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T. B. SCHAUMER

2,888,931

BRASSIERE

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FIG. 1. *FIG. 2.*

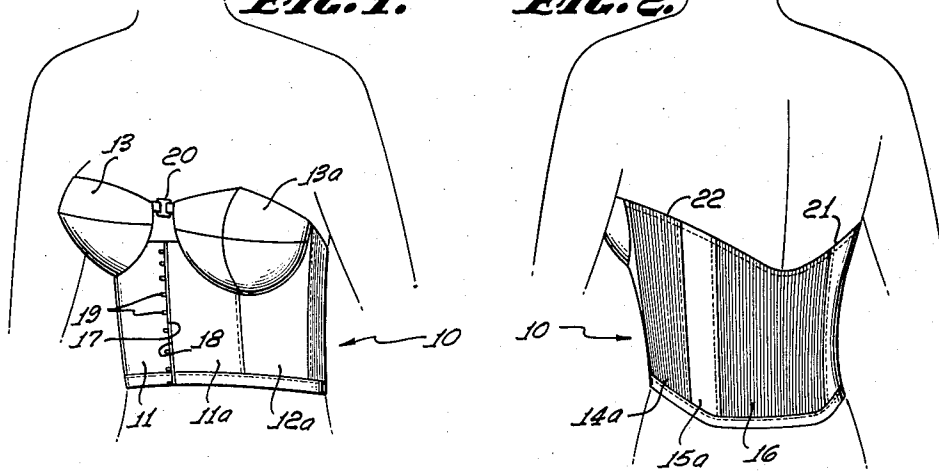


FIG. 3.

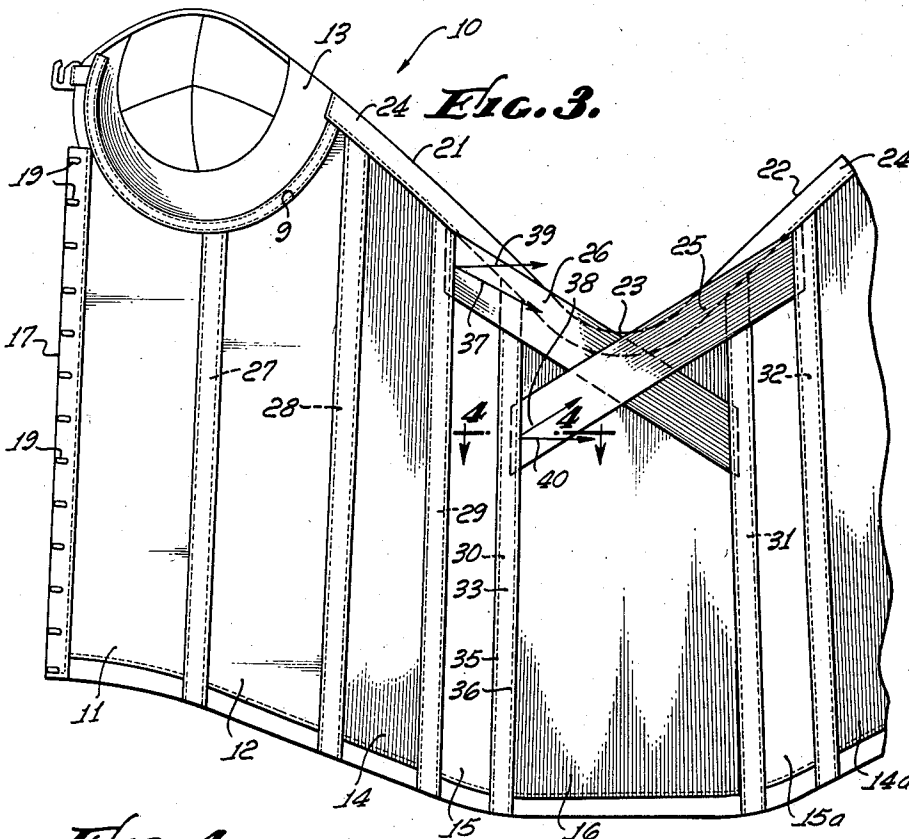
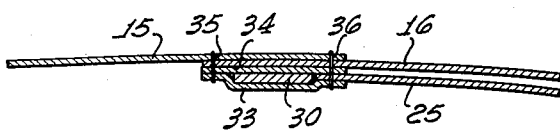


Fig. 4.



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1

2,888,931

BRASSIERE

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3 Claims. (Cl. 128—482)

This invention relates to brassieres.

When articles of clothing having low-cut backs, such as evening gowns, are worn, the rear portion of the body encircling band of the brassiere may be revealed. The width of the band may be reduced at the back at the sacrifice of peripheral strength. Hence, prior brassieres utilize straps which may be concealed by straps provided on the gown to provide appropriate support for the brassiere. However, such brassiere straps cannot be used in connection with garments that are strapless as well as backless.

In my copending application, Serial No. 612,645, filed September 28, 1956, and entitled "Brassiere," there is disclosed a strapless, low-cut brassiere that utilizes a U-shaped wire reinforcing member at the low-cut back to impart suitable circumferential strength.

One of the objects of this invention is to provide a strapless, low-cut brassiere of the general type described in my prior application, but that, in a novel manner, obviates the use of wire reinforcement.

Another object of this invention is to provide a novel brassiere structure that maintains the inclined top edges of the brassiere on opposite sides of the back, as well as the breast cups, snugly in place against the body of the user without requiring any connecting means disposed circumferentially of that garment that would be revealed by a backless garment.

Still another object of this invention is to provide a novel brassiere structure that effectively transfers circumferential stresses across a low-cut back.

The foregoing objects are made possible by the use of crossed elastic strips, the point of crossing of which is situated sufficiently low as not to be revealed by a backless garment. The respective strips are substantially aligned with the upper inclined edges of the brassiere on opposite sides of the back, and pull these edges firmly against the wearer's body.

Vertical stays provide appropriate anchors for the strips, and prevent the brassiere from crushing or twisting. So far as body encircling functions are concerned, those produced by the crossed strips act to provide components of forces at the back directed circumferentially at the level of the brassiere cups.

Yet another object of this invention is to provide an improved construction that avoids localized stresses upon the material of the brassiere. For this purpose, a novel arrangement of parts ensures that the strips act directly upon the stays, and thus indirectly upon the brassiere material.

Still another object of this invention is to provide an improved brassiere of this character that can economically be manufactured.

This invention possesses many other advantages, and has other objects which may be made more clearly apparent from a consideration of one embodiment of the invention. For this purpose, there is shown a form in the drawings accompanying and forming a part of the present specification. This form will now be described in detail, illustrating the general principles of the invention; but it is to be understood that this detailed description is not to be taken in a limiting sense, since the scope of this invention is best defined by the appended claims.

2

Referring to the drawings:

Figure 1 is a pictorial view showing the front of a brassiere in position on the wearer;

Fig. 2 is a pictorial view showing the rear portion of the brassiere;

Fig. 3 is a fragmentary elevation of the brassiere as seen from the inside thereof; and

Fig. 4 is an enlarged fragmentary sectional view taken along the plane indicated by line 4—4 of Fig. 3.

The brassiere 10, in the present instance, is of the torso type, namely, one in which the body encircling elements of the brassiere extend a little below the waistline of the wearer. However, the brassiere may be made even longer or slightly shorter.

The body encircling elements of the brassiere 10 comprise, in this instance, nine vertically extending panels having overlapping lateral edges sewn together.

The ends of the body encircling band formed by the panels are located between the cups 13 and 13a at the front of the wearer. The opposed vertical edges 17 and 18 formed at the end panels 11 and 11a are detachably joined by a series of hooks 19 sewn along one of the edges 17 and a series of eyes (not shown) sewn along the other edge 18. Other types of suitable fastening means may be used in lieu of hooks and eyes.

The panel 12, together with the end panel 11 to which it is joined, provides an arcuate upper edge 9 to which the lower portion of the breast cup 12 is secured. The panel 12a for the opposite symmetrical side of the brassiere and the end panel 11a similarly provide an arcuate upper edge. These arcuate edges, in this instance, intersect the end edges 17 and 18 of the panels 11 at a place located at the hollow below the breasts, and beneath the median horizontal plane passing through the cup. Supplemental detachable fastening means 20 hold the opposed upper portions of the breast cups against separating movement.

The front panels 11, 12, 11a and 12a are preferably of inelastic material, such as lace, broadcloth, silk, or the like.

Each symmetrical half of the brassiere has two side panels 14, 15, or 14a, 15a. The corresponding panels 14 and 14a for each half are made preferably of two-way stretch elastic net material, and the other corresponding side panels 15 and 15a are made of material similar to that of the front panels 11, 12, 11a, 12a.

A common back panel 16 is secured to the edges of the side panels 15 and 15a. This may also be made of two-way stretch elastic net material.

The upper edges 21 and 22 of the brassiere extending along the sides and the back of the garment slope downwardly to an apex 23 located at the center of the wearer's back at a level somewhat below that of the lower edges of the breast cups. This provides an appropriate configuration so that the brassiere will not be revealed when a backless garment is worn. Sewn along the edges 21 and 22 is an elastic tape 24 providing suitable finish to the upper edges 21 and 22.

Since no shoulder straps are provided for the brassiere, reliance must be placed almost entirely upon circumferential snugness of the brassiere in order to maintain it properly in position. Since the relatively low location of the apex 23 prevents the use of circumferentially located straps at the upper back of the brassiere for holding the cups against the wearer's body, other means are provided.

For this purpose, two oblique or inclined crossed, wide elastic strips 25 and 26 are provided on the inside of the garment. The lower end of the strip 25 is secured at one side of the back panel 16 substantially beneath the top edge 21. The strip 25 inclines upwardly and extends diagonally across the back panel 16 and the side panel

15a, generally paralleling the edge 22. The upper end of this strip is secured at the seam between the side panels 15a and 14a immediately beneath the corresponding top edge 22.

The other strip 26 is similarly but symmetrically located, and is substantially parallel to the other top edge 21. It crosses strip 25 at the central portion of the panel 16 beneath the apex 23. The strips are unattached at the place of crossing. The lower portions of the strips beneath the place of crossing are shorter than the upper portions.

In the unflexed condition of the brassiere, as shown in Fig. 3, the intermediate portions of the strips 25 and 26 purposely extend slightly above the edges 21 and 22. However, when the brassiere is donned, the strips are concealed beneath these edges. Thus, the brassiere expands more at the top than at the bottom. This is due partly to the normal tapering of the torso toward the waistline. Furthermore, the cut of the brassiere, including a slight normal upward divergence between the end edges 17 and 18 of the brassiere (indicated by the angularity of the edge 17 in Fig. 3) assists this effect.

This increased expansion at the top causes the angle between the edges 21 and 22 to increase to a greater extent than does the angle between the crossed strips 25 and 26. Accordingly, the strips 25 and 26 move into substantially perfect parallelism with the edges 22 and 21, with the upper edges of the bands disposed entirely beneath, but respectively close to the top edges 22 and 21 of the brassiere. Thus, the strips 25 and 26 are entirely concealed.

The strip 26, for example, both ends of which are firmly anchored, provides a force applied at a position adjacent the edge 21 spaced upwardly from the apex 23. The force is directed and located as indicated by the arrow 37. This force acts in substantial alignment with the upper edge 21 and causes this edge 21 firmly to engage the body of the wearer. This force has a component directed circumferentially, as indicated by the arrow 39. Since this component acts close to or at the level of the cup 13, the cup is drawn firmly against the body.

The opposite strip 25 provides symmetrically directed forces and components on the opposite side of the brassiere.

The lower ends of the strips 25 and 26 provide upwardly directed forces. Thus, at the lower end of the strip 25, one of these forces is indicated at the arrow 38. This force has a significant upward vertical component which, together with the downward vertical component of the force exerted by the upper end of the opposite strip 26, tends to twist or crumple the brassiere. To avoid this, vertical stays 27, 28, 29, 30, 31, 32, etc. are provided at the seams between the brassiere panels. Furthermore, to ensure against localized stresses, distortions, and even fatigue failure of the fabric material, the strips are so secured that the forces which they exert act directly upon the stays rather than upon the panels.

The stay 30, for example, is located at the juncture between the panels 15 and 16 and is shown in detail in Fig. 4. The stay 30 is accommodated in a pocket comprising two juxtaposed strips of inelastic material 33 and 34 which are placed upon overlapping edges of the panels 15 and 16 on the inside of the brassiere. Two lines of stitching 35 and 36 not only secure the pocket strips 33 and 34 together to enclose the stay 30, but also conveniently secure the overlapping edges of the panels 15 and 16 together. Before the line of stitching 36 is provided, the lower end of the elastic strip 25 is inserted between the strips 33 and 34. Accordingly, the strip 25 is caught by the line of stitching 36. Thus, longitudinal stress in the strip 25 is transmitted through the strips 33 and 34 to the stay 30. The opposite edge of the strip 25, as well as both edges of the other strip 26, are similarly secured to the pocket element for the corresponding stays 29, 31 and 32.

The inventor claims:

1. A brassiere comprising a pair of breast cups, a unitary resilient member adapted to encircle the body of a wearer affixed to said cups at least along the bottom and opposite outward sides of said cups to support and hold said cups resiliently upon and against the body of a wearer, said member including a front portion and a back portion adapted to lie adjacent the front and back body areas respectively of a wearer, the upper edge of said member from each of said breast cups running downwardly toward said back portion in two continuous lines converging to form substantially a V configuration with its apex in said back portion, a first strip of longitudinally resilient material affixed at a first end thereof to said member adjacent said upper edge on one side of said apex, a second strip of longitudinally resilient material affixed at a first end thereof to said member adjacent said upper edge on the other side of said apex, said first strip extending longitudinally substantially as a continuation of a first of said lines of said edge to said other side of said apex and being affixed to said member at a point below that at which said first end of said second strip is affixed, and said second strip extending longitudinally substantially as a continuation of the second of said lines of said edge to said one side of said apex and being affixed to said member at a point below that at which said first end of said first strip is affixed, said strips being otherwise unsecured to said member and to each other, whereby said strips resiliently draw said upper edge of said member against the body of a wearer by contracting said upper edge along its longitudinal lines.

2. A brassiere as set forth in claim 1, wherein said member has two ends in the front portion thereof carrying cooperating fastening means for securing the member about the body of a wearer.

3. In a strapless brassiere: a pair of breast cups having upper edges sloping downwardly toward the back of the garment and toward each other when the brassiere is donned; a pair of panel means respectively fixed to the cup; each panel means having an arcuate top edge joined to the corresponding cup edge, each cup edge having a portion extending upwardly beyond the panel means; the panel means having upper edges forming downwardly slanting continuations of the upper edges of the breast cups; a pair of unitary crossed longitudinally resilient strips; the strips being permanently attached at opposite ends to the respective panel means; the strips being respectively aligned with the upper edges of the panel means so that the area of crossing is at the center of the back of the garment; stays extending longitudinally of the panel means; those juxtaposed areas of the strips at the crossing being substantially free of each other whereby said strips resiliently draw the upper edges of said panel means and said cups against the body of the wearer by contracting said upper edges along their longitudinal lines so that the brassiere is held on the body of the wearer independently of shoulder straps, but in a manner which permits body movements; and detachable fastening elements at the front center portion of the brassiere and having cooperating parts extending adjacent the front edges of the panel means for securing the brassiere about the body of the wearer.

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