

BRA WITH UNDERARM COMFORT FEATURE

The present invention relates in general to brassieres and, in particular to a new and useful bra construction which includes an underarm comfort feature.

5 US Patent 3,746,008 discloses a brassiere having a dorsal or underarm panel which comprises two pieces of material which have a stretch characteristic in different directions. The two pieces of material are sewn together in a Y shaped arrangement. This construction is claimed
10 to avoid the unsightly bulge of tissue above the dorsal panel which sometimes results when the brassiere is unbalanced or overly tight. This patent does not however disclose a structure which is capable of providing a differential expansion between upper and lower margins of
15 the dorsal panel to accommodate women having different proportions in these areas.

US Patent 3,817,255 discloses a brassiere having a dorsal panel with stretchable upper and lower margins. The panel is trapezoidal and has no special supporting structure between the dorsal panel and the cup of the bra.

5 A side or dorsal panel for a brassiere having crossing tapes is disclosed in US Patent 3,464,417. No supporting panel structure is provided above this crossing structure however.

A brassiere with a dorsal panel containing
10 inclined stretch bands is disclosed in US Patent 2,969,067. A similar structure is disclosed in US Patent 2,869,554. A further crossing tape construction for a brassiere is disclosed in US Patent 2,541,960 with a crossing stretch structure in a full body undergarment
15 being disclosed in US Patent 2,484,265.

While many of these earlier patents were directed to structures which improve the comfort and wearability of a brassiere or full body undergarment, none of these patents teach a fully satisfactory structure for
20 adapting to different body types in the areas at the top and bottom of the dorsal or underarm panel for a brassiere.

According to the present invention, there is provided a brassiere with underarm comfort feature,
25 comprising a pair of cup regions each having an inner margin and an outer margin, the inner margins of said cup regions being connected to each other, an underarm region connected to the outer margin of each cup region, a back

region connected to each underarm region and structured so that the back regions are connected or are connectable to one another, said underarm region comprising an elastic underarm panel extending away from said cup region to said back region, said cup region comprising a main cup panel having inner, outer and lower edges, an elastic lower cup panel connected to the lower edges of said main cup panel, an elastic upper cup panel connected to the outer edge of said main cup panel, and a central cup panel connected to the inner edge of said main cup panel, an elastic upper side band extending along an upper edge of said underarm panel and an outer edge of said upper cup panel at a location spaced from the outer edge of said main cup panel, an elastic lower band extending along a lower edge of said underarm panel and a lower edge of said lower cup panel, an upper cup band extending along an inner edge of said central cup panel and along an upper edge of said upper cup panel, a lateral band extending to said lower band at a location between said underarm panel and said lower cup panel, said lateral band separating said main cup panel from said upper cup panel and being spaced from said upper side band in said cup region, an under-cup band extending along the lower edge of said main cup panel and between said upper cup panel and said underarm panel, to said upper side band, said lateral band crossing said under-cup band at an X-junction located on the outer

margin of said cup region and at an inner edge of said underarm panel intermediate said upper side band and said lower side band, and said lower band comprising a first lower band portion at a lower edge of said underarm panel and a second lower band portion at a lower edge of said lower cup panel.

The various features of novelty which characterise the invention are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and specific objects attained by its uses, reference is made to the accompanying drawing and descriptive matter in which a preferred embodiment of the invention is illustrated.

In the drawing, Fig. 1 is a perspective view of a modified A-frame full support bra having the underarm comfort feature of the present invention.

Fig. 1 shows a brassiere generally designated 10 having a pair of cup regions generally designated 12, each having an inner margin and an outer margin. A back region 16 of the bra is provided with hooks and loops to allow the garment to be opened, or a continuous back region is provided and the garment is opened by separating the cup regions in a manner not shown.

The bra 10 includes a pair of underarm regions 14 connected to the outer margins of the cup regions 12

and positioned between the cup regions and the back region.

Each underarm region 14 comprises an elastic underarm panel 18 extending from the cup region 12 to the back region 16. Panel 18 is an elastic panel and is advantageously made of material that is elastic in all directions.

The cup region 12 comprises a relatively inelastic main cup panel 22 having inner, outer and lower edges 33, 36 and 38 respectively. An elastic lower cup panel 20 is connected to the lower edge 38 and an elastic upper cup panel 24 is connected to the outer edge 36. A relatively inelastic central cup panel 34 is connected to the inner edge 33 of the main cup panel 22.

An elastic upper side band 26 extends along an upper edge of the underarm panel 18 and an outer edge of the upper cup panel 24, at locations spaced from the outer edge 36 of the main cup panel. A lower elastic side band 28,30 also extends along a lower edge of the underarm panel 18 and a lower edge of the lower cup panel 20. Band 28,30 has a first portion 28 under panel 18 and a second portion 30 under panel 20.

A relatively inelastic upper cup band 32 extends along an upper edge of the central cup panel 34 and along an upper edge of the upper cup panel 24. A relatively inelastic lateral band extends along edge 36 between the upper cup band 32 at a location between the central cup panel 34 and the upper cup panel 24, to the lower band 28,30 at a location between the underarm panel 18 and the lower cup panel 20. The lateral band 36 separates the main cup panel 22 from the upper cup panel 24 and is spaced and substantially parallel to the upper side band 26 as it extends in the cup region 12.

A relatively inelastic under cup band also

extends along lower edge 38 and between the upper cup panel 24 and the underarm panel 18. Band 38 extends to the upper side band 26 and separates the upper cup panel 24 from the underarm panel 18.

5 The crossing relatively inelastic bands 36 and 38 form an X-junction 40 located on the outer margin of the cup region 12 and at an inner edge of the underarm panel 18. The lower band 28,30 comprises a first lower band portion 28, under the underarm panel 18, and a second
10 lower band portion 30, at the lower edge of the lower cup panel 20. In the embodiment of Fig. 1, the first lower band portion 28 is more elastic than the second lower band portion 30 so that the under region may stretch to accommodate different figures. The junction 40 also
15 permits the bands 36 and 38 to pivot like the blades of a scissors, at junction 40. This permits free uncoupled stretching between the upper side band 26 and the lower side band 28,30 so that women with different proportions at the upper and lower areas of their underarm region can
20 comfortably wear the bra.

Although in the embodiment of Fig. 1, the full extent of both bands 35 and 38 are inelastic, for the invention to operate properly, only the legs or portions of the bands extending from the junction 40 and along the
25 edge of panel 18 need be inelastic.

As will be explained in connection with the other disclosed embodiments of the invention, other structures such as the central panel 34, the upper band 32

and a separate seam along inner edge 33, can be eliminated without departing from the present invention.

Also the term "band" as used here may include tapes, ribbons or seams in the bra.



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WHAT IS CLAIMED IS:

1. A brassiere with underarm comfort feature,
comprising:

5 a pair of cup regions each having an inner
margin and an outer margin, the inner margins of said cup
regions being connected to each other;

an underarm region connected to the outer margin
of each cup region;

10 a back region connected to each underarm region
and structured so that the back regions are connected or
are connectable to one another;

said underarm region comprising an elastic
underarm panel extending away from said cup region to said
back region;

15 said cup region comprising a main cup panel
having inner, outer and lower edges, an elastic lower cup
panel connected to the lower edges of said main cup panel,
an elastic upper cup panel connected to the outer edge of
said main cup panel, and a central cup panel connected to
20 the inner edge of said main cup panel;

an elastic upper side band extending along an
upper edge of said underarm panel and an outer edge of
said upper cup panel at a location spaced from the outer
edge of said main cup panel;

25 an elastic lower band extending along a lower
edge of said underarm panel and a lower edge of said lower
cup panel;

an upper cup band extending along an inner edge



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of said central cup panel and along an upper edge of said upper cup panel;

5 a lateral band extending to said lower band at a location between said underarm panel and said lower cup panel, said lateral band separating said main cup panel from said upper cup panel and being spaced from said upper side band in said cup region;

10 an under-cup band extending along the lower edge of said main cup panel and between said upper cup panel and said underarm panel, to said upper side band, said lateral band crossing said under-cup band at an X-junction located on the outer margin of said cup region and at an inner edge of said underarm panel intermediate said upper side band and said lower side band; and

15 said lower band comprising a first lower band portion at a lower edge of said underarm panel and a second lower band portion at a lower edge of said lower cup panel.

2. A brassiere according to claim 1, wherein the
20 main cup region is relatively inelastic.

3. A brassier according to claim 1 or claim 2, wherein the central cup panel is relatively inelastic.

4. A brassiere according to any one of claims 1 to 3, wherein the upper cup band is relatively inelastic.



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5. A brassiere according to any one of claims 1 to 4, wherein the first lower band portion is more elastic than the second lower band portion.
6. A brassiere according to any one of claims 1 to 5, wherein the lateral band is relatively inelastic and extends between the upper cup band at a location between the central cup panel and the upper cup panel.
7. A brassiere according to any one of claims 1 to 6, wherein the under-cup band is relatively inelastic.
- 10 8. A brassiere constructed and arranged substantially as described herein with reference to the accompanying drawing.