

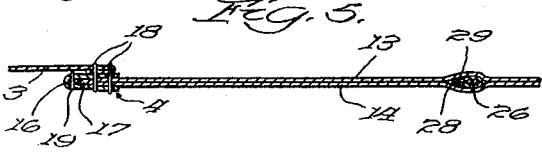
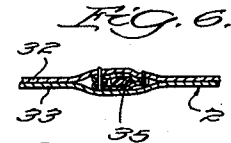
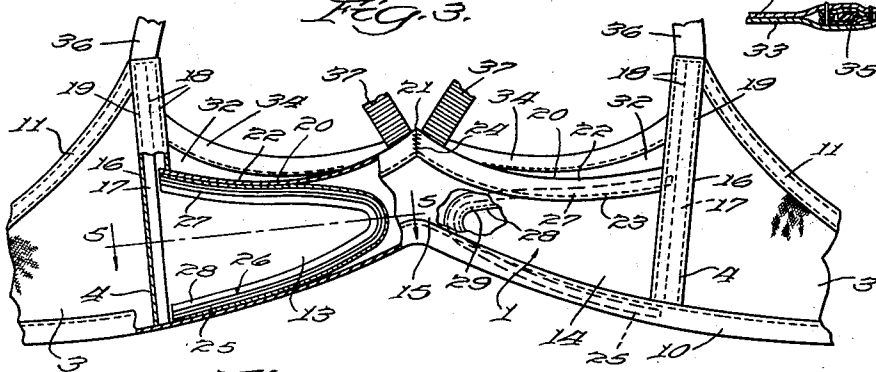
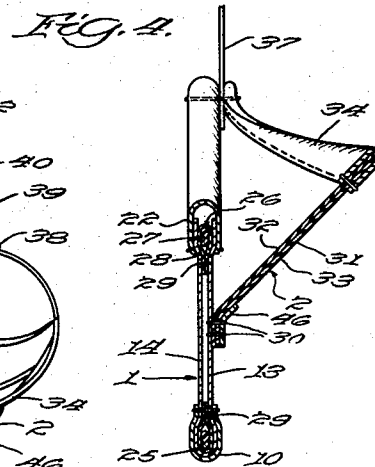
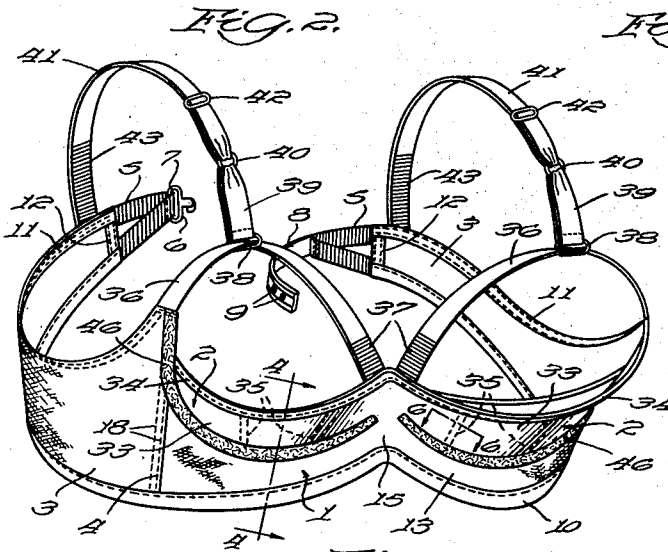
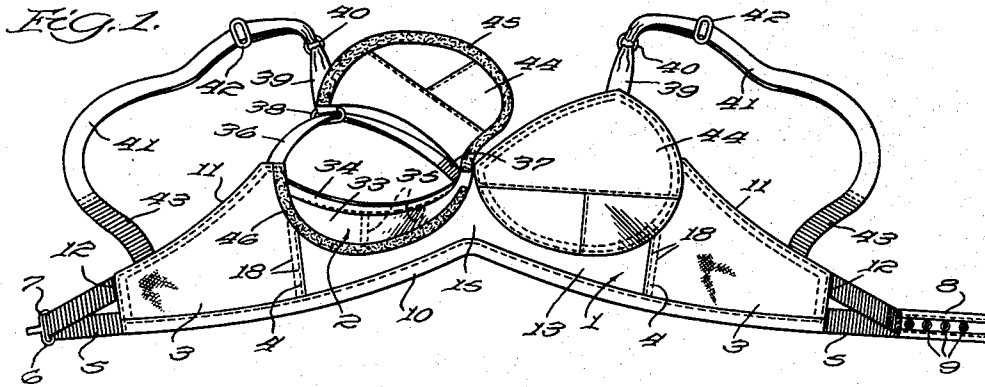
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BRASSIERE

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BRASSIERE
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This invention relates to brassieres and more particularly to improvements therein effecting more comfortable and healthful support of the breasts of the wearer.

An object of the present invention is to provide a brassiere having reinforced breast supporting cup or pocket structures each of which includes a resilient, upwardly urged member extending parallel to the torso substantially at the juncture of the lower edge of the breast with the torso together with other reinforced supporting means disposed outwardly from said resilient, upwardly urged member.

Another object of the invention is to provide a brassiere having breast supporting pockets constructed and arranged to afford support for the breasts without subjecting the tissues to the pressure of the end surfaces of rod like reinforcing members.

With the above objects in view, together with such additional objects and advantages as may subsequently appear, the invention resides in the parts, and in the construction, combination and arrangement of parts described, by way of example, in the following specification of a presently preferred embodiment of the invention, reference being had to the accompanying drawings which form a part of said specification and in which drawings:

FIG. 1 is a front elevational view of a brassiere embodying the present invention, one of the cover elements for a breast receiving pocket being opened up to show the pocket in pocket elevation,

FIG. 2 is a perspective front view substantially in the position as worn, the covers for the breast receiving pockets being omitted,

FIG. 3 is an enlarged scale, rear elevational, view of the front panel component of the brassiere, portions of the fabric being broken away to show details of interior construction,

FIG. 4 is a further enlarged scale, fragmentary, transverse sectional view of one of the pockets taken on the line 4—4 of FIG. 2,

FIG. 5 is an enlarged scale, fragmentary, sectional view taken on the line 5—5 of FIG. 3, and

FIG. 6 is an enlarged scale, fragmentary sectional view taken on the line 6—6 of FIG. 2, and particularly showing the method of enclosing a pocket reinforcing and supporting member.

Referring to the drawings, the illustrated embodiment of the invention comprises a brassiere having a torso encircling band including a front panel 1 which includes the breast supporting cups or pockets 2, 2 and the reinforcing means associated therewith, side panels 3, 3 each having one end thereof attached to one each of the opposite ends of the front panel by seams 4, 4 and at their other ends having looped elastic straps 5, 5 attached thereto; one of said looped straps carrying a flat metal hook 6 having an elongated eye 7 through which the loop of the strap extends and the other of said looped straps having one end of a single strap 8 sewed to the looped end thereof and said single strap 8 being provided with a plu-

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ality of metal eyelets 9 spaced therealong for engagement by the hook to close the body encircling band tightly about the torso of the wearer at a level below the breasts. The lower edge of the body encircling band component 5 is preferably finished by a binding 10 sewed thereto; the portions of said lower edge formed by said side panels extending generally horizontally along the portions of the torso contacted thereby and the upper edges thereof diverging from the narrow rear end of the side panels to which the straps 5, 5 are attached, in a curved line of gradually increasing steepness to the forward ends at the seams 4, 4. The upper edges of the side panels as well as the rear ends thereof are suitably finished by any suitable means such as hems 11, 11 at the said top edge and hems 12, 12 at the said rear ends.

The front panel 1 preferably includes front and rear plies of fabric 13 and 14 extending between the seams 4, 4 and has a lower edge which is coincident with the lower edges of the side panels at said seams and thence extends in slight upward curves to a center portion 15; said lower edge being finished by the same binding 10 as the lower edges of the side panels. The upper edges of the plies 13 and 14 terminate short of the upper edges of the side panels and the ends of said plies are enclosed within bindings 16, 16 the folds of which are disposed beyond the end of said plies to afford room for the plastic rod reinforcing ribs 17, 17 which extend from the lower edge of the front panel to the upper edge of the pocket members 2, 2 at the juncture thereof with the seams 4, 4. Rows of stitching 18, 18 simultaneously secure the binding to said plies and the infolded edge of the side panel together to form the seam structures 4, 4. Additionally, a third row of stitching 19 at the folds of the binding 16, 16 assists in tightly enclosing the reinforcing rib members 17, 17 therein. The upper edges of the fabric plies 13 and 14 extend from the side edges of the front panel in concave downwardly sweeping curves 20, 20 to a point approximately midway from the side edges of the front panel and the center point thereof and thence curve upwardly and meet an apical center point 21, said upper edges of said plies being enclosed in binding strips 22, 22 secured thereby by stitching 23 and the ends of these binding strips at the side edges of the front panel are enclosed by the binding 16, 16 and at said apical point are joined by stitching 24 which also connects certain supporting straps as will presently be described.

Enclosed in the binding 10 along the bottom of each side of the front panel are the arms 25, 25 of a pair of nested resilient plastic rods 26, 26 bent into a modified U-shaped configuration with the closed ends thereof disposed between the plies 13 and 14 and adjacent to the center of said front panel; the other arms 27, 27 being enclosed in the respective bindings 22, 22 and the ends of said rods being disposed within the seams 4, 4 as best shown at the left hand side of FIG. 3. Preferably these nested reinforcing members are enclosed in a strip of fabric having an inwardly extending flange 28 constituting the edges of the enclosing fabric strip and which edges are united by stitching 29; said flange providing means by which the rod assemblies are secured in place by the stitching securing the binding to the upper and lower edges of the front panels. These rods tend to keep the portion of the front panel in which they are enclosed yieldingly spread in a flat condition and also serve

to support the breast of the wearer at the point at which the under side of the breast extends outwardly from the plane of the torso. To state the structure and the action thereof in other words, these rods apply a lifting bias along a line which is generally coincident with at least a portion of the line representing the juncture of the breast contacting surfaces of the pockets with the torso contacting surface of said band structure. While in the present embodiment, the rods are arranged in nested pairs, where desirable, it will be appreciated, that a single similarly shaped rod may be used.

Fixed by parallel seams 30, 30 to the front ply 13 of the front panel at each side of the center line thereof are the front members 31, 31 of the pockets 2, 2; said front members comprising an inner ply 32 and an outer ply 33, and the upper edges of said members being finished by binding strips 34, 34 and the respective ends of the binding being enclosed in the seams 4, 4 at the sides of the front panel and being coincident with the ends of the bindings 22, 22 at the center of the front panel and being secured by the stitching 24. The said lower edges of each of the front members 31, 31 starts at the upper end of the side seams 4, 4 and continues therealong to about the point of juncture of the binding 22 with said seam, and thence extends laterally in a curved line which at its midlength approaches the lower edge of the front panel and thence curves upwardly to terminate slightly below the apical point 21. Interposed between the outer and inner plies 32 and 33 of these front members at spaced points therealong are rigid reinforcing or stiffening elements comprising plastic rods 35, 35 extending substantially at right angles from the seams 30 to the upper edges of said front members. Parallel rows of stitching extending through the plies 32 and 33 at each side of said reinforcing members serving to form pockets in which said members are retained and the upper ends of said reinforcing members are contained within the bindings 34, 34.

The shape of the plies 32 and 33 is such that when attached to the front panel as above described, the upper edges covered by the bindings 34, 34 have sufficient fullness so that they extend outwardly from the upper edge of the front panel to an extent such as illustrated in FIG. 4, and thus affords support for the breast of the user outwardly from the general plane of the front panel.

The shoulder support for the brassiere comprises a pair of straps 36, 36 associated one each with each side of the front panel and each having one end fixed to the end of the respective seams 4, 4 and the other end attached to a short length of elastic material 37 which at its other end is attached to the upper edge of the front panel adjacent to the apical point 21 thereof; said straps being considerably longer than the straight line distance between the points of attachment thereof and being given a half twist between their ends for a purpose presently to be explained.

Slidably carried on each of the straps 36, 36 is one each of a pair of flat metal loops 38, 38 and each of said loops carries a short double length of fabric strap material 39, 39 which at its other end extends through a metal ring 40, 40. A pair of shoulder straps 41, 41 engages one each of said rings by being doubled therethrough and having buckle means 42 by which the length of the shoulder strap can be adjusted. The opposite ends of the shoulder straps are connected to one end each of a pair of short length elastic straps 43, 43 which at their other ends are sewn to the upper edge of the side panels adjacent the rear ends thereof. By the engagement of the loops 38, 38 with the straps 36 the pull of the shoulder straps at each side of the pockets 2, 2 is equalized and the half twist imparted to the straps 36, 36 allows the straps to pass smoothly and flat through the loops 38, 38.

Also attached to the strap portions 39, 39 adjacent to the loops 38, 38 thereon are the upper ends of covers 44, 44 which on the portion of the periphery thereof

which contacts the lower edge of the pocket members along the seams 30, 30 are provided with one component 45 of a continuous pressure attached and detached fastening means having the other component 46, 46 thereof overlying the seams 30, 30 thus enabling the cover to be readily attached and smoothly secured and as readily detached when necessary.

While in the foregoing specification and drawings there has been disclosed a particular configuration and proportioning of the breast supporting components of the invention, it will be remembered that there is a wide variation in the breast configuration and measurements of women, wherefore, the relative lengths of the parts represented by the bindings 22 and 34 as well as the curvatures thereof and the relative positions thereof as worn will require considerable variation in manufacture not only in bust sizes but in various edge configurations in each size. Accordingly, changes and modifications may be made in these configurations without departure from the invention as defined in the appended claims.

I claim:

1. In a brassiere, a body encircling band structure having ends adapted to be joined at the back of the user provided with interengaging means and having the front portion thereof provided with a pair of breast receiving and supporting pocket components, and separate means for providing equalized vertical support for each of said pocket components, each of said pocket supporting means comprising a shoulder strap having a rear end attached to said body encircling band structure at the end of said band structure which is adjacent the pocket component supported by the shoulder strap and said shoulder strap having a loop at the other end thereof, and a second strap having the ends thereof attached to said band structure at the opposite sides of the associated pocket component and slidably engaging said loop, a first resilient means carried by said band structure constantly operative to apply a lifting bias along at least a portion of a line defining the juncture of the breast engaging surface of one of said pockets with the torso engaging surface of said band structure, and a second resilient means carried by said band structure similarly and independently operative to apply a similar lifting bias to the other of said pockets.

2. In a brassiere including a body encircling band structure having ends adapted to be joined at the back of the user provided with interengaging means and having a pair of breast receiving pockets at the front thereof with the lower portions of said pockets disposed above the lower edge of said band structure, the combination of yieldable stiffening means carried by said band structure below each of said pockets reacting between the lower edge of said band structures and the lower portion of each of said pockets and operative to impart a resilient lifting bias along a line generally coincident with the juncture of the breast contacting surfaces of said pockets with the body contacting surface of said band structure.

3. A brassiere as claimed in claim 2 in which each of said yieldable stiffening means comprises a pair of resilient rods bent into U-shape configuration and disposed in nested relation to each other with the rebent end portions thereof toward the midlength portion of said band structure and with one limb thereof parallel to and at the lower edge of said band structure and with the other limb thereof disposed at the juncture of the breast contacting surface of the associated pocket with the torso engaging surface of said band structure.

4. A brassiere as claimed in claim 2 in which each of said pockets is shaped to underlie the breast of the wearer and is provided with a series of spaced stiffening elements extending between the seam joining the pocket to said band structure to the outer edge of the pocket whereby the pocket is free to hinge outwardly away from the plane

of said band structure to the extent permitted by said joining seam.

5. A brassiere as claimed in claim 2 in which the upper portions of said pockets are provided with a means for equalized support; said means comprising a pair of shoulder straps associated one each with each of said pockets and a pair of strain equalizing means interposed one each between each shoulder strap and the opposite sides of the pocket associated therewith.

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