

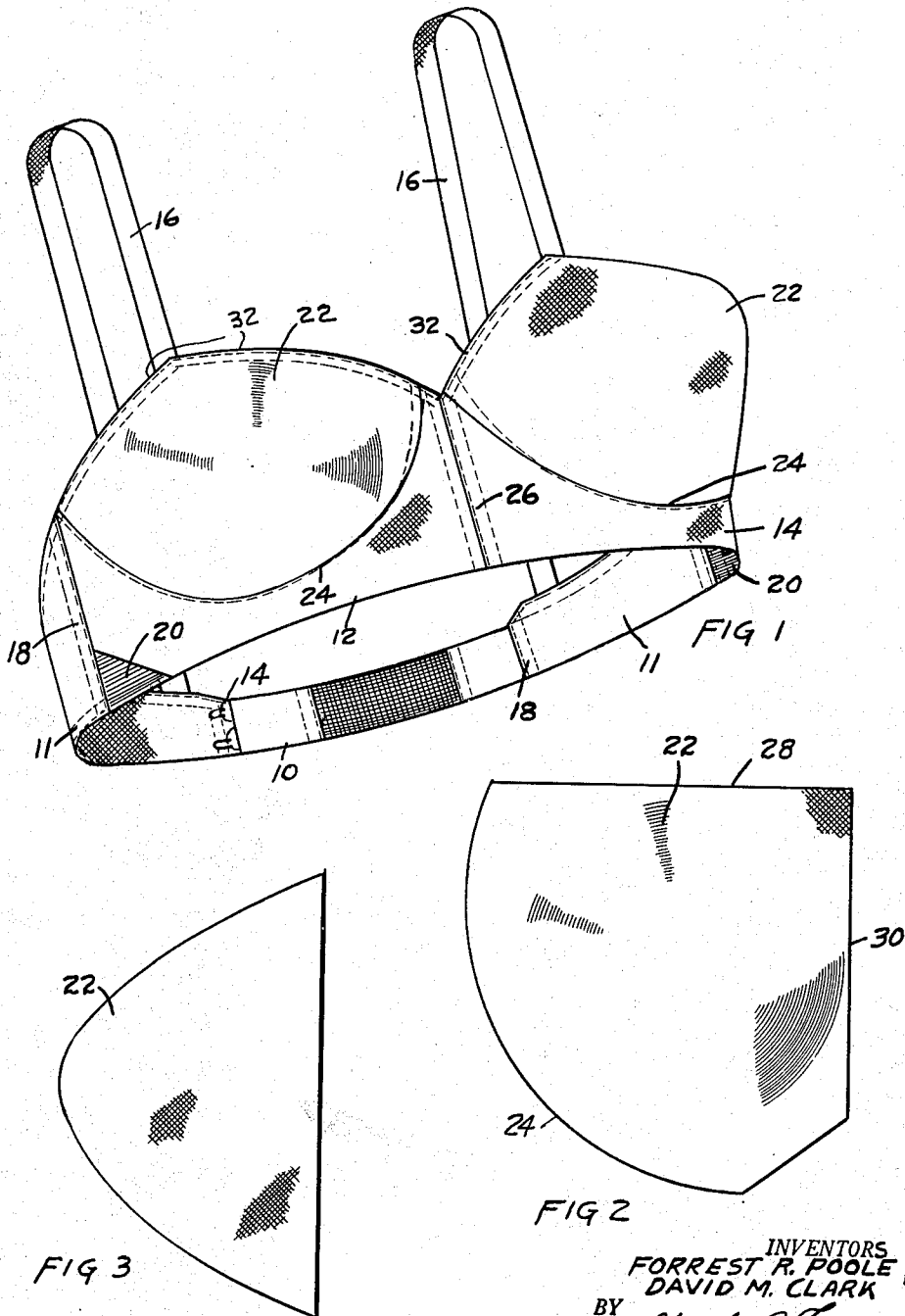
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F. R. POOLE ET AL
BRASSIERE AND BUST CUP THEREFOR

2,760,198

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3 Sheets-Sheet 1



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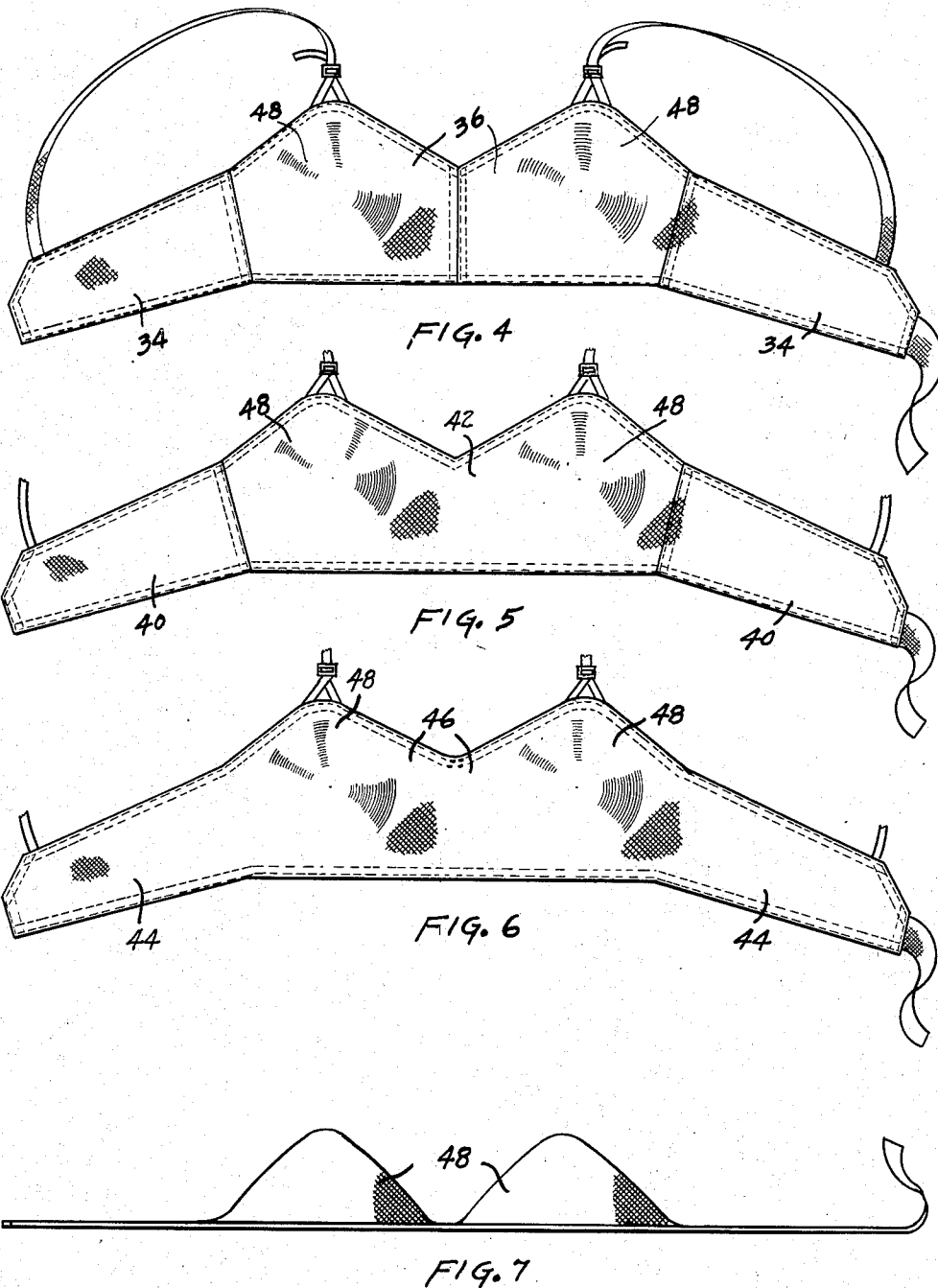
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3 Sheets-Sheet 2



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3 Sheets-Sheet 3

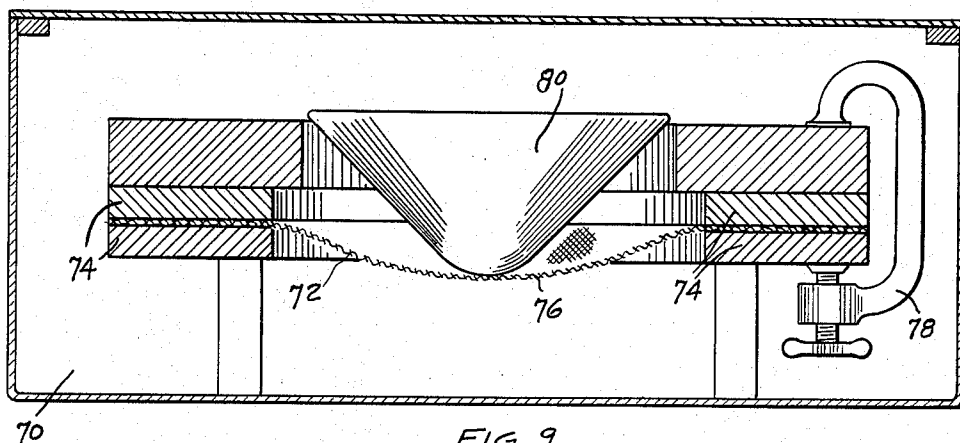


FIG 9

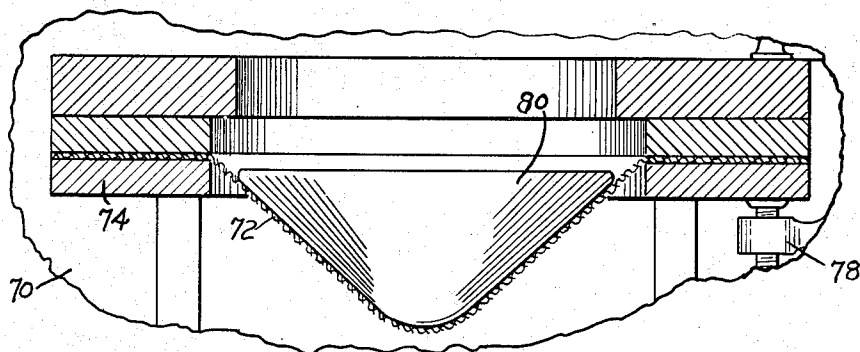


FIG 10

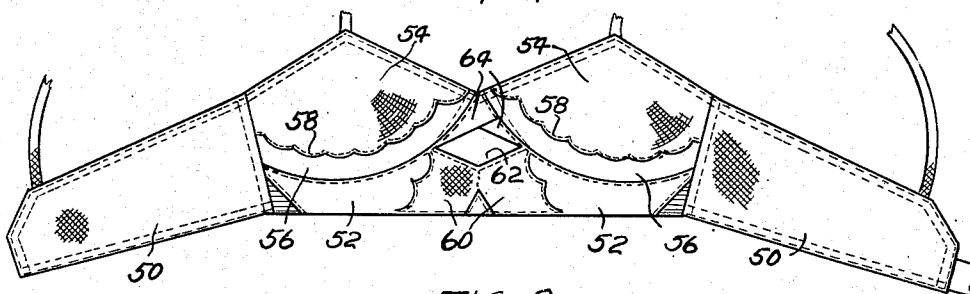


FIG 8

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BRASSIERE AND BUST CUP THEREFOR

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1 Claim. (Cl. 2—42)

This invention relates to brassieres in general and specifically to the bust cups therefor, and the principal object of the invention is to provide a brassiere having bust cups that give the ultimate in control and comfort and yet at the same time completely avoid any seam or fold of whatever nature and are therefore completely smooth and uninterrupted in extent, thus increasing to a high degree the comfort to the wearer and the appearance of the brassiere.

Another object of the invention resides in the provision of a bust cup for a brassiere, said bust cup being soft and flexible and made from a cloth fabric preferably in the nature of nylon, Orlon, Dacron, or the like, said cup being of a conoidal shape suitable for use in brassieres and being smooth, uninterrupted and seamless; and the provision of a bust cup as stated, in which the material thereof is distortable, i. e. stretchable under conditions of heat and pressure, in combination with a lunar-shaped, scalloped, relatively stiff breast support cooperatively associated therewith, whereby the brassiere gives the greatest control, support and comfort, and is uniform, seamless, and unfolded in any way.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which:

Fig. 1 is a perspective view of a brassiere according to the present invention;

Fig. 2 is a plan view of a novel bust cup;

Fig. 3 is an edge view thereof;

Fig. 4 is a view in elevation of a brassiere according to the invention showing a modification;

Fig. 5 is a similar view showing another modification;

Fig. 6 is a similar view showing a still further modification;

Fig. 7 is a similar view showing the invention as an improvement over existing brassieres;

Fig. 8 is a general view illustrative of each one of the different brassieres of Figs. 4, 5, 6 and 7;

Fig. 9 is a section through an apparatus for forming the bust cup of the present invention and showing the fabric in unstretched condition; and

Fig. 10 is a similar view but showing the fabric in stretched condition.

As is well known in the art, the considerations desired in brassieres reside in the provision of a brassiere having bust cups which, while comfortable to the wearer, give the maximum of support and figure control. Whereas acceptable brassieres have heretofore been produced as evidenced by United States Patents Nos. 2,100,932; 2,192,427; 2,301,499 and 2,515,580, nevertheless the deficiency has always existed that even the best brassieres include folds or seams which up to the present were necessary in order to form the conoidal shape required for fitting the bust. These seams or folds are visible through thin outer clothing and at times are uncomfortable and chafing to the wearer. The present inven-

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tors have discovered how these seams or folds may be completely done away with.

According to the disclosure of the present invention, Fig. 1 shows a band 10 and side sections 11, which in combination with front sections 12 and 14, hold the brassiere to the figure below the busts and in the region of the diaphragm, the band 10 being provided with a conventional fastener 14 in order to attach the same about the person. Conventional shoulder straps at 16 are provided and it is to be understood that the present invention may be applied to many different forms and styles of brassieres without departing from the scope thereof, but in any event in the present case the band 10 is secured to the sections as described as for instance at seams 18 and appropriate elastic may be provided as is well known in the art at appropriate locations as at 20.

The bust cups in the present case comprise conoidal shaped members generally indicated at 22 and each preferably having a convex curve as at 24 whereby the same is attached to the sections 12 or 14 respectively, these sections being attached together, e. g., by a seam at 26.

The bust cups are also provided with more or less straight edges at 28 and 30 in order to form the top edges of the bust cups as at 32 as will be apparent to those skilled in the art, but this shape is not a limitation of the scope of the invention.

The major characteristic of each bust cup is that it is in the definite conoidal shape clearly shown in Figs. 1 and 3, but it does not have any interruptions, ridges, seams or rough lines of any kind. In other words, there are no seams or folds to interrupt the smooth contour or surface thereof at either surface, and these cups therefore perform the functions described above in optimum fashion and with maximum comfort.

Referring now to Fig. 4, there is shown here a brassiere having the side sections 34 comparable to those at 11 in Fig. 1 and secured to and between these side sections are a pair of right and left-hand but otherwise similar integral pieces of fabric material as indicated at 36.

These pieces 36 comprise the bust portion or cups which are the same as those shown in Figs. 1, 2 and 3 except that in Fig. 4 they are larger in extent and include in the increased area thereof flat fringe portions which form the diaphragm portion corresponding to the parts 12 and 14 in Fig. 1. Thus it is seen that the parts 36 embody the front sections and the bust cups all in one piece and having the same characteristics as described above.

In Fig. 5 there is shown a brassiere which has the side sections 40, 40 and secured between them a single front section 42 which is made to have two bust cups formed therein and wide flat areas comparable to the two front sections 36 and also to those at 12 and 14.

The only difference in construction between Fig. 4 and Fig. 5 is that the two sections 36 are incorporated in a single section 42 in Fig. 5, this single section including a pair of bust cups and extensive flat separation and diaphragm areas.

Fig. 6 shows a single piece of material generally indicated as containing side pieces 44, 44 and bust sections 46, 46 all of which are formed from one single continuous piece of material but otherwise having the characteristics recited above. In Figs. 4, 5, 6 and 7, the bust cups 48 are all alike and are all seamless, smooth and soft and flexible and continuous, according to the invention as described.

In Fig. 8 the brassiere comprises side sections 50 connected to front sections 52, each of which include a novel seamless but cup 54 similar to those of Fig. 1, having incorporated therein lunar-shaped stiffeners 56 each having a lower convex edge co-terminous with the

edge 24 in Fig. 1, and an upper concave scalloped edge 58 that underlies and firmly supports the bust. The central portion of the waistband or front section is stiffened and reenforced by members 60 having upper ends flush with a central notch at 62 and lower ends terminating at or adjacent the lower edge of the front section. Members 60 are inclined toward each other and spaced at their lower ends and are scalloped at their opposite edges.

The bust cups curve up at their inner edges and are inter-connected by a pair of triangular crossed control members 64 which form the upper edge of the notch and make it diamond shape.

In order to produce the bust cup and brassiere of the present invention, there is provided an oven or heating chamber or the like at 70 (see Figs. 9 and 10) and any form of heat may be applied to carry out the invention.

A flat cloth piece of the required size and shape of material having the required characteristics is shown at 72. This material is distortable, taking a permanent set under conditions of heat and pressure. Such a material may be referred to as a thermo-plastic material and where this designation is used herein, it identifies any fabric or cloth of natural or synthetic fiber or other material that can be shaped into a seamless, one-piece brassiere cup.

The piece of material 72 may take the general shape of that shown in Fig. 2 or Figs. 4-7 inclusive, but in any event it is contained at its edges in clamping blocks or rings 74 and the center part thereof at 76 will sag slightly as clearly shown in Fig. 9. The clamping blocks 74 are secured together by any conventional clamping means as desired such as at 78 and the clamped piece of material is placed in the heating enclosure or oven.

A weight generally indicated at 80 is then placed upon the material at the central point as clearly shown in Fig. 9 and the enclosure is covered and heat is applied thereto so that the weight applies pressure to the fabric in the presence of heat and gradually stretches the material to a conoidal shape as disposed by the shape of the weight, which in this case is shown as conical.

The fabric stretches to a large degree as indicated in Fig. 10 as compared with Fig. 9 and this set is perma-

nent and is not removed in any way by washing or ironing the brassiere nor is it lost through any ordinary conditions of heat involving any ordinary washing in hot water, as a higher heat than boiling water is required to impair the permanent set in the stretch of the material under consideration.

The cups may be made separately and applied to the brassiere as shown in Figs. 1 and 8, or the cups may be made in the section of Fig. 4 and the double section of Fig. 5, or as a part of the entire brassiere, see Fig. 6.

This invention is not restricted merely to bust cups for brassieres but extends to any garment, inner or outer, to which the invention may be applied, as for instance, slips, girdles, combination garments and undergarments, corselets, bathing suits, etc.

Having thus described our invention and the advantages thereof, we do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claim, but what we claim is:

A brassiere comprising a main body portion and a pair of bust cups of soft, seamless, unfolded molded thermo-plastic woven material in conoid shape, each cup having an outwardly convex terminal edge adjoining the main body portion of the brassiere, a relatively stiff bust-supporting panel in the lower section of each cup, said panels each being lunar-shaped having a generally plain convex lower edge substantially superposed and coextensive with respect to the convex terminal edge of the respective bust cup, and each lunar-shaped panel having an upper generally concave scalloped edge, each panel being secured at its upper and lower edges to the material of the respective bust cup.

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