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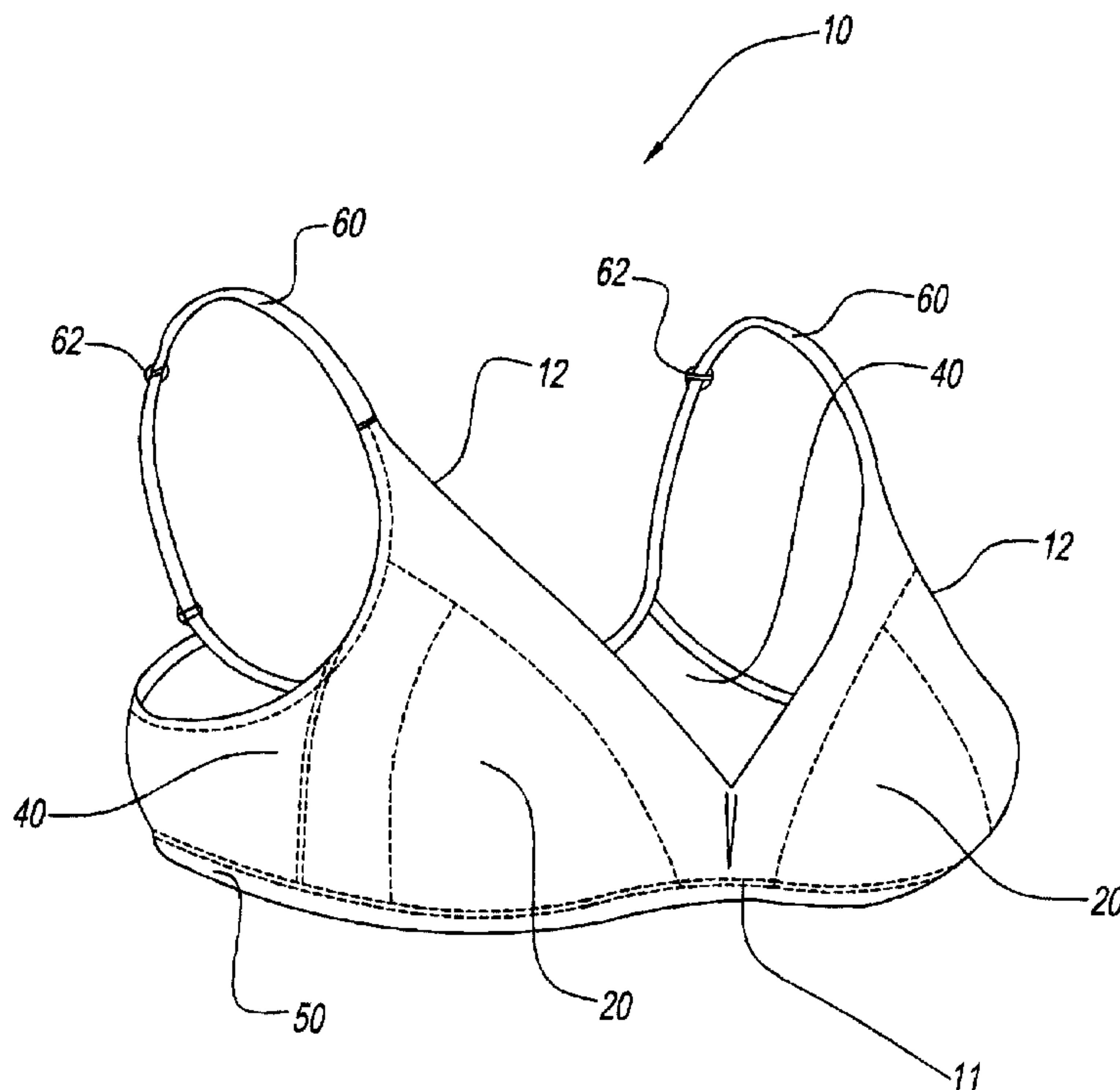
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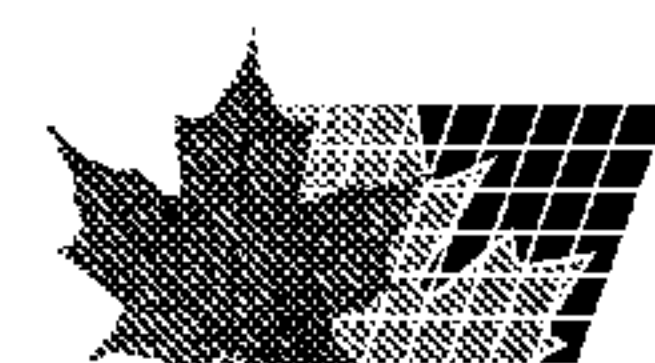
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(54) Title: FLEX FRAME BRASSIERE



(57) Abrégé/Abstract:

A brassiere for shaping and support having a body with an inner surface and an outer surface and a M-flex frame is provided. The M-flex frame is connected to the inner surface of the body and in particular to the inner periphery of two breast-receiving cups. The M-flex frame has a pair of lateral portions and a pair of medial portions that are substantially flexible to provide support and shaping to the breasts of the wearer. The M-flex frame can be incorporated into a softcup or an underwire brassiere.



ABSTRACT OF THE DISCLOSURE

A brassiere for shaping and support having a body with an inner surface and an outer surface and a M-flex frame is provided. The M-flex frame is connected to the inner surface of the body and in particular to the inner periphery of two breast-receiving cups. The M-flex frame has a pair of lateral portions and a pair of medial portions that are substantially flexible to provide support and shaping to the breasts of the wearer. The M-flex frame can be incorporated into a softcup or an underwire brassiere.

FLEX FRAME BRASSIERE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to brassieres having breast cups each having a frame for shaping and supporting the breasts. More particularly, the present invention is related to brassieres having breast cups each having an inner frame that straddles each respective breast for improved shaping and support.

2. Description of Related Art

A wide range of brassiere types are currently available in the women's undergarment market. These different brassiere offer either a single specific benefit or attempt to satisfy the varying degrees of functionality women demand in a brassiere. Today, brassieres must complement a broad range of popular fashions and demands of the user.

While improvements have been made, current brassieres still lack the adaptability necessary to comfortably accommodate many women in their daily activities. Often, an enhancement in one feature results in a compromise of another aspect of the brassiere. A brassiere that offers increased support coverage may not be very attractive. Such a brassiere may also not provide the necessary shaping or contouring women require. Conversely, a very attractive brassiere that offers shaping may not provide the necessary support or versatility required during everyday activities.

Furthermore, many brassieres that offer support or shaping do not allow for the adaptability that women's bodies demand. Also, many brassieres do not allow for minor fluctuations of breast size that occur with a woman's menstrual cycle or with a minor weight loss or gain. They also do not offer security and support while stretching with every movement of the body.

Accordingly, there is a need for a brassiere having a frame that provides continual support during activities and natural shaping while adapting to the fluctuations in a woman's breast size.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a brassiere that has a member to provide shaping and support to the wearer's breasts during a variety of movements and menstruation cycle periods of the wearer.

It is another object of the present invention to provide a brassiere having a flexible inner frame for shaping and supporting the breasts of the wearer at all times during use of the brassiere.

It is still another object of the present invention to provide such a brassiere that have a pair of inner liners, each for a different one of the pair of breast cups, in which each inner liner has two elasticized peripheral portions to support and shape the wearer's breasts.

It is yet another object of the present invention to provide such a brassiere that have a pair of inner liners in which the shaping of the wearer's breast includes an aesthetically pleasing tapering of the breast tissue.

It is a further object of the present invention to provide such a brassiere in which the pair of inner liners form a M-shaped, flexible frame.

These and other objects and advantages of the present invention are achieved by the present invention that provides a brassiere for supporting and shaping the breasts of the wearer. The brassiere has a body portion that includes a pair of breast cups, and a M-shaped, flexible inner frame that is connected to the body portion. The inner frame has a pair of elastic or stretchable peripheral arm or leg portions that provide for shaping and support of the wearer's breasts. Each cup has low elasticity.

BRIEF DESCRIPTION OF DRAWINGS

Fig. 1 is a front perspective view of a first embodiment of a brassiere according to the present invention.

Fig. 2 is a rear perspective view of the brassiere of Fig. 1.

Fig. 3 is a rear plan view of the brassiere of Fig. 1.

Fig. 4 is a front perspective view of a second embodiment of the brassiere of the present invention.

Fig. 5 is a front plan view of the brassiere of Fig. 4.

Fig. 6 is a front perspective view of a third embodiment of a brassiere of the present invention, shown as a maternity brassiere.

DETAILED DESCRIPTION OF THE INVENTION

Referring to the figures, and more particularly to Fig. 1, a brassiere according to the present invention is generally designated by reference numeral 10. The brassiere 10, in its conventional aspects, has a body 11 with a pair of breast receiving cups 20, a pair of side panels 40 each adjacent and connected to a different one of the pair of breast receiving cups, and preferably a torso-encircling band 50 along the entire base or lower edge of the brassiere. The body 11 also has an upper trim or edge 12 that is along the upper edge of the pair of breast cups 20, as well as a pair of side edges or trims at a portion of side panels 40. The brassiere 10 preferably also has a pair of shoulder straps 60, each associated with a different one of the pair of breast cups 20 and pair of side panels 40. Each shoulder strap 60 preferably has a conventional length adjusting means or device 62. The side panels 40 are removable connected together along their free or distal ends by a conventional fastener, preferably in the form a conventional hook 70 and eye 72 arrangement.

Referring to Figs. 1 and 2, each breast cup 20 is a layer of material 22 positioned between its adjacent breast cup 20, side panel 40, and band 50. The pair of breast cups 20 have connected thereto, preferably directly, a M-shaped flexible frame 24, that will be called herein "M-flex". The M-shaped frame 24 is connected or attached to body 11 along side panel edges 44, upper edges 14, and lower edges 54. Accordingly, M-flex frame 24 has four lateral edges 26 that are not connected to body 11 so that that portion of the M-flex frame can flex towards and away from the body of brassiere 10. The upper trim or edge 12 folds over to border the upper edges of layer 22 of each breast cup 20 and the upper portion of frame 24 to prevent separation of the two materials.

Referring to Fig. 3, M-flex frame 24 has a pair of lateral pieces or portions 30 and a pair of medial pieces or portions 32. Each lateral piece 30 is connected to a respective medial piece 32 near the upper portion of its respective breast cup 20. Each lateral piece 30 is peripherally connected to a respective cup 20 along side panel edge 44, upper edge 14 and lower edges 54. Each medial piece 32 is connected along edge to the torso-encircling band 50, and to upper edge 14. The medial pieces 32 can be a single integral piece or connected together along a line 33. The connection of the medial pieces 32 forms a trapezoidal area 34

that separates the wearer's breasts. Moreover, the connection of medial pieces 32 or trapezoidal portion 34 is not connected to body 11 so that the trapezoidal area can also move towards and away from body 11 depending upon the movement and any slight change in breast size of the wearer.

The frame 24, namely lateral pieces 30 and medial pieces 32, surround or frame in a contouring manner the breasts of the wearer. Furthermore, they cooperate to provide shape and support to the wearer's breasts. By actively framing the breasts, the M-flex frame 24 provides the desired projection of the breast tissue in a way that a full inner liner could not offer. The lateral pieces 30 and the medial pieces 32 project the breast tissue forward to provide natural and desired shaping. In contrast, a full inner liner would compress the breasts of the wearer and detract from the appearance of the clothing.

The four lateral edges 26 of frame 24, allow a pocket area to be formed between body 11 and frame, by not being connected to body 11. The lateral edges 26 of lateral pieces 30 and medial pieces 32, are available to follow movement of the wearer and support the breasts in any position of the wearer. The wearer is able to have continual support and contouring while wearing the brassiere 10.

Each layer 22 is made of a low elasticity material. Preferably, the material of layer 22 is preferably a lace type material that, preferably, provides a decorative pattern such as, for example a floral pattern. The lace type material is a lace that is about 92% nylon and about 8% Lycra. The frame 28 of each breast cup 20 is formed of an elastic-type material that also preferably provides a cushioning effect. The material can be, for example, a combination of a raschel fabric that is preferably 86% nylon and 14% spandex, and a circular knit fabric that is about 92% polyester and 8% spandex. Frame 24 has a layer of the raschel fabric connected, by an adhesive such as glue, to the circular knit fabric to form a two-ply frame.

Furthermore, the elastic material of lateral pieces 30 and medial pieces 32 of frame 24, along with the flexibility provides by the attachments of the frame to body 11, readily accommodate fluctuations in breast size resulting from monthly menstrual cycles or slight weight gain or loss. This adjustment allows the woman to wear the same brassiere throughout the month and maintain a desired level of appearance, comfort and support without compromise. Furthermore, the elastic cushioning material of lateral pieces 30 and medial pieces 32 of frame 24 allows continual support and shaping as the wearer moves in different directions.

The illustrated brassiere of Figs. 1 to 3 is a soft cup brassiere without an underwire. However, the flexible frame 24 of the present invention can also be used in an underwire brassiere, as shown in Figs. 4 and 5, or other type brassieres, without compromising the benefits provided by frame 24.

Referring to Figs. 4 and 5, the underwire brassiere 10 has the structure of body 11 as that in Figs. 1 to 3. However, the underwire brassiere embodiment does change frame 24 and, moreover, the connection of the frame to body 11. In this embodiment, body 11 also has connected thereto a pair of sheaths 80. Each sheath 80 can receive therein a conventional underwire.

Each sheath 80 is connected, preferably by stitching, at one end to side panel edge 44 and the other end to upper edge 14. Also, each sheath 80 is connected along edge 82 that connects side panel 40 and lateral piece 30 to layer 22. Unlike the first embodiment shown in Figs 1 to 3, the frame 24 has two separate medial pieces 32 that terminate at sheath 80. Further, body 11 has a center gore 16 that is positioned between the pair of sheaths 80. In this embodiment, sheath 80 is connected to body 11 and medial piece 32 along sheath peripheral edge 84 so that center gore 16 forms a triangular shape. In this embodiment, there is no space between medial pieces 32 and body 11 that permits the entire medial piece to move towards and away from body 11 as in the first embodiment of Figs. 1 to 3. Accordingly, for this embodiment having an underwire that would normally be directed to a more fuller figure woman, there is more anchoring or support between the breast cups 20 that is needed for such a wearer. Besides this aspect, the M-flex frame 24 in this second embodiment, nonetheless also provides, as with the first embodiment shaping and support to the breasts of the wearer including the tapering-type shaping of the breasts of the wearer.

Referring to Fig. 6, this embodiment of the present invention illustrates a maternity brassiere 10 that also incorporates the M-flex frame 24. As with the first embodiment, the M-flex frame 24 has lateral pieces 30 and medial pieces 32 that are flexible or elastic and form the M-flex shape. As with the first embodiment, the M-flex frame 24 has a trapezoidal center shape 34 at the stitched together two medial pieces 32 and the entire center shape can move towards and away from body 11. In this embodiment, body 11 has layer 22 with an openable device, such as, for example a snap 27 that opens layer 22 to permit access to the breast of a wearer from outside of the brassiere 10 when the brassiere is worn by the wearer.

While the present invention has been described with reference to one or more exemplary embodiments, it will be understood that various changes may be made and equivalents may be substituted for elements thereof without departing from the scope of the present invention. In addition, many modifications may be made to adapt a particular situation or material to the teachings of the disclosure without departing from the scope thereof. Therefore, it is intended that the present invention not be limited to the particular embodiment(s) disclosed as the best mode contemplated for carrying out this invention, but that the invention will include all embodiments falling within the scope of the appended claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A brassiere for shaping and supporting the breasts of a wearer comprising:

a body having an inner surface and an outer surface;

a M-shaped, substantially flexible frame being connected to the inner surface of said body, said frame having a pair of lateral portions and a pair of medial portions, said pair of lateral portions and said pair of medial portions being substantially flexible to provide support and shaping to the breasts of the wearer.
2. The brassiere according to claim 1, wherein said brassiere is a soft-cup brassiere or an underwire brassiere.
3. The brassiere according to claim 1, wherein said body further comprises a pair of breast receiving cups, a pair of side panels connected to a respective one of said breast receiving cups, and a torso-encircling band connected to each of said pair of breast receiving cups and each of said pair of side panels.
4. The brassiere according to claim 3, wherein said pair lateral portions are each peripherally connected to a respective one of said pair of breast receiving cups, a respective side panel and said torso-encircling band, thereby forming a pocket between said respective breast cup and said respective lateral portion.
5. The brassiere according to claim 4, wherein said pair of medial portions are each connected to each other to forming a space between said M-frame substantially flexible and said inner surface of said body, thereby allowing relative movement therebetween.
6. The brassiere according to claim 1, wherein said body further comprises a pair of breast receiving cups, pair of side panels, a pair of underwire sheaths each containing a respective underwire, wherein each one of said underwire sheath is connected to a respective breast receiving cup, a respective side panel and to a central gore located between said pair of breast receiving cups.

7. The brassiere according to claim 6, wherein each of said pair of lateral portions and each of said pair of medial portions are peripherally connected to a respective underwire sheath and to a respective one of said pair of breast receiving cups, thereby forming an open pocket between each said lateral portion and a respective breast receiving cup and each said medial portion and a respective breast receiving cup.

8. The brassiere according to claim 1, wherein each of said pair of medial portions and each of said pair of lateral portions are formed of an elasticized cushioning material.

9. The brassiere of claim 3, wherein each one said pair of breast receiving cups are formed of a elasticized lace-type material.

10. The brassiere according to claim 1, wherein said M-shaped frame straddles the breasts of the wearer.

11. A brassiere for shaping and supporting the breasts of a wearer comprising:

a pair of breast receiving cups, wherein each of said pair of breast receiving cups has a periphery and an inner and an outer surface; and

a pair of M-shaped, substantially flexible frames being connected to said inner surface of said periphery of each said pair of breast receiving cups to provide flexible support and shaping to the breasts of the wearer.

12. The brassiere according to claim 11, wherein said each of said pair of M-shaped, substantially flexible frames further comprises a lateral portion and a medial portion.

13. The brassiere according to claim 12, further comprising a central gore connected to each of a pair of breast receiving cups, a pair of side panels each connected to a respective one of said pair of breast receiving cups, and a torso-encircling band connected to each of said pair of breast receiving cups and to each of said pair of side panels.

14. The brassiere according to claim 13, wherein said each of said pair of lateral portions are connected to a respective one of said pair of side panels, a periphery of a respective one of said pair of breast receiving cups and to said torso-encircling band to form an open pocket between each said pair of lateral portions and the respective one of said pair of breast receiving cups.

15. The brassiere according to claim 14, wherein each said pair medial portions is connected the other of said pair of medial portions, to a periphery of the respective breast receiving cup and to said torso-encircling portion thereby forming an opening between said medial portions and said breast receiving cups to provide relative movement therebetween.

16. The brassiere according to claim 13, further comprising a pair of underwire sheaths each having an underwire, wherein each of said pair of underwire sheaths is connected to one of said pair of breast receiving cups, a respective side panel and to said central gore.

17. The brassiere according to claim 16, wherein each of said pair of lateral portions and are connected to one of said pair of medial portions and to one of said pair of underwire sheaths, and each of said pair of medial portions are connected one of said pair of underwire sheaths, thereby creating a pair of pockets between each said pair of breast receiving cups and said M-shaped flexible frame.

18. The brassiere according to claim 12, wherein each of said pair of lateral portions and each of said pair of medial portions are formed of an elasticized cushioning material.

19. The brassiere according to claim 12, wherein said pair of breast receiving cups are formed of an elasticized lace-type material.

20. The brassiere according to claim 11, wherein the brassiere is a soft-cup brassiere or an underwire brassiere.

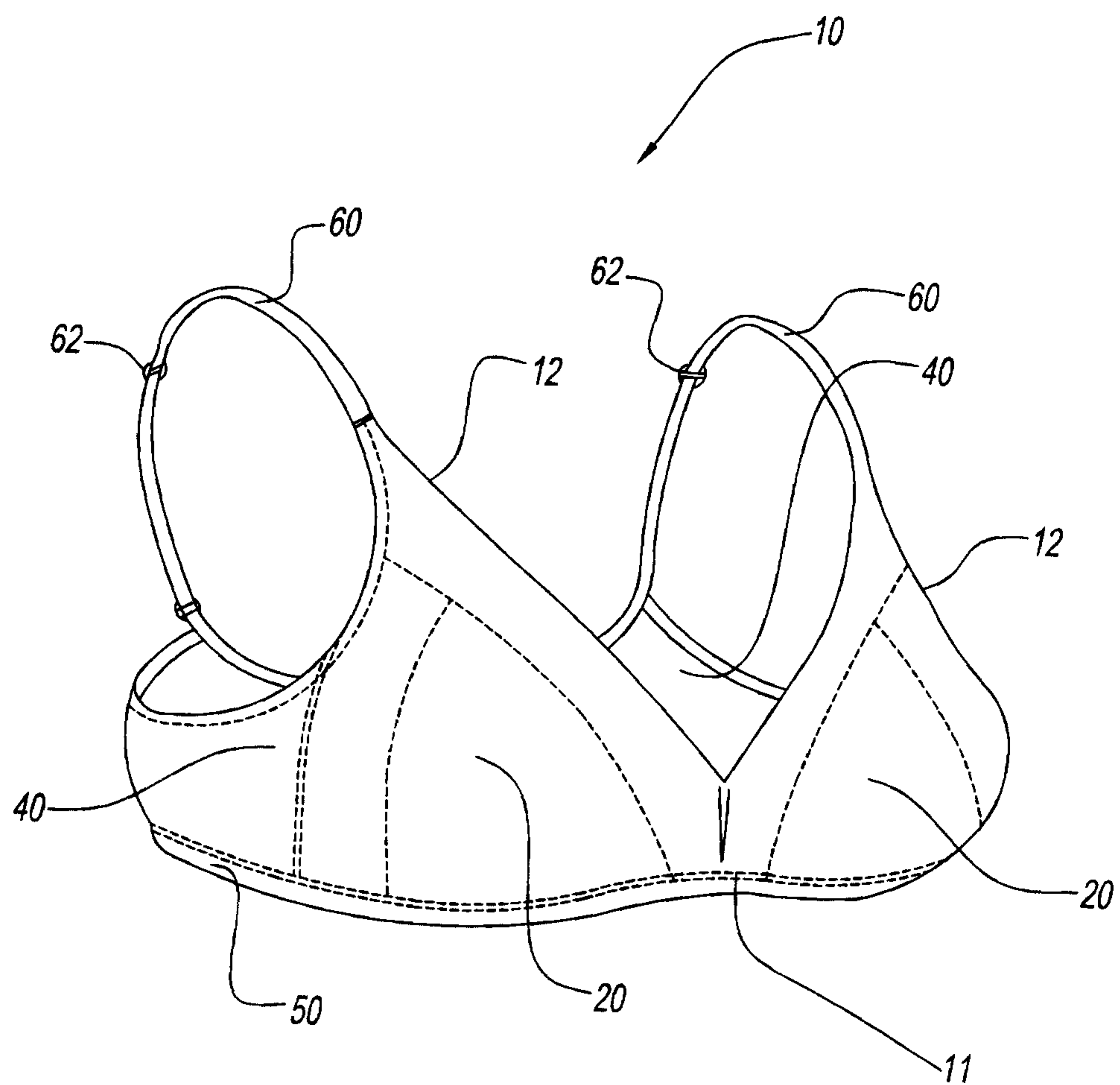


Fig. 1

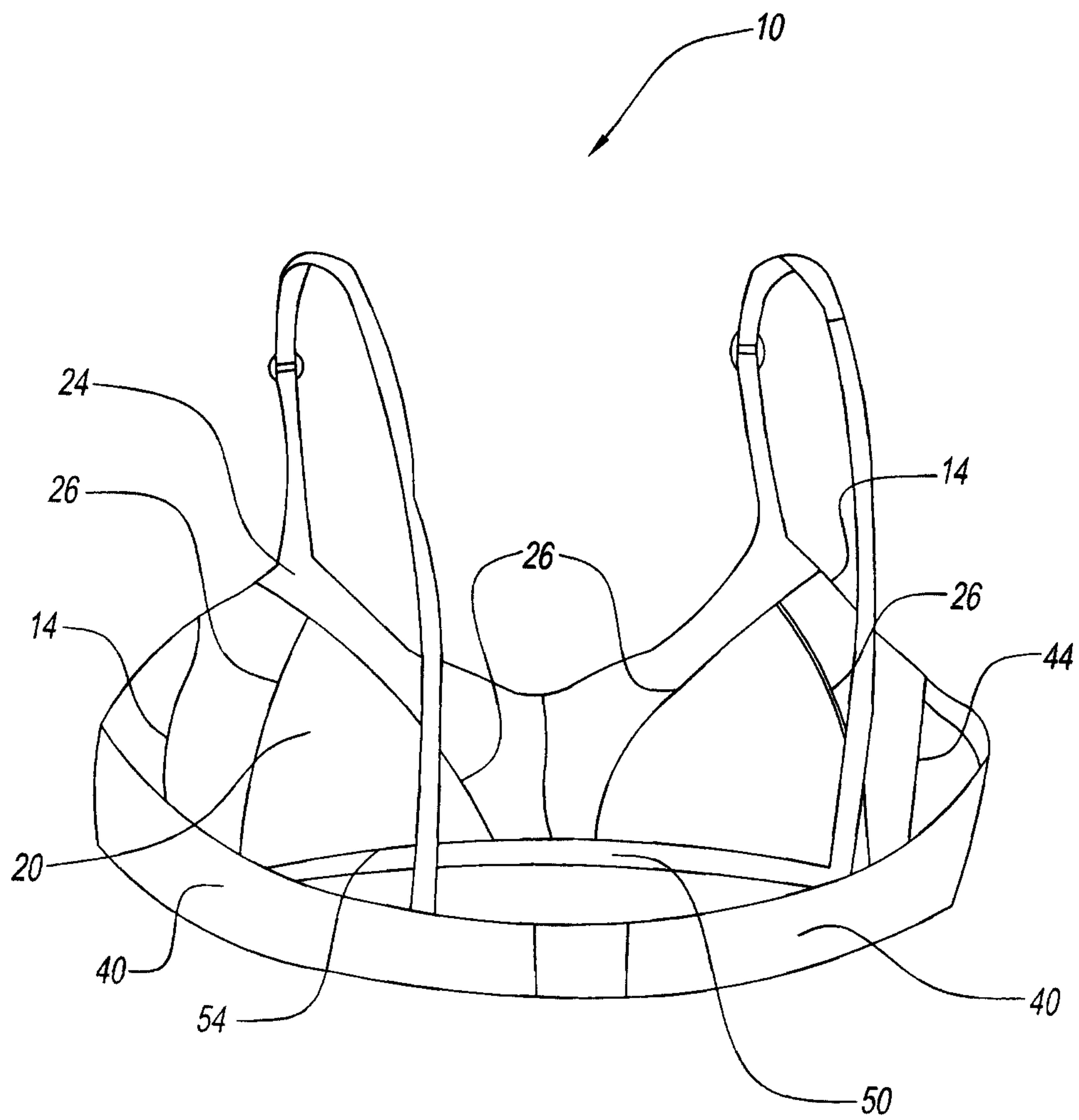


Fig. 2

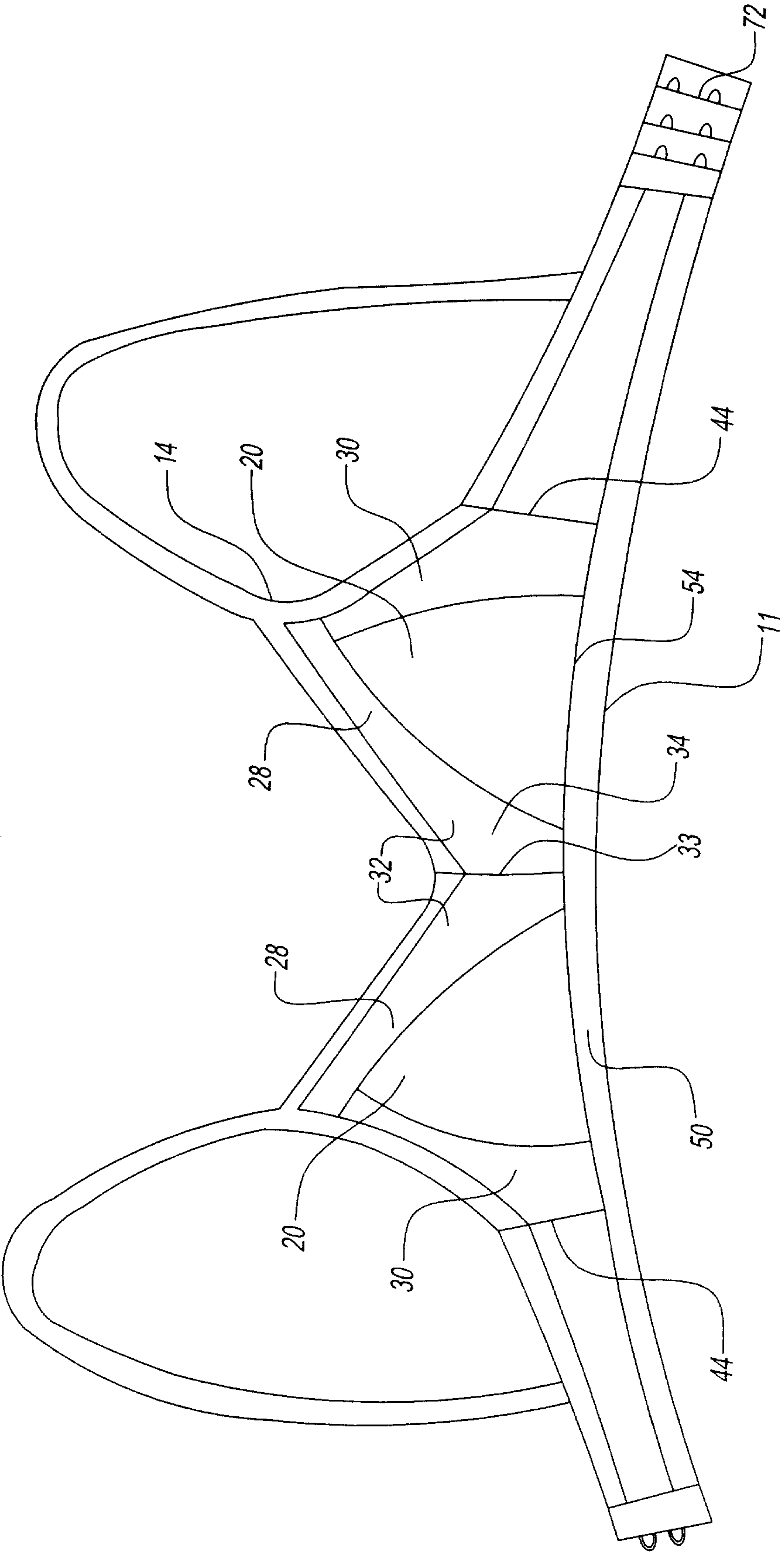


Fig. 3

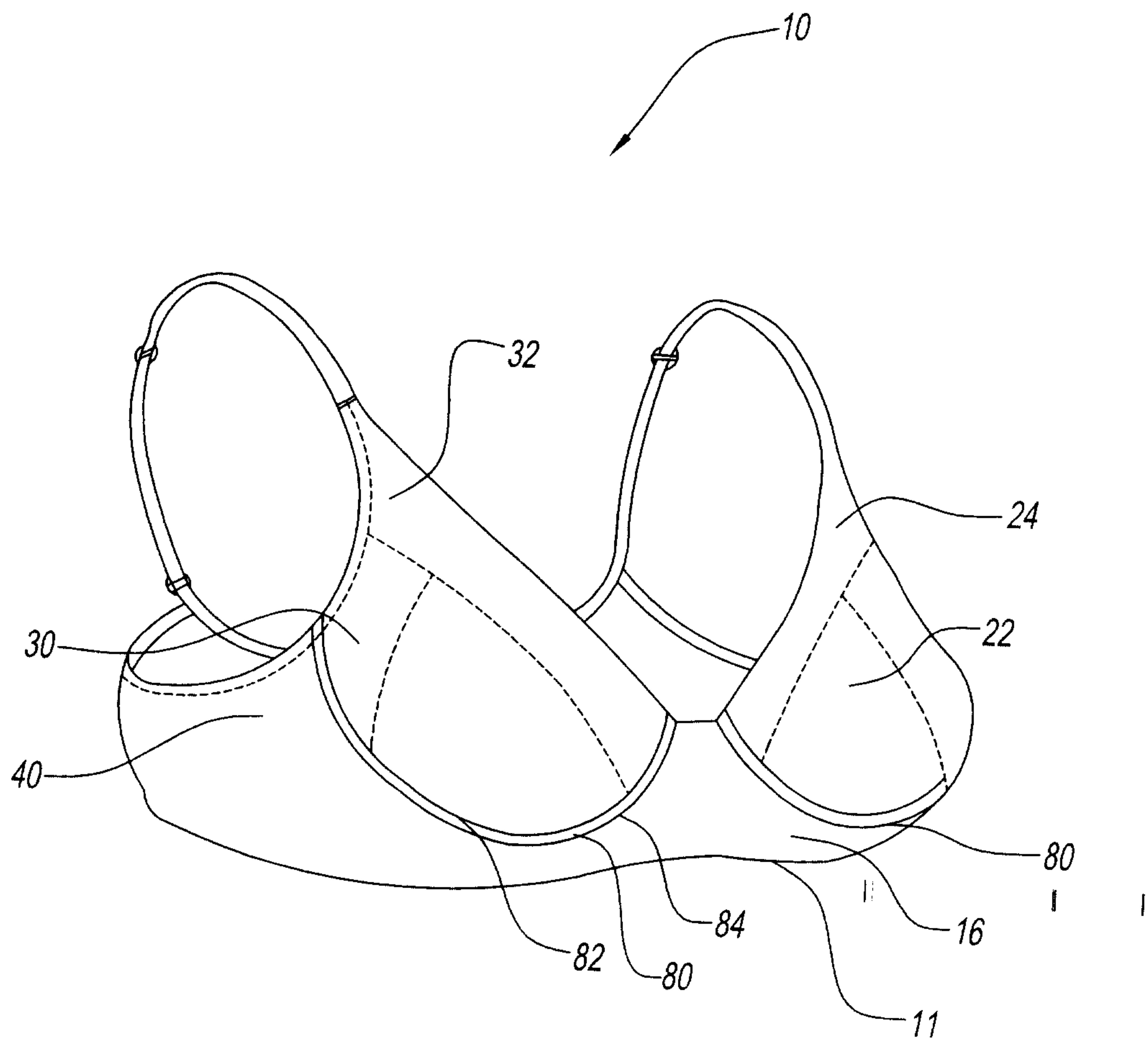


Fig. 4

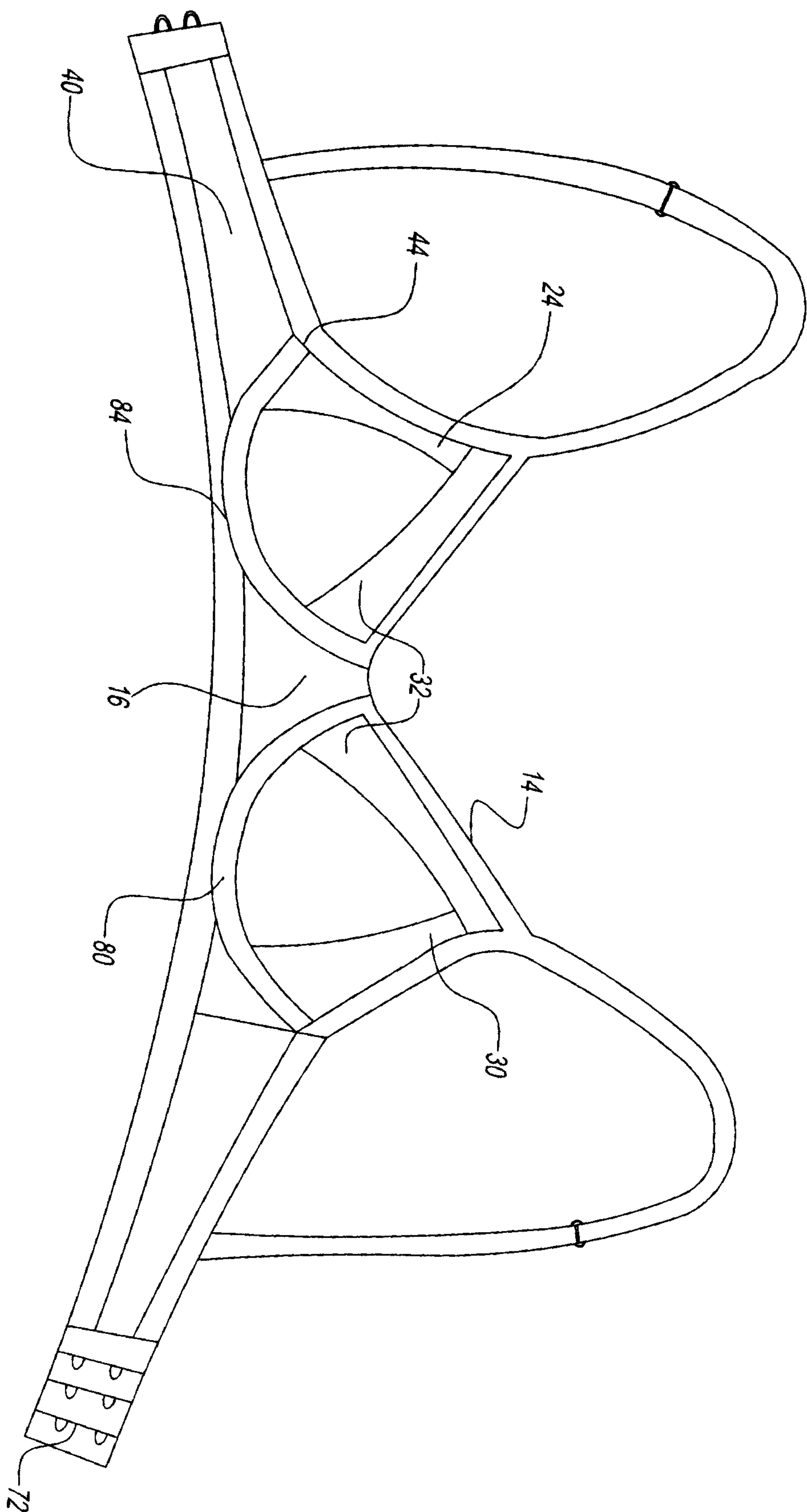


Fig. 5

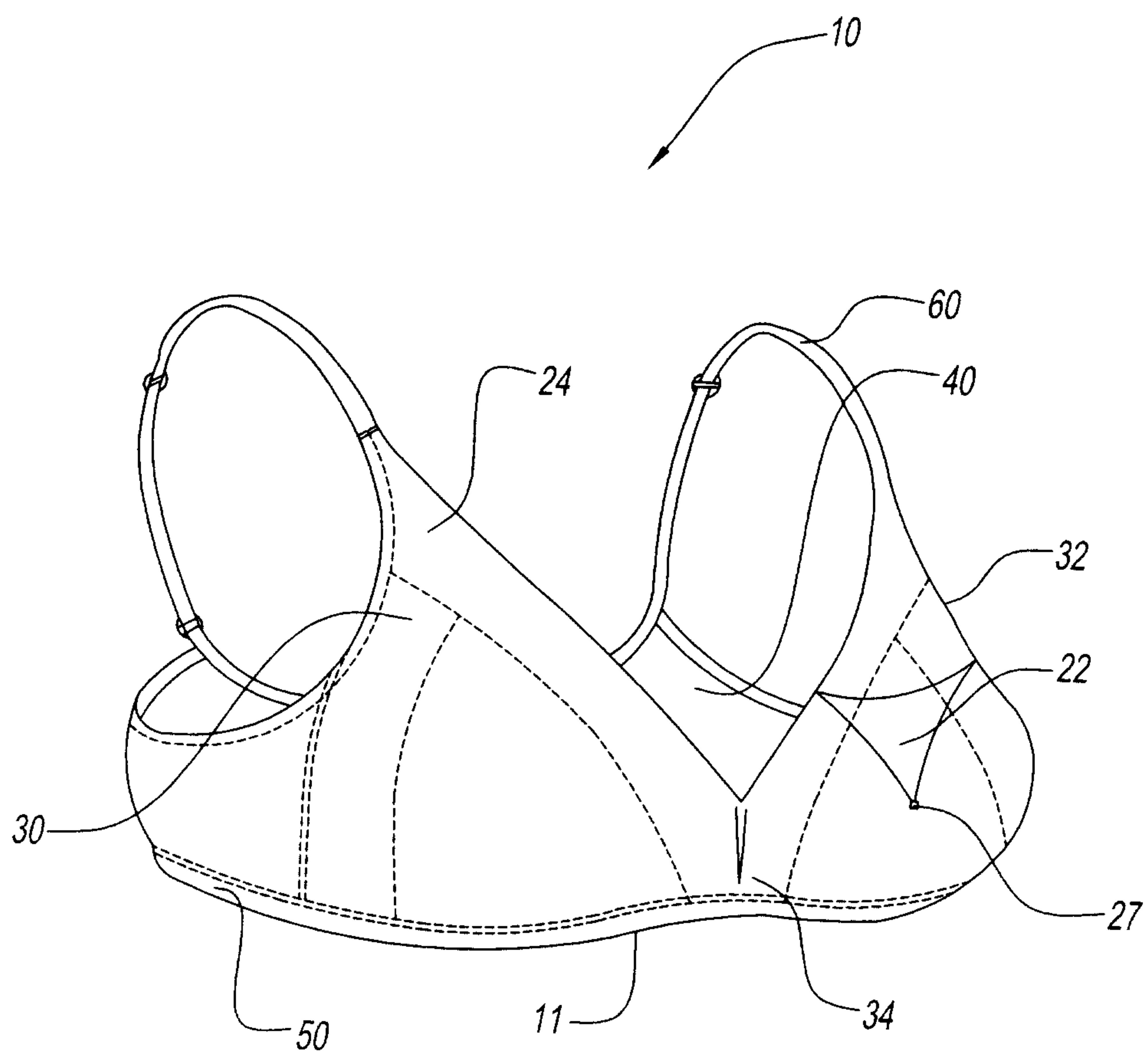


Fig. 6

