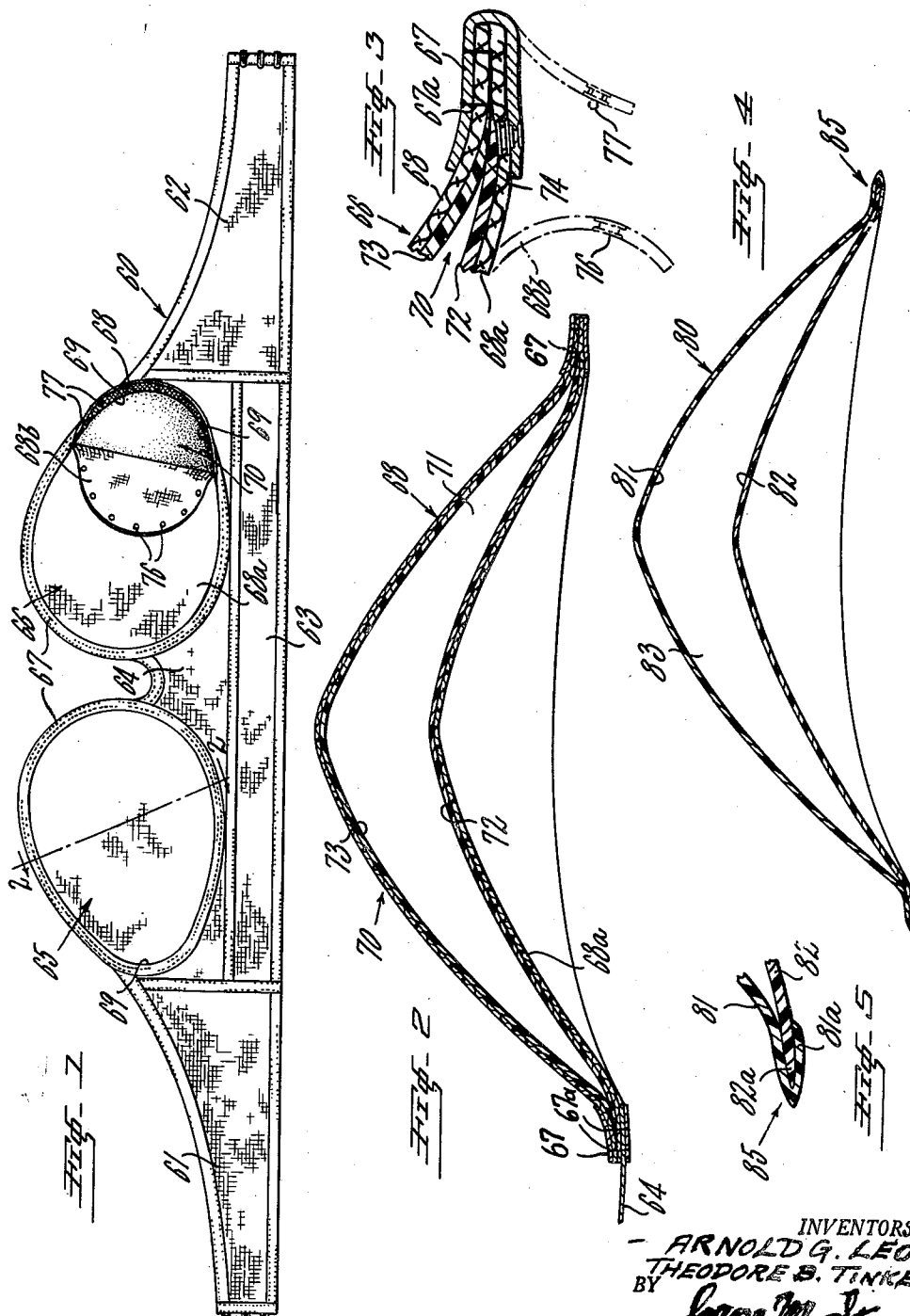


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BREAST PAD STRUCTURE
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BREAST PAD STRUCTURE

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This invention relates to breast pads or like breast simulating structures which are constructed to be used in connection with brassières, in particular with brassières devoid of shoulder straps.

It is one of the main features of this invention to provide means resulting in breast pads of the above nature which may be made from plastics and similar composite material and which conform very closely to the natural form and conditions of a lady's breast.

It is another object of the present invention to provide means affording the insertion of the breast pad in a so-called "strapless" brassière, which without resorting to any wire reinforcement as now generally used, coats with a reinforcement brought about by the particular shape and structure of the novel breast pad.

It is still another object of the present invention to provide means facilitating inexpensive manufacture of efficient breast pad structures having predetermined volume and size, the latter being somewhat regulatable due to the inflation of the breast pad with air or other suitable fluid.

Yet a further object of the present invention is to provide means rendering the possibility of generally employing the breast pad structure as a prosthetic device which replaces those heretofore used and made to order.

Yet a further object of the present invention is to provide means ensuring the creation of breast pad structures containing a predetermined quantity of air or like fluid and permitting the movability of the front wall of the breast pad relatively to the rear wall thereof, the latter terminating in a reinforced relatively stiff rim adapted for engagement preferably with a "strapless" brassière.

Still a further object of the present invention is to provide means facilitating the assembly of the breast pad structures of the aforesaid nature with a brassière, whereby the latter is maintained in operative position by said breast pads and for ready removal of the latter from said brassière.

With the above and other objects in view, the invention will be hereinafter more fully described and the combination and arrangement of parts will be shown in the accompanying drawing and pointed out in the claims which form part of the specification.

In the drawing:

Fig. 1 is a rear view of a strapless brassière, parts thereof being broken away.

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Fig. 2 is a sectional view on an enlarged scale taken along line 2-2 of Fig. 1.

Fig. 3 is an enlarged fragmentary view of the right hand corner of Fig. 2.

Fig. 4 shows on a somewhat reduced scale a sectional view of a breast pad made in accordance with this invention but somewhat modified with respect to the breast pad shown in Fig. 2.

Fig. 5 is a fragmentary view in section of the left hand corner of the breast pad illustrated in Fig. 4.

Referring now more particularly to the embodiment of the invention shown in Figs. 1 to 3, there is disclosed a brassière 60 of the type which is devoid of any shoulder straps. This brassière has the lateral stretchable or elastic portions 61, 62; the relatively rigid or non-stretchable lower or bandeau portion 63 and the median portion 64, which may preferably be made from elastic fabric material.

Cups 65, 66 are defined by suitable binding 67 which retains in position by stitches 67a a piece of net material 68 forming the front wall of each cup 65, 66. Each cup has further a rear wall 68a of relatively wide mesh fabric, such as tulle-like net material which is also held and fixed in position by stitches 67a and binding 67 but for a lateral end opening 69 provided in the outer ends of the respective cups 65, 66. These open ends are closable by suitable fastener means 76, 77 as will be explained further below.

Through these open ends may be introduced the breast pads 70 of predetermined size and containing a predetermined volume 71 of air or similar fluid. These breast pads 70 are made of preferably transparent plastic material of which the rear wall 72 is pre-shaped and preferably convex and relatively rigid, whereas the front wall 73 is flexible and pliable. Sheet material of vinyl chloride acetate plastics, vinyl acetate resins, and similar plastic compositions may be employed for the more rigid rear wall 72 and the yieldable and pliable front wall 73, which are electronically heat sealed or otherwise bonded along the marginal or peripheral rim 74 at which the outer edges of rear wall 72 and of front wall 73 meet.

Since rim 74 is thus reinforced and rather rigid and, rim 74 when positioned for contact with the adjacent inner faces of the edges of outer and inner tulle or fabric walls 68, 68a (Figs. 2, 3) replaces the wire or bones heretofore employed to maintain cups 65, 66 in extended and taut condition.

It will be observed from the right hand side of

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Fig. 1 that the outer end of rear wall 63a forms a flap 68b, which, in the present instance, has a plurality of snap fasteners 76 adapted to engage complementary fasteners 77 whereby end opening 69 may be closed. Any known and suitable velvet finishing strip or trimming may be used to avoid any contact of the snap fastener means with the skin of the wearer. It is also contemplated to reduce the opening 69 to a minimum and close same by a corresponding smaller flap 68b which is devoid of any fastener or securing means.

In the latter case flap 68b may be basted to the binding 67. The rear wall 63a may be otherwise glued temporarily or permanently connected to the curved and relatively stiff rear wall 72, if desired.

In the embodiment shown in Fig. 3 a portion of the binding 67 engages by means of a male fastener 77 the socket of the female fastener 76 whereby flap 68b is fixed in position to retain pad 70 in its position at the closable end 69.

Fig. 4 shows a pad 80 of predetermined shape having the pliable front wall 81 and the relatively stiff rear wall 82. A predetermined volume 83 of air or other suitable fluid is defined by the walls 81, 82. In this particular instance and as more clearly shown in Fig. 5 the flexible wall 81 is folded over the end 82a of wall 82 and is heat sealed thereto or otherwise bonded at 81a. Thus, a reinforced rim 85 is obtained which is shaped for the insertion into a suitable space provided within the binding 67, to thereby hold the respective cup of the brassiere in taut condition, as more specifically referred to in the embodiment shown in Fig. 2.

It is well understood that the pre-shaped and pre-inflated pad 80 with the relatively stiff wall 82 and relatively yieldable front wall 81 may be made of any suitable plastic material or plastic composition as hereinabove referred to and that, if desired, a suitable valve (not shown) may be employed to further inflate and to increase or decrease volume or space 83.

Since front wall 81 is relatively movable and pliable with respect to rear wall 82 it will be recognized that the pad made in accordance with this invention permits very close conformity of the breast pad to the natural form and conditions of a lady's breast.

Upon the insertion of the breast pad, according to the invention, in a brassiere (whether strapless or not) circulation of air between the skin of the wearer and the wide mesh rear wall may readily be afforded (for example, by suitably spacing fabric rear wall 63a from plastic rear wall 72). Retainment of the breast pads in their position within the cups may be achieved by wedging and frictional engagement of the reinforced rims 74 or 85, with the opposite inner faces of the fabric front wall and rear wall, which define a predetermined space therebetween, the latter extending lengthwise of said fabric walls at said binding with which said fabric front and rear walls are connected.

If the fabric rear wall is made from a material having pinkish color, such rear wall will afford to the thus assembled brassiere a more natural appearance.

Rear wall 68a instead of being glued or otherwise temporarily or permanently connected to the outwardly curved and relatively stiff rear wall 72 may be cut on a bias so as to approximately conform to rear wall 72 but being nevertheless sufficiently spaced therefrom to afford air circulation, as mentioned hereinabove.

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It is well understood that the rear wall 72 or 82 may be tinted in pinkish color, whereas the front wall 73 or 81 is translucent or transparent.

It can thus be seen that there has been provided according to the invention a closed air-inflated body of plastic sheet material, which body has a relatively thin front wall and relatively stiff rear wall preferably made from one and the same material, each wall terminating in a circumferential edge, said walls being heat-sealed or otherwise bonded to and upon each other along the circumferential edges thereof, which are substantially coextensive, to thereby provide an end rim, said front wall extending from said rim and being spaced from said rear wall and forwardly of the latter, whereby said front wall may be moved relatively to said rear wall.

While two embodiments of the invention have been shown and described, it will be easily understood that the same is capable of modification without departure from the general scope and spirit of the invention as defined in the claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent, is:

1. A breast pad structure for use in a brassiere cup comprising a fluid-inflated body made of plastic sheet material and having a relatively thin front wall and rear wall, each wall terminating in a circumferential edge, said walls being bonded to and upon each other along the circumferential edges thereof to thereby provide a reinforced end rim, said rear wall being relatively stiff and pre-shaped to extend forwardly of said rim, said front wall extending from said rim and being spaced from the latter and forwardly of the rear wall, said front wall being movable relative to said rear wall, said rim being shaped in outward direction beyond the remainder of said walls for engagement within the cup of a brassiere to maintain said cup in substantially taut condition.

2. A structure according to claim 1, wherein the edge of one of said walls is folded over the edge of the other of said walls and bonded thereto to thereby obtain a reinforcement of said rim.

3. The combination, in a brassiere, of a fluid-inflated breast pad, with a cup forming a part of said brassiere and provided with retaining means engageable with said breast pad, said breast pad including a relatively thin and pliable front wall and a rear wall each terminating in a circumferential edge, said walls being bonded to each other in superposed position along the circumferential edges of said walls to thereby provide a reinforced laminated rim, said rear wall being made of plastic material which is relatively stiff and pre-shaped to extend forwardly of said rim, said front wall being made of plastic material extending from said rim and being spaced from said rear wall in forward direction of the latter whereby said front wall may be moved relatively to the rear wall, said laminated rim of said pad being shaped for engagement with said retaining means to maintain said cup in substantially taut condition.

4. The combination according to claim 3, wherein said retaining means consists of a fabric front wall against which said front wall of said pad abuts and a fabric rear wall positioned rearwardly of said pad, said fabric front wall and said fabric rear wall being joined together but forming a space at the location of the junction, whereby said laminated rim may be positioned within said space and to be retained therein.

5. A breast pad structure for use in a brassiere

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cup having a peripheral portion; comprising an inflatable body fabricated of plastic sheet material and including front and rear walls each terminating in a marginal edge, said walls being bonded at their marginal edges in superposed position to provide an air-impervious sealed space between said walls to receive therein an inflating medium and to attain a reinforced marginal rim having a thickness considerably larger than that of either wall, said rim being engageable with the peripheral portion of said cup for maintaining the latter in substantially taut condition, said rear wall being preshaped to extend forwardly of said reinforced marginal rim, said front wall extending from said reinforced marginal rim and being spaced forwardly of the latter and of said rear wall, whereby said walls are mov-

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able relative to each other, said front wall being shaped to form an outwardly curved surface simulating the contour of a breast of predetermined size and shape.

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