, 22a, groups of needles at each side of the active needles are moved to inactive position at one time, those needles which later form the lower vertical portions of the front and rear sutures 25a and 27a. Then, the partial courses of the front and rear panels 21a, 22a are again gradually narrowed and then groups of needles at each side of the active needles are again moved to inactive position at one time, those needles which later form the upper vertical portions of the front and rear sutures 25a and 27a. The partial courses of the front and rear panels 21a and 22a are then again gradually narrowed to complete the front and rear panels 21a, 22a.

Thus, in the second form of girdle shown in FIGURES 5 through 8, the side panels 12a and 13a are longer than the side panels 12 and 13 of the first form of girdle shown in FIGURES 1 through 4 and the inner edges of the lowermost portions of these side panels 12a and 13a are joined directly to each other along the respective front and rear gore or suture lines 35 and 36. This provides more length to the girdle from the upper waist opening to the lower leg opening than the girdle shown in the first form (FIGURES 1-4).

Referring to FIGURES 9 through 12, a third form of girdle is shown in which the manner of knitting has been changed slightly to provide a girdle which is wider or larger in diameter than the first and second forms of girdle disclosed in FIGURES 1 through 4 and FIGURES 5 through 8. Here again, the girdle blank shown in FIGURES 9 and 10 is knit in the same general manner as the first and second forms of girdles shown in FIGURES 1 through 4 and FIGURES 5 through 8 and includes substantially the same parts, therefore, parts of the third form of girdle which are similar to corresponding parts of the first and second forms of girdle will bear like reference characters with the small letter "b" added.

In the girdle blank shown in FIGURES 9 and 10, the front and rear panels 21b and 22b are initially joined together at their lower and upper ends. Thus, the lower portions of the front and rear panels 21b, 22b are continuous through the crotch 17b at the lower portion of the blank. In the present instance, the front and rear panels 21b, 22b include a plurality of complete circular courses in the medial portions thereof and between the dash-dot lines indicated at 40 and 41.

These complete courses extend over the top of the blank, downwardly between the tubular portions 10b and 11b and through the crotch 17b. Thus, the ends of

the lowermost partial courses of the side panel 12b are separated from the ends of the lowermost partial courses of the side panel 13b by the complete courses in the body gusset 20b and provide a girdle which is wider or larger in diameter than the first and second forms of girdle heretofore described.

In knitting the girdle blank shown in FIGURES 9 and 10, the tubular portion 10b, the side panel 12b and the first portions of the front and rear panels 21b, 22b are knit in the same manner to that described in the knitting of corresponding parts of the second modified form of girdle blank shown in FIGURES 5 through 8. Therefore, it is not believed necessary to again describe the knitting of these parts.

Upon completion of the first fashioned portion of the front and rear panels 21b and 22b, the machine switches into circular knitting and all of the needles are activated to knit the circular courses located between the dash-dot lines 40 and 41. The lower portion of the first circular course of the front and rear panels 21b and 22b is joined to the inner portion of the tubular portion 10b along the inner portion of the dash-dot line 14b (FIGURES 9 and 10). After the desired number of complete courses are knit, the groups of needles knitting the lower portion of the circular courses are moved to inactive position and the machine again switches to reciprocatory knitting. Then, the partial courses of the last portion of the front and rear panels 21b and 22b are fashioned in the manner described in the knitting of these corresponding partial courses of the panels 21a and 22a of the second form of girdle blank shown in FIGURES 5 and 6.

The side panel 13b is then knit while widening the partial courses thereof in the same manner as that described for knitting the upper portion of the side panel 13a of the second form of girdle blank shown in FIGURES 5 and 6. The machine then switches to rotate the needle cylinder and all the needles are activated to form the tubular portion 11b. The inner portion of the first course of the tubular portion 11b is joined to the lower portion of the last circular course of the body gusset 20b along the inner portion of the dash-dot line 15b (FIGURES 9 and 10).

After the third modified form of girdle blank is completed, the upper portion is slit along the line 30b and the crotch 17b is cut away. Then, the elastic bands 31b and 32b are sewed to the upper and lower portions of the blank in the manner heretofore described to complete the relatively wide girdle shown in FIGURES 11 and 12.

In each of the forms of girdle shown, the tubular portions at the lower ends of the side panels are knit for convenience in starting knitting on the circle of needles. However, it is possible to start knitting on only a portion of the needles while the needle cylinder is reciprocating and then the lowermost partial course of the first side panel would be knit first. If the girdle blank is started with the knitting of the first partial course of the first side panel, then the crotch portions 17 and 17a would not be formed in the first and second forms of girdle and it would not be necessary to cut the lower end of the blank before sewing the elastic bands thereto.

If the tubular portions 10b and 11b are omitted in the third form of girdle shown in FIGURES 9 through 12, the crotch 17b would still be formed by the lower portions of the complete courses of the body gusset 20b. Then, this form of girdle would be finished by cutting away the crotch 17b and finishing the lower opening by hemming or attaching an elastic band thereto.

In order to provide the proper amount of support to the wearer, the girdle blank must be knit at least in part of some type of stretchable yarn. It is a simple matter to knit certain of the panels of different types of yarn to provide different stretch characteristics thereto. In some instances, it has been found advantageous to knit

two different types of stretchable yarns together in plated relationship to achieve the desired stretch characteristics. For example, a covered rubber yarn has been knit in plated relationship with a multifilament thermoplastic yarn which has been texturized by what is known as the Banlon process. Of course, various other types of stretchable yarns or combinations of yarns, including non-stretchable yarns, may be used to knit the girdles disclosed herein.

Although the different forms of girdles disclosed in the present application have different shapes, they each have an upper waist opening and a single lower leg opening and they are each formed of a plurality of integrally knit fashioned body panels which are joined together along sutures which are formed during the knitting of the body panels. Further, each of the girdles disclosed includes a pair of side panels which have knit wales extending longitudinally of the girdle and the lower portions of the side panels terminate adjacent the lower leg opening and the side panels gradually decrease in width as they extend upwardly from the lower leg opening. The inner edges of the side panels are connected to opposite sides of the front and rear panels of a body gusset which has knit wales extending transversely of the girdle and the front and rear panels are fashioned to provide the desired shape to the upper portion of the girdle.

Referring to the three forms of finished girdles shown in FIGURES 4, 8 and 12, it will be noted that the lower edges of the side panels of the girdles shown in FIGURES 4 and 8 define the lower leg opening and the lower edges of the side panels of the girdle shown in FIGURE 12 define a major portion of the lower leg opening. The inner edges of the side panels extend upwardly from the lower opening and generally converge to substantially define the two equal sides of an isosceles triangle. The upper edges of the front and rear panels define a major portion of the waist opening and the outer edges thereof extend downwardly therefrom and generally converge to substantially define the two equal sides of isosceles triangles. Although the edges of the side, front and rear panels are not straight, corresponding edges of each panel are alike and equal.

In the drawings and specification there have been set forth preferred embodiments of the invention and, although specific terms are employed, they are used in a generic and descriptive sense only and not for purposes of limitation, the scope of the invention being defined in the claims.

We claim:

1. A fashioned tubular seamless knit girdle having an upper waist opening and a single lower opening adapted to encircle the upper portions of the legs of a wearer, said girdle comprising a pair of fashioned side panels having knit wales extending longitudinally of said girdle, said side panels extending around opposite sides of said girdle and the lower edges of said side panels defining a major portion of the lower opening, fashioned front and rear panels having knit wales extending transversely of said girdle, said front and rear panels being integrally knit with said side panels, pairs of front and rear sutures defining the juncture of said integrally knit front and rear panels and said side panels, the upper edges of said front and rear panels defining a major portion of the upper waist opening, and said corresponding pairs of front and rear sutures extending downwardly from adjacent the waist opening in common generally converging relationship.

2. In a girdle according to claim 1 wherein the lower ends of said front sutures are joined together at the lower opening, and the lower ends of said rear sutures are joined together at the lower opening.

3. In a girdle according to claim 1 wherein the lower ends of said front sutures are joined together at a point spaced above the lower opening, the lower ends of said rear sutures are joined together at a point spaced above

the lower opening, and said side panels are joined to each other along front and rear sutures which extend downwardly from the junctures of corresponding pairs of front and rear sutures and terminate at the lower opening.

4. In a girdle according to claim 1 wherein the lower ends of said front sutures terminate at the lower opening in spaced apart relationship, and the lower ends of said rear sutures terminate at the lower opening in spaced apart relationship.

5. A fashioned tubular seamless knit girdle having an upper waist opening and a single lower opening adapted to encircle the upper portions of the legs of a wearer, said girdle comprising a pair of fashioned side panels having knit wales extending longitudinally of said girdle, said side panels extending around opposite sides of said girdle and the lower edges of said side panels defining a major portion of the lower opening, each of said side panels having inner edges which extend upwardly from the lower opening and generally converge to substantially define the two equal sides of an isosceles triangle, fashioned front and rear panels having knit wales extending transversely of said girdle, said front and rear panels being integrally knit with said side panels, the upper edges of said front and rear panels defining a major portion of the upper waist opening, each of said front and rear panels having outer edges which extend downwardly from the waist opening and generally converge to substantially define the two equal sides of an isosceles triangle, and the outer edges of said front and rear panels being joined to the inner edges of said side panels.

6. A method of making a seamless knit tubular girdle having an upper waist opening and a single lower opening adapted to encircle the upper portion of the legs of the wearer on a circular knitting machine comprising the steps of knitting by reciprocation on a group of the needles to form a first side panel while reducing the number of needles knitting in succeeding courses, knitting by reciprocation to form a fashioned body gusset integral with the first side panel while first increasing and then decreasing the number of needles knitting in succeeding courses, knitting by reciprocation to form a second side panel integral with the body gusset while increasing the number of needles knitting in succeeding courses, and then slitting the fabric transversely of the body gusset to form the upper waist opening.

7. A method of making a seamless knit tubular girdle having an upper waist opening and a single lower opening adapted to encircle the upper portion of the legs of the wearer on a circular knitting machine comprising the steps of knitting a few complete courses on all of the needles to form a first tubular portion, knitting by reciprocation on a group of the needles to form a first side panel integral with the first tubular portion while reducing the number of needles knitting in succeeding courses, knitting by reciprocation to form a fashioned body gusset integral with the first side panel while first increasing and then decreasing the number of needles knitting in suc-

ceeding courses, knitting by reciprocation to form a second side panel integral with the body gusset while increasing the number of needles knitting in succeeding courses, knitting a few complete courses on all of the needles to form a second tubular portion integral with the second side panel and connected to a portion of the first tubular portion to form a crotch, slitting the fabric transversely of the body gusset to form the upper waist opening, and then severing and removing the knit fabric forming the crotch to form the single lower opening.

8. A method of making a seamless knit tubular girdle having an upper waist opening and a single lower opening adapted to encircle the upper portion of the legs of the wearer on a circular knitting machine comprising the steps of knitting a few complete courses on all of the needles to form a first tubular portion, knitting by reciprocation on a group of the needles to form a first side panel integral with the first tubular portion while reducing the number of needles knitting in succeeding courses, knitting by reciprocation to form a fashioned body gusset while first increasing the number of needles knitting in succeeding courses to form front and rear sutures joining the body gusset to the first side panel and then decreasing the number of needles knitting in succeeding courses, knitting by reciprocation a second side panel while increasing the number of needles knitting in succeeding courses to form front and rear sutures joining the second side panel to the body gusset, knitting a few complete courses on all of the needles to form a second tubular portion integral with the second side panel and connected to a portion of the first tubular portion to form a crotch, slitting the fabric transversely of the body gusset to divide the body gusset into a front and a rear panel and to form the upper waist opening, and then severing and removing the knit fabric forming the crotch to form the single lower opening.

9. A method of making a seamless knit fashioned tubular girdle having an upper waist opening and a single lower opening adapted to encircle the upper portions of the legs of the wearer comprising the steps of knitting a first group of courses to form a first side panel while progressively reducing the number of stitch loops in successive courses, knitting a second group of courses to form front and rear panels integrally knit with the first side panel while first increasing and then decreasing the number of stitch loops in successive courses of the front and rear panels, and knitting a third group of courses to form a second side panel integrally knit with the front and rear panels while progressively increasing the number of stitch loops in successive courses.

References Cited in the file of this patent

UNITED STATES PATENTS

2,511,720	Lacks	June 13, 1950
2,560,580	Lacks	July 17, 1951
2,898,754	Harms	Aug. 11, 1959
2,952,149	Halliday et al.	Sept. 13, 1960