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<th>(71)</th>
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<td>Jets Swimwear Pty Ltd</td>
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<tr>
<th>(72)</th>
<th>Inventor(s)</th>
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<tr>
<td></td>
<td>Allen, Jessika</td>
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<th>(74)</th>
<th>Agent / Attorney</th>
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<tr>
<td></td>
<td>Molins &amp; Co, Suite 5, Level 6 139 Macquarie Street, Sydney, NSW, 2000</td>
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Abstract

A garment construction and method incorporates linked panels, particularly swimwear pants or bottoms that incorporate linked front panels.
AUSTRALIA
Patents Act 1990

COMPLETE STANDARD PATENT SPECIFICATION FOR THE INVENTION ENTITLED:

GARMENT WITH LINKED PANELS

This invention is described in the following statement:-
Garment with Linked Panels

Field of the Invention

The invention relates to swimwear and more particularly to a construction for a swimsuit bottom incorporating linked panels.

Background of the Invention

The commercial success of swimwear, particularly women's swimwear is determined, in part by fashion and aesthetics. Novel constructions which result in attractive appearance are particularly successful when they are distinctive, well constructed, comfortable and accommodating of a variety of body shapes and sizes.

Objects and Summary of the Invention

It is an object of the invention to provide a garment construction that incorporates linked panels.

It is another object of the invention to provide swimwear, particularly swimwear pants or bottoms that incorporate linked front panels.

Brief Description of the Drawing Figures

In order that the invention be better understood, reference is now made to the following drawing figures in which:

Figure 1 is a layout, in plan view, of panels utilised to construct a swimwear garment;

Figures 2(a)-(d) are details illustrating the creation of an opening in a panel;

Figure 3 illustrates the passage of one panel through another panel;

Figure 4 is a perspective view illustrating the joining of a front panel to itself;

Figure 5 is a perspective view of two linked panels;

Figure 6 is a schematic plan view illustrating the joining of linked panels to an asymmetrical lower front panel; and
Figure 7 illustrates the front and rear of a garment constructed in accordance with the teachings of the present invention.

Best Mode and Other Embodiments of the Invention

As shown in Figure 1, a garment such as a women’s swimwear pant can be constructed from a collection of panels comprising (from the wearer’s perspective) a right front panel 10, a left front panel 11, a lower front panel 12 and a back panel 13.

The right front panel 10 further comprises a curved top or waist edge 14 that extends between a first top corner 15 and a second top corner 16. First and second lateral edges 17, 18 extend between the first and second top corners 15, 16 and the first and second lateral corners 19, 20. The concave lateral or leg line edges 21, 22 extend between the lateral corners 19, 20 and the generally inverted “V” shaped lower edge 23 of the right front panel 10.

Note that the lower edge 23 is generally equally subdivided in its length by a peak 24. Thus, the right front panel 10 is generally symmetrical about a transverse fold line or axis 25 that passes through the peak 24.

The left front panel 11 is preferably symmetrical about a longitudinal fold line or axis 26 and includes a gently curved first lateral edge 27 and a shallow “V” shaped second lateral edge 28. The top and bottom edges 29, 30 are similar in their configuration, each including a curved longer portion 31, 32 and a concave shorter portion 33, 34 that meet at a peak 35, 36.

The lower front portion 12 comprises first and second curved leg line edges 37, 38, a generally flat lower edge 39 and a peaked top edge having an asymmetrical peak 40 joining a longer first and a shorter second portions 41, 42 of that top edge. The back panel 13 has an upper or waist edge 63, side edges 64, 45 that extend from the waist edge 63 to the leg line edges 46, 47 and a lower edge or crotch line 48 that interconnects the lowest extent of the two leg edges 46, 47.

As shown in Figure 2, the construction of the garment preferably commences with folding of the left front panel 11 along its longitudinal fold line 26 forming a doubled free edge between the corners 52, 53. In the alternative a single thickness left front panel may be used having the shape depicted in Figure 2(a). As shown in Figure 2(b) a transverse fold 50 brings
the first and second lowermost corners 52, 53 together. The new doubled lower or re-doubled lower free edge 54 (located between the lowest extent 55 of the fold line 50 and the joined together corner 52, 53) can then be partially sewn 56, the seam 56 not reaching the fold line 50. With reference to Figures 2(b) and (c) it can be seen that the upper edge in the area of the transverse fold 50 forms a "V" shape 65 that is flattened and brought somewhat toward the joined corners 52, 53 to create the temporary structure depicted in Figure 2(c). The partial stitching 56 together with the transverse fold 50 define a hole 57. The spreading apart or splaying of the unjoined portions of the lateral edges 58, 59 creates a leg line that is shown in Figure 2(d). Note the seam 60 that extends between the leg line and the hole 57. A bar tack 56a strengthens the seam 60.

As shown in Figure 3 the hole 57 is adapted to receive the right front panel 10 through it. The second lateral edge 18 of the front panel 10 is passed through the opening 57 and, as shown in Figure 4, it is folded back over itself so that the top or waist edge 14 can be sewn to itself thus aligning the first and second lateral edges 17, 18. When the right front panel is folded over itself and joined after having been passed through the hole 57 it creates the link waist feature depicted in Figure 5. This twist link structure is then joined to the lower front panel 12 as shown in Figure 6. The asymmetrical peak becomes located adjacent to the opening 57. The first portion of the lower front panel's top edge 41 joins the long edge 61 of the folded right front panel. The lower front panels shorter edge portion 42 is joined to the shorter edge 62 of the left front panel.

As shown in Figure 7, the assembly constructed according to the principles of Figure 6 is then joined to a back panel 13. The waist line and leg lines may then be finished with 6mm rubber reinforcement and single needle stitching.

While the present invention has been disclosed with reference to particular details of construction, these should be understood as having been provided by way of example and not as limitations to the scope or spirit of the invention.
What is Claimed is:

1. A garment with a linked panel structure, the garment comprising:

   a first panel having a fold axis;
   a second panel folded about a transverse fold line to make a doubled free edge,
   the doubled edge being partially stitched to form a hole; wherein
   the first panel is inserted through the hole, folded back about the fold axis and
   joined to itself.

2. The garment of claim 1, wherein,

   the first panel further comprises a curved waist edge between a first and a
   second top corner, the top corners being brought together by folding the first
   panel about the fold axis creating a waist that is sewn to itself.

3. The garment of claims 1 or 2, wherein,

   the first panel further comprises a lower edge, the lower edge being generally
   inverted V shaped, wherein the fold line runs through a peak of the lower
   edge.

4. The garment of a claims 1, 2, or 3, wherein,

   the second panel further comprises unjoined portions that are spread apart to
   create a leg line.
5. The garment of claim 4, wherein,

the second panel further comprises a side seam of the garment adjacent to the
gle line.

6. The garment of any of claims 1 to 5, wherein,

the first panel further is generally symmetric about the fold axis and further
comprises a first and a second concave lateral edges, the concave lateral edges
coinciding to form a leg line after the first panel is folded back.

7. The garment of any one of claims 1-6, wherein,

the second panel is generally symmetric along the longitudinal fold line and
folded along that longitudinal fold line prior to being folded about the
transverse fold line.

8. The garment of any one of claims 1-7, wherein,

the garment further comprises a lower panel, the lower panel further
comprising a top edge having first and second portions, a peak located
between the first and second portions, the first portion being sewn to the first
panel, and the second portion sewn to the second panel.
9. The garment of claim 8, wherein,

the lower panel further comprises a first curved edge forming a leg line, and a second curved edge forming another leg line.

10. The garment of claim 8, wherein,

the peak is asymmetrical and the first and second portions are unequal in length.

11. The garment of any one of claims 1-11, wherein,

the first and second lower panels are formed into a swimwear garment.

12. The garment of claim 11, wherein,

the garment is swimsuit pant.

13. A method of constructing a linked panel structure for a garment, comprising the steps of:

folding the second panel along a transverse fold line to join a first and a second lowermost corners together and form a new lower edge;

partially stitching the new lower edge together, leaving a hole between the transverse fold line and a partial stitching line;

passing a second lateral edge of a first front panel through the hole;
folding the first panel back over itself; and
sewing a top edge of the first panel to itself, with a first lateral edge and a
second lateral edge of the first panel in alignment.

14. The method of claim 13, wherein,

two unjoined portions of a first and a second lateral edge of the second panel
are spread apart to form a leg line.

15. The method of claims 13 or 14, wherein,

a lower panel is joined to the linked panel structure, wherein the lower panel
has a top edge with a peak located adjacent to the hole.

16. The method of claim 15, wherein,

the peak in the peak top edge joins a longer first portion that is sewn to an
edge of the first panel, and a shorter second portion that is sewn to an edge of
the second panel.

17. The method of claim 16, wherein,

the lower panel further comprises a first and a second side edges, respectively
having a curvature forming a leg line.
18. The method of claims 16 or 17, wherein,

a back panel is further attached to the structure.

19. The method of claim 18, wherein,

the back panel further comprises two leg lines that are interconnected by a lower edge, and the lower edge is sewn to a lower edge of the lower front panel.

20. The method of any one of claims 13 - 19, wherein,

the second panel is folded along a longitudinal fold line prior to folding the second panel along the transverse fold line.