Aug. 27, 1963 B. KORMAN 3,101,717

ORNAMENTAL BREAST CUP AND METHOD OF MAKING

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FIG. 5

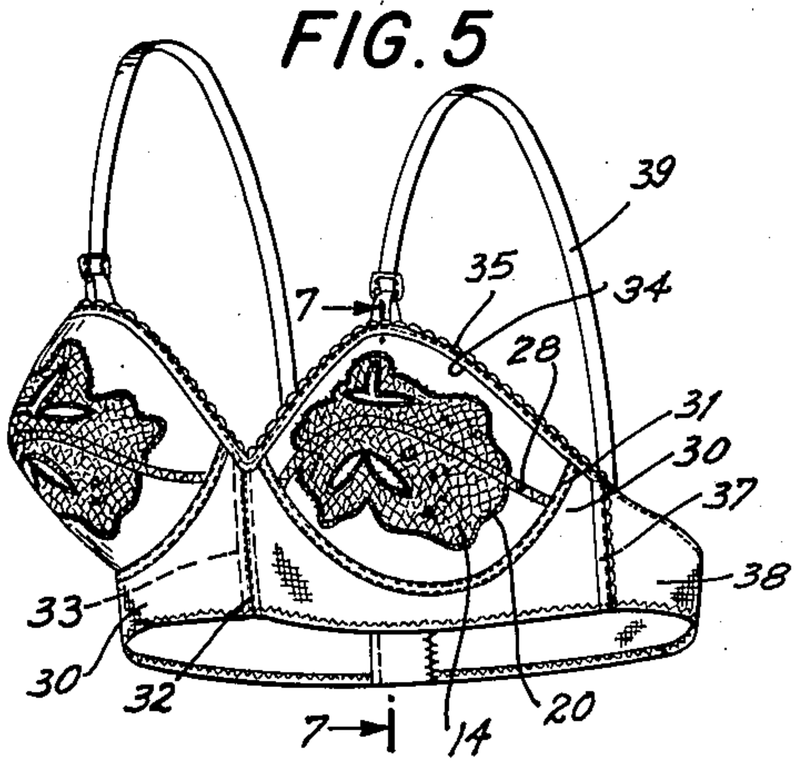


FIG. 7

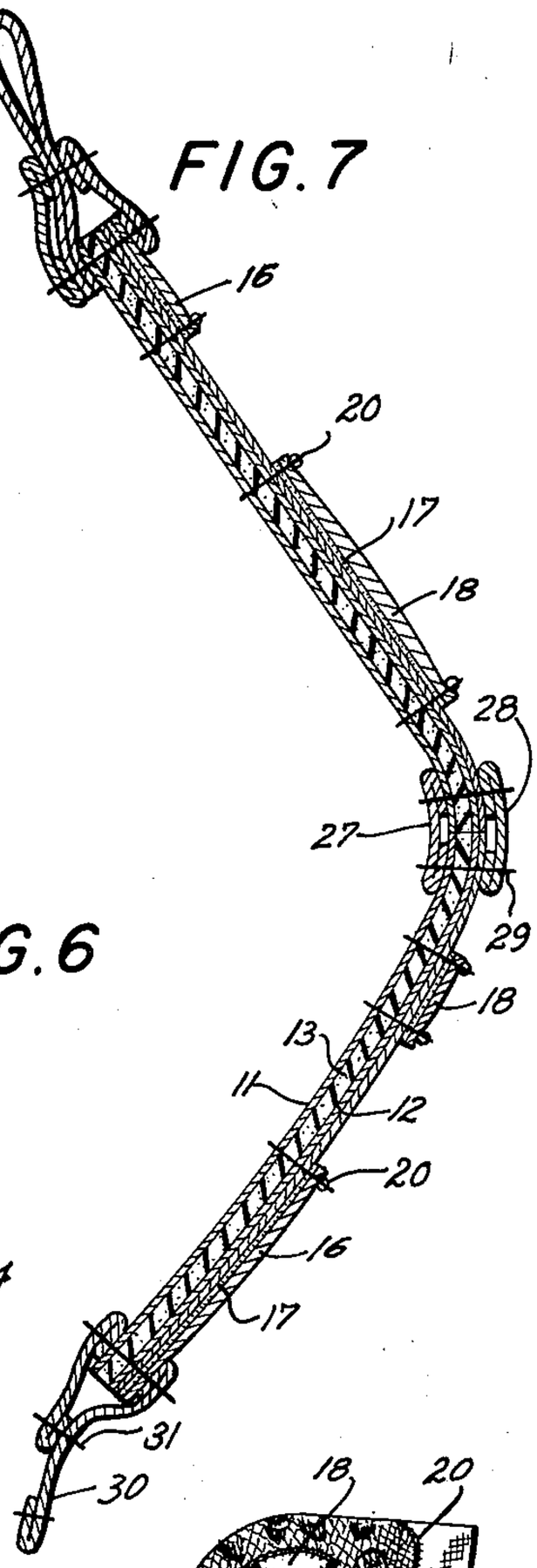
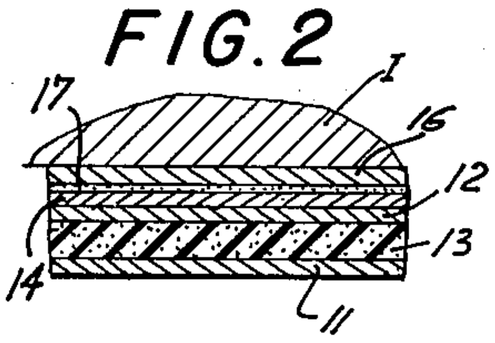


FIG. 2



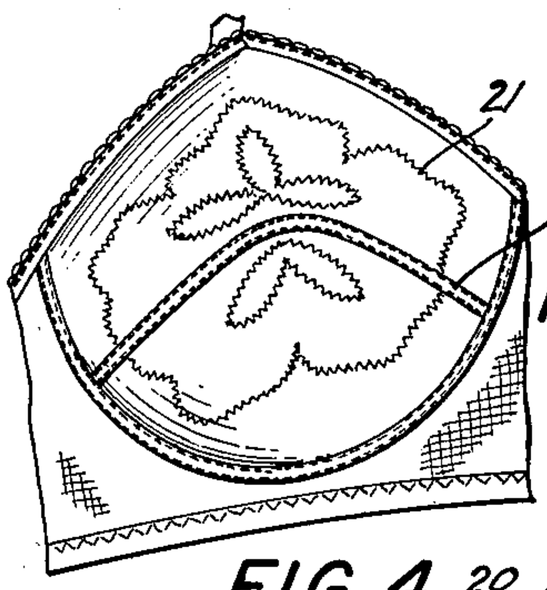
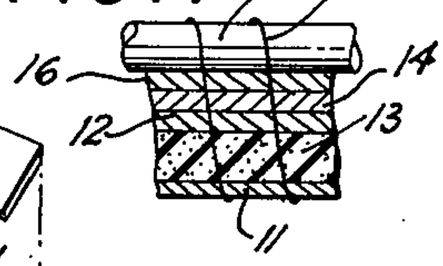


FIG. 6

FIG. 4



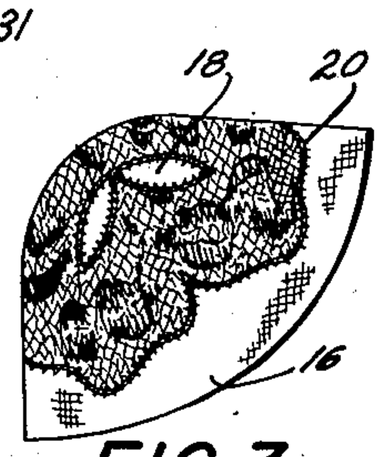


FIG. 3

FIG. 1

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ORNAMENTAL BREAST CUP AND METHOD OF MAKING

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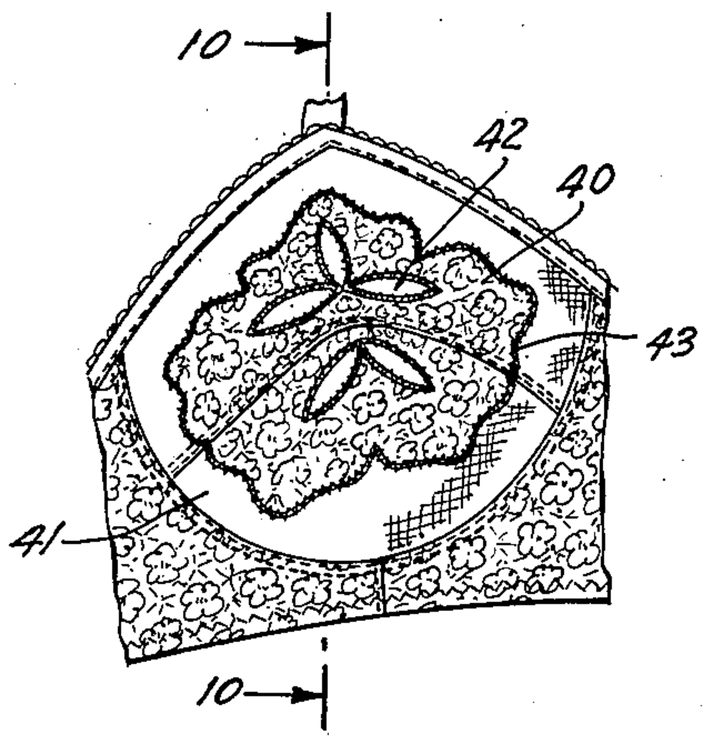

FIG. 9

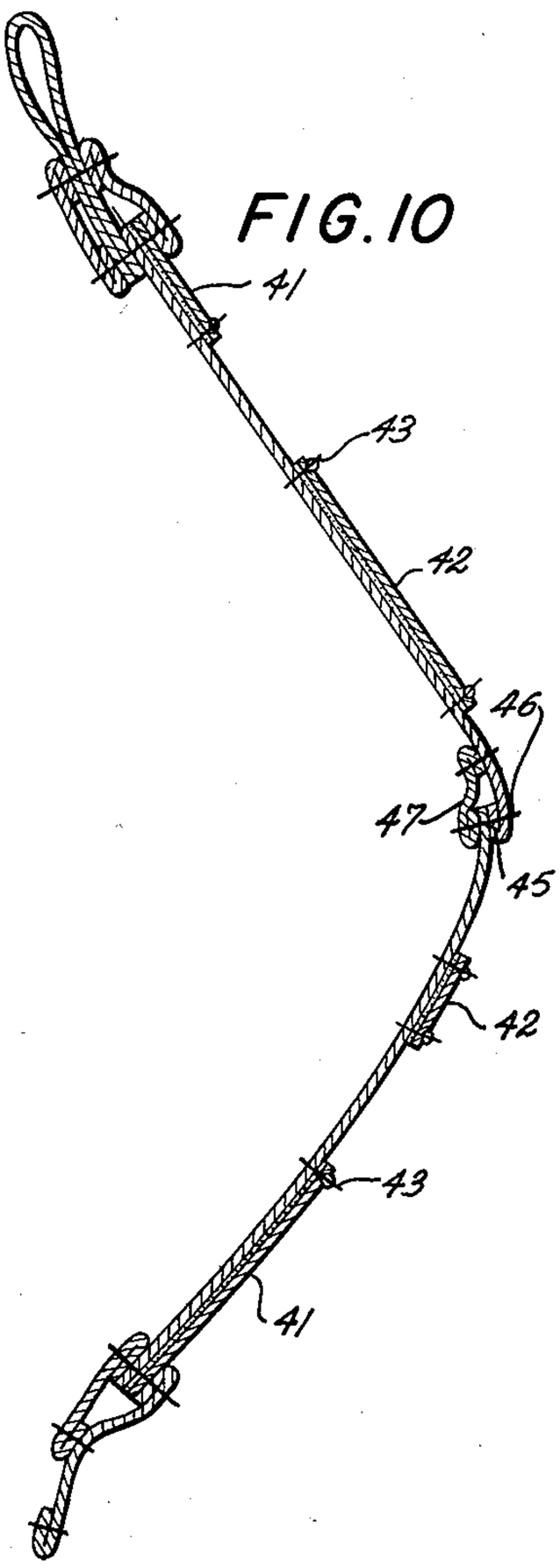

FIG. 10

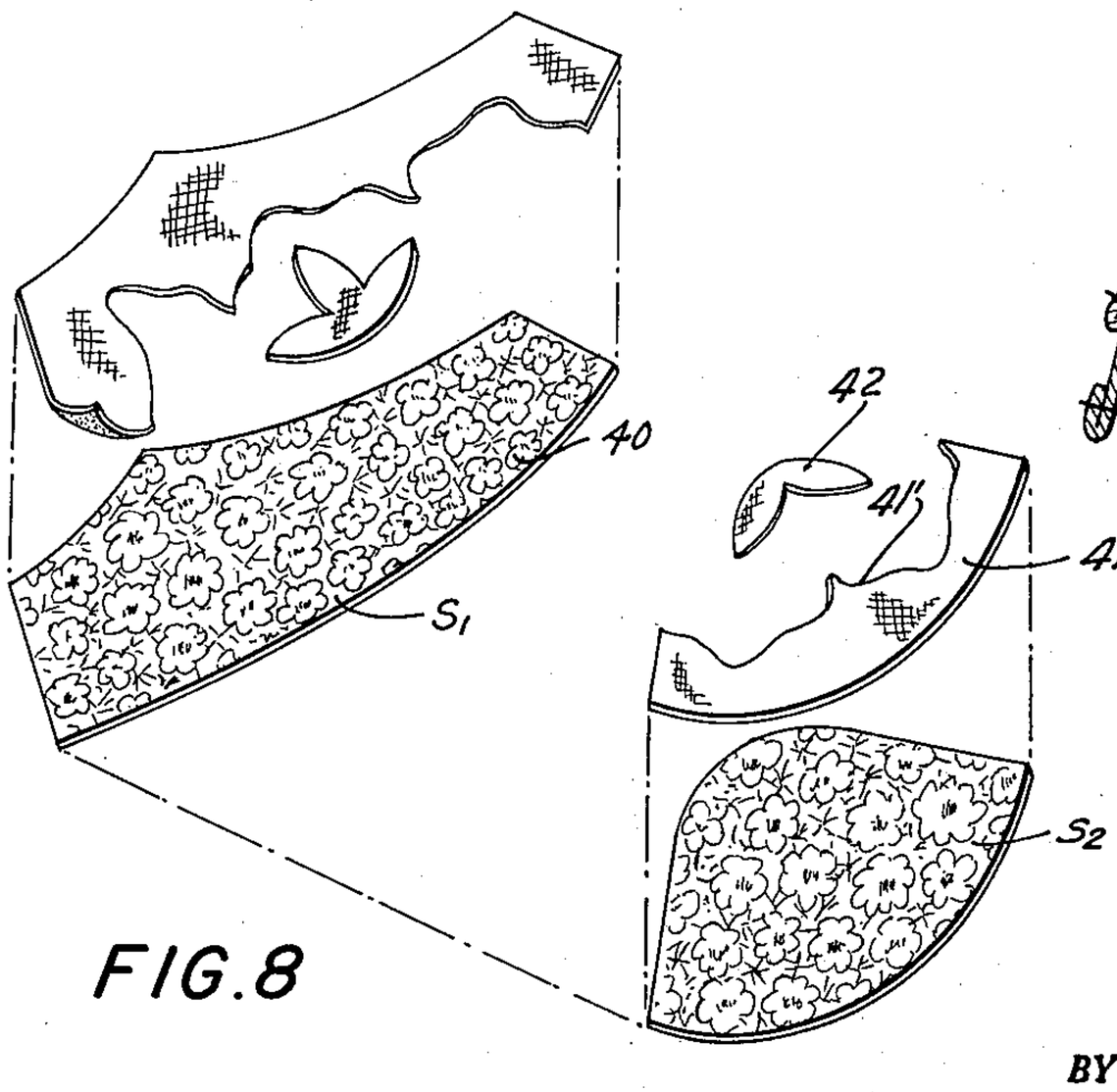

FIG. 8

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ORNAMENTAL BREAST CUP AND METHOD OF MAKING

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Filed June 24, 1960, Ser. No. 38,552
8 Claims. (Cl. 128—463)

The present invention is concerned with bust covering garments, including brassieres, corselettes, girdles and the like.

It is among the objects of the invention to provide for brassieres and other bust covering garments breast cups which are highly ornamental in appearance in affording appliqué finish commonly connoting a costly handmade garment, but yet may be made by machinery at low cost and to methods of producing the same.

According to the invention each breast cup is made of preferably two or, if desired, of more than two complementary flat segments of fabric. On each of the originally flat complementary segments, there is adhesively affixed one or more ornamentally shaped overlays of thin fabric, such as satin. In one desirable embodiment the cup-rim-forming region of each of the originally flat complementary segments of fabric has adhesively affixed thereto a strip of thin border covering fabric which presents an ornamental curvilinear outline at some distance from the cup-rim-forming portion. Desirably there may be also affixed to the flat complementary fabric segments at some distance from the ornamental border covering strips, small design motifs of fabric, similar to the border covering fabric and similarly adhesively affixed.

In a preferred embodiment, the ornamental decorative overlays, such as the border covering strips and motifs are stamped from satin or the like and precoated on the rear face thereof with thermoplastic cement. These border covering strips and motifs are affixed to the flat segments of the breast cup, desirably by the pressure and heat of an electric iron.

According to the invention, there is then stitched by sewing machine to each of the flat complementary segments, from which the cup is to be assembled, along the overlay, such as along the curvilinear outline of the border covering strip of satin or other material, and through the thickness of the flat segment of breast cup material, a length of gimp cord with its encompassing securing thread. A similar border of gimp cord is similarly stitched about the peripheries of the smaller motif elements of satin or other fabric that have also been adhesively affixed to the respective flat segments of the breast cup.

The structure of the breast cup segments in one embodiment is laminated, comprising an inner layer which may be of tricot, of cotton, rayon, nylon, silk, or the like, and an outer layer of satin, cotton, rayon, nylon, silk, or the like, there being an intervening thicker layer of compressible padding material which may be foam rubber, cotton or the like. Such intermediate padding sheet becomes compressed by tight machine stitching of the gimp, affording to the garment a decorative, tufted effect near the inner rim and within the peripheries respectively of the adhesively affixed ornamental bonded, overlay strips and the small decorative design pieces of satin or the like. The two or more segments are then assembled to form the breast cup.

In another embodiment the structure of the breast cup comprises single-ply segments of tricot, such as the rear sheet of the laminated fabric of the first embodiment, and here the single-ply tricot fabric is illustratively shown embroidered. In this embodiment ornamental border overlap strips of satin or the like and ornamental small motifs illustratively in the form of leaves, preferably of the same fabric, backed by thermoplastic cement,

are affixed to the flat segments of the breast cup in the same manner as in the first embodiment.

In the accompanying drawings in which are shown one or more of various possible embodiments of the several features of the invention,

FIG. 1 is a plan view of complementary flat segments of fabric from which a breast cup is to be fabricated from laminated fabric, partly opened to show the inner padding layer, the outer layer of the breast cup segments and the ornamental overlay before it is applied, and illustratively showing on one segment a lace covering on the outer cover but under the overlays.

FIG. 2 is a fragmentary sectional view on an enlarged scale showing the preferred mode of applying the overlays to the laminated flat segments of fabric of FIG. 1.

FIG. 3 is a plan view showing the completed segment of breast cup of FIGS. 1 and 2;

FIG. 4 is a perspective view on a larger scale of the appliqué cord and associated attaching thread as applied;

FIG. 5 is a perspective view of a complete brassiere embodying the cups of FIGS. 1–3;

FIG. 6 is a perspective view showing the inside of the completed breast cup;

FIG. 7 is a cross-sectional view on a larger scale taken on line 7—7 of FIG. 5;

FIG. 8 shows another embodiment in manner similar to FIG. 1 comprising a single-ply breast cup segment shown embroidered;

FIG. 9 is a view similar to FIG. 3 of the embodiment of FIG. 8; and

FIG. 10 is a sectional view on a larger scale taken on line 10—10 of FIG. 9.

Referring now to the drawings, there is shown in FIGS. 1–7 an illustrative embodiment of the invention. Each breast cup in this embodiment is shown made up of a laminated initially flat segment or blank consisting of a backing sheet **11** of tricot and a outer sheet **12** each of any of satin, cotton, rayon, nylon, or the like, as desired, and an intervening padding layer **13** preferably of foam rubber, but if desired of other padding material, such as cotton. The lamination may be effected by pouring the foam rubber upon the tricot backing **11**, and the outer cover **12** may be applied in any manner, as by stitching or cementing in place.

In the illustrative embodiment shown, the outer fabric **12** of satin or the like may have superposed thereon a thin lace fabric **14** connected in place by baste stitching **15** to the outer fabric before the same is laminated to the padding covered tricot backing sheet.

In the embodiment shown in FIGS. 1–7, the outer edge portions of the flat segments have affixed thereon ornamental overlay border covering strips **16**, each with a curvilinear inner edge **16'** spaced from that portion 16^2 of each flat segment which defines a rim portion of the breast cup. Preferably the ornamental border covering strips **16** of decorative fabric are die-stamped from satin or other thin piece-goods, the back face of which has been pre-coated with a film **17** of thermoplastic cement composition. The thermoplastic composition desirably comprises cellulose ester applied as a film to the rear face of the piece-goods from which the decorative strips or designs are stamped. Such thermoplastic cement may comprise cellulose nitrate and a thermoplastic resin compatible therewith, both dissolved in solvent for uniform film deposition on the piece-goods. The solvent may be an alkyd resin, or the like, either plain or modified by fatty acid.

The ornamental border strips **16** are applied to the flat breast cup segments S_1 and S_2 by the pressure and heat of a hot sad-iron I, usually an electric iron, as shown in FIG. 2, whereby the ornamental border cover-

ing strip 16 becomes bonded to the flat fabric segments S_1 and S_2.

In addition, there may be applied to the center region of either or both of the flat breast cup segments S_1 and S_2, smaller motifs such as a leaf motif 18, desirably of the same adhesive-backed satin or like fabric, which is used for the ornamental border overlays 16 and likewise bonded in place by resort to the hot electric iron.

Appliqué 20 is then attached along the inner curvilinear rim 16′ of the border covering overlay strips 16 of satin or the like, and also about the peripheries of the smaller motifs 18 in the body of the flat breast cup segments S_1 and S_2. This appliqué is applied by a sewing machine and compresses a gimp cord 20 which may be of any desired thickness, say of 1/32 to 1/16 inch, by means of a stitch 21 of suitable thread as shown on larger scale in FIG. 4, each stitch embracing the gimp cord and penetrating the decorative adhesive-backed ornamental border overlay strip 16, the lace covered face fabric 11, the foam rubber or other padding 13, and the back face fabric 11, the stitch being drawn tight to cause the appliqué embroidery to compress the foam rubber or other padding at that region to such extent as to afford a highly ornamental tufted effect, as best shown in FIG. 7 of the drawings.

After the breast cup segments have thus been completed, the complementary segments S_1 and S_2 are assembled. To this end the wedge-shaped edge 25 of segment S_2 and edge 26 of segment S_1 are juxtaposed, and by reason of the different conformations of adjacent edges 25 and 26, the cup shape results. Narrow tape 27 is applied over the border regions of the two juxtaposed edges along the inside of the cup and like tape 28 is similarly applied over the outer face of the juxtaposed edges, and both tapes are simultaneously stitched to the underlying segment edge portions by sewing machine stitching 29.

The breast cups thus assembled are then built into a brassiere in conventional manner. As illustratively shown for instance in FIG. 5, triangular webs 30 are stitched as at 31 to the lower rim portions of the two breast cups and stitched together at their adjoining ends at 32, desirably through connecting tape 33. Similarly, the rims of the upper halves of the breast cups have stitched thereto binding tape 34 which may be covered at the outer side with lace 35. To the outer side edges of the webbing 30 are attached by stitching 37 the usual elastic back closing straps 38 for the brassiere, and the brassiere may also have shoulder straps 39.

In the embodiment of FIGS. 8, 9 and 10, the two segments S_1 and S_2 of the breast cup are not of laminated construction, but each may be of a single ply of any desired material, such as satin, cotton, rayon, nylon, silk, or the like, illustratively shown embroidered as at 40. Each segment prior to assembly, that is while flat, has superposed thereon and adhesively connected thereto, the decorative satin or other overlays, such as the border covering strips 41 and the leaf or other decorative motifs 42, each of which is blanked out from the piece-goods that had been pre-coated on its under face with thermoplastic cement. Each overlay stamping is applied to the fabric segment by a hot iron in the same manner as in FIG. 2. Finally, the appliqué of gimp 43 and thread is machine stitched to the curved edge 41′ of the border strips and about the peripheries of the leaf or other small decorative motif 42. Finally the breast cups are assembled. To this end the adjoining edges of the two segments are superposed with the edge turned inward as at 45 and are stitched together as at 46 desirably through a tape 47 extending along the rear of the junction.

The cups are then assembled into the brassiere which may be constructed substantially as that shown in FIG. 5.

While the invention has been shown applied to a brassiere, it is also applicable to a corselette, a corset or other bust covering garment that has breast cups.

As many changes could be made in the above construction and method, and many apparently widely different embodiments of this invention could be made without departing from the scope of the claims, it is intended that all matter contained in the above description or showing the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. The method of fabricating from two complementary flat blanks of fabric, a breast cup for a bust covering garment, which comprises bonding to the outer face of each of the complementary flat blanks of fabric from which the breast cup is to be assembled, ornamental pieces of light fabric contrasting with the outer face of the fabric blanks and then affixing appliqué along the rims of said ornamental pieces by thread stitching gimp along the rims of said ornamental pieces which securely stitches the ornamental pieces to the respective blanks and then stitching the component flat pieces to form the breast cup.

2. The method of producing a breast cup for a bust covering garment, which breast cup is composed of a pair of complementary initially flat blanks of fabric, which consists in applying by pressure and heat to the outer faces of the flat fabric blanks, ornamental border strips of thin fabric, each border strip having an ornamental curved inner edge, each of said strips being prefabricated with thermoplastic cement coating the under face thereof, to cover at least the border areas of said flat blanks and after applying said strips as recited, applying along the curved inner edges of the border strips, appliqué consisting of gimp and thread, with the thread penetrating, and securing the border strips to the respective blanks and then assembling the blanks to complete the breast cup.

3. The combination recited in claim 2 in which motifs of small ornamental pattern blanks with thermoplastic cement coating on the inner faces thereof are applied to the outer faces of the blank by pressure and heat and the peripheries of said small pattern blanks are stitched by appliqué in manner similar to the stitching of the border strips as recited in claim 2.

4. The combination recited in claim 3 in which the segments of the breast cups are single-ply with machine embroidery at the areas other than those covered by the ornamental gimp bordered adhesively mounted strips and motifs.

5. The method of producing a breast cup for a bust covering garment, which breast cup is composed of a pair of complementary, initially flat blanks of soft padding, having fabric coating the faces thereof, which consists in applying border strips of thin fabric, each border strip having an ornamentally curved inner edge, each of said strips being prefabricated with thermoplastic cement coating on the under surface thereof to cover at least the border areas of the outer fabric of the blank, said border strips being affixed by pressure and heat, and applying appliqué along the curved inner edge of the border strips, said appliqué consisting of gimp and thread with the thread penetrating and securing the edges of the border strips to the respective blanks, the thread penetrating the border strip, the outer fabric, the soft padding and the inner fabric, and then assembling the blanks to complete the breast cup.

6. A breast cup as a component for a bust covering garment, comprising complementary, initially flat segments of fabric, each segment having an ornamental border strip overlay of thin fabric superposed over and in bonded relation to the corresponding initially flat segment, each of said border strips having an ornamental curvilinear edge, each segment having overlay motifs of small ornamental design patterns of thin fabric bonded thereto at a distance from the corresponding ornamental

border strip, each overlay having an undercoating of thermoplastic cement constituting the bonding means and appliqué of gimp cord and securing thread extending through the thickness of the segments and maintaining the peripheries of the overlay motifs of small design patterns affixed under compression to the respective segments of the cup, and appliqué of gimp cord and securing thread extending along said curvilinear edge and maintaining the gimp cord, the segment and the border strip stitched together.

7. The combination recited in claim 6, in which each segment of the cup is laminated, comprising a padding layer, an inner and an outer cover layer of fabric, the overlays are bonded to the outer cover layer and the appliqué stitching thread penetrates all three layers of each laminated blank.

8. The combination recited in claim 6, in which each segment of the breast cup has an overlay of lace stitched to the outer cover layer of the laminated segment and the border strips and small design patterns are adhesively affixed to the fabric over the lace overlay.

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