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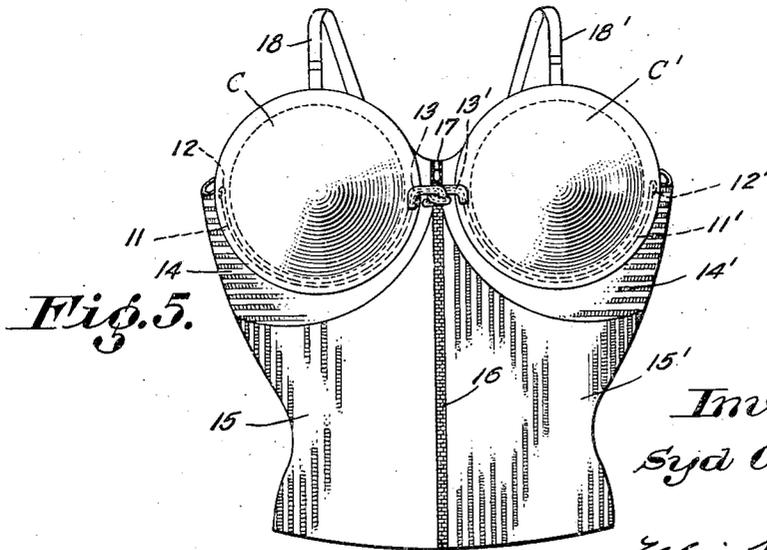
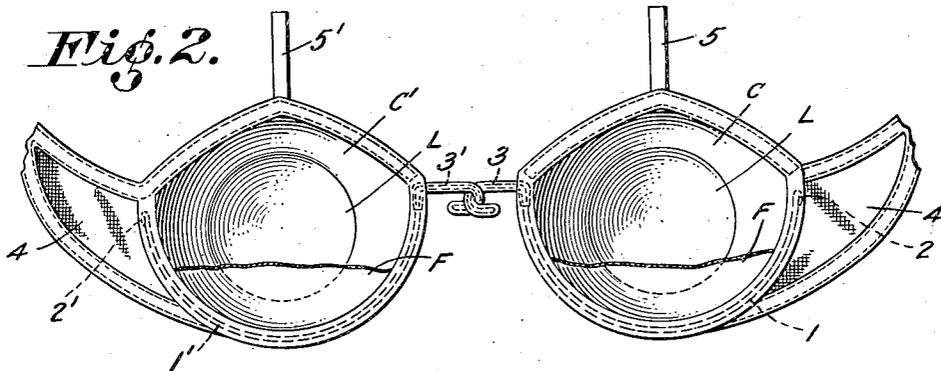
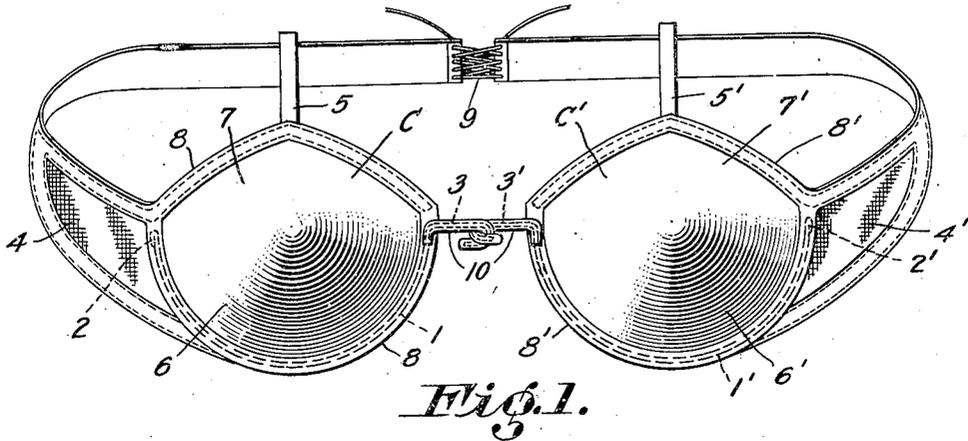
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2,485,570

BREAST SUPPORTING GARMENT

Filed Jan. 6, 1947

2 Sheets-Sheet 1



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BREAST SUPPORTING GARMENT

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2 Sheets-Sheet 2

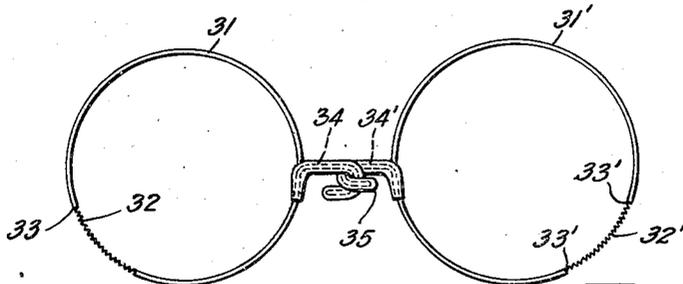
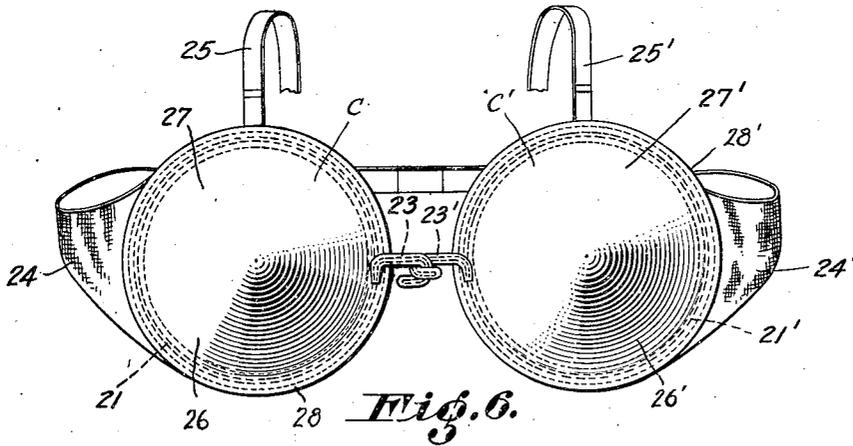
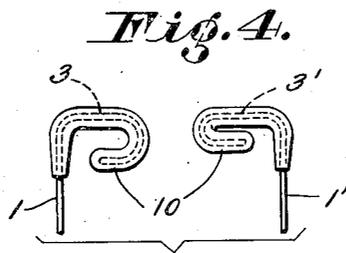
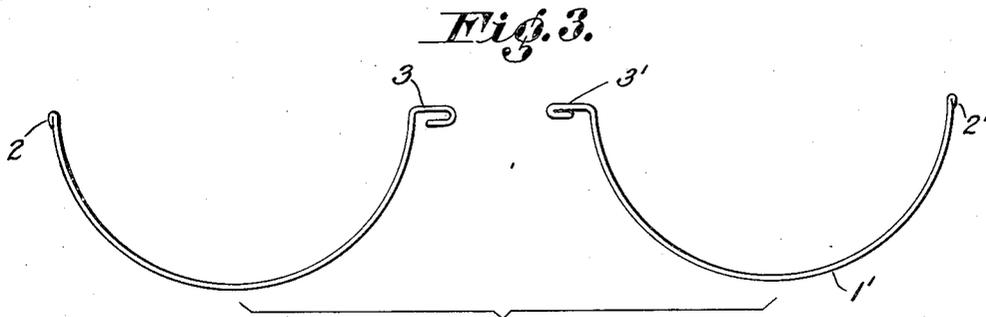


Fig. 7.

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UNITED STATES PATENT OFFICE

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BREAST SUPPORTING GARMENT

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Application January 6, 1947, Serial No. 720,335

4 Claims. (Cl. 2—42)

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This invention relates to breast supporting garments and particularly brassières of all types including nursing bras, style bras, long-line bras and bras designed for sportswear, including those which may be used in conjunction with bathing suits, halters, kerchiefs and the like.

It is the object of the present invention to provide a breast supporting arrangement or item of ladies' wearing apparel which is capable of universal application in ladies' nether garments of all types and which is characterized by a pleasing and neat appearance and a capability of convenient and rapid manipulation at the front of the garment. By a suitable design of the primary features of the invention, effective support can be given to the breasts under diversified circumstances while imparting thereto a youthful and attractive appearance.

The invention, while recognizing the fact that brassières with wire reinforcing frames have been used extensively in the prior art, contemplates a novel association of additional structural features with such reinforcements to impart a new range of effectiveness and utility to such brassières. These novel and advantageous results are made possible by the provision of hook projections integrally attached to the wire reinforcing frames which are selectively engageable and disengageable at the front and center of the brassière with convenience and dispatch, so that the wearer may adjust the same very quickly and wear the same with maximum comfort. The brassière in accordance with the invention provides a healthy support for the breasts which may be adjusted in the course of the fastening operation.

The provision of a pair of comparatively large cooperating hooks, which are preferably coated with colored plastics in order to render the article attractive in appearance and comfortable to the touch, provides a secure engagement between the breast cups of the brassière, and yet one which is readily disengageable by a simple manipulation, presenting a distinct advantage over front fastening arrangements used in the past, and exemplified by ribbon ties, small hook and eye fasteners and the like. The engagement and disengagement of the hooks may be performed rapidly at the front of the wearer, by the sense of touch only if necessary, when no light is available, which makes possible all nuances of utility for different wearers of such items of apparel, ranging from nursing mothers to strip-tease artists.

It is another object of the present invention to provide effective confining frames for the breast cups of nursing brassières, style bras and long-

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line bras, with interconnecting hooks therebetween, which frames serve to maintain the desired shape of the breast cups for long periods of time without material variation under conditions of frequent launderings.

It is a further object of the invention to provide wire reinforcing frames in conjunction with interengaging hooks integrally attached thereto which are distendable circumferentially in order to permit the use of such breast-confining frames with different types of sportswear such as bathing suits, jerseys, halters and the like, when the active exercise of the wearer makes desirable brassières capable of "breathing" in conformity with the chest movements of the wearer.

Other objects and purposes will appear from the detailed description of the invention following hereinafter, taken in conjunction with the accompanying drawings, wherein

Fig. 1 is a front view of a nursing bra incorporating the features of the instant invention;

Fig. 2 is a rear view of the breast cups shown in Fig. 1;

Fig. 3 is a front view of the wire reinforcing frames shown in Figs. 1 and 2 in the initial stages of fabrication of the product and before the same are incorporated in breast cups of any suitable textile material;

Fig. 4 is an enlarged view of the hooks at the terminals at the adjacent ends of the reinforcing frames following their dipping in or coating with a suitable resinous plastic composition;

Fig. 5 is a front view of a second embodiment of the invention showing the wire reinforcing frames with integrally formed hook terminals applied to a long-line bra or corselet;

Fig. 6 shows another embodiment of the invention in which the reinforcing frames are formed as complete circles with the connecting hooks therebetween disposed at approximately the horizontal diameters thereof; and

Fig. 7 is a front view of a variation of the circular frames, each of which is provided with a distendable coiled spring along a portion of the periphery thereof to permit circumferential distention of the frame as the need therefor arises by the movements of the wearer.

In Fig. 1 is shown a nursing bra formed of two breast cups C, C' fabricated of textile material in any manner known in the prior art. The breast cup C is formed of a lower breast supporting portion 6 and an upper breast covering portion 7 sewn in a manner to give a cupped effect to the covering and which is circumscribed by a binding edging 8, as generally employed in the

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art. The edging 8 at the lower portion of the cup formed by suitable tapes, has incorporated in the interior thereof a reinforcing wire frame 1 of generally semi-circular configuration. This wire may be formed of steel piano wire or any other strong and resilient metal. One end of the wire frame is either formed with a loop 2 or has an opening stamped therein, similar to a needle eye, so that the frame may be tacked to the cup C and remain in fixed position. A hook 3 projects from the opposite end of the wire frame towards the other cup C' and this hook extends downwardly and inwardly in a substantially vertical plane. The cooperating breast cup C' is formed in a similar manner from parts 6' and 7' and the boundary 8' has incorporated at the lower portion thereof the reinforcing wire 1' tacked to the cup C' at 2'. The hook 3', projecting from the wire 1', is sufficiently displaced at its free end from the vertical plane so that the same may be quickly engaged and disengaged with the hook end of the element 3. The hooked portions 3 and 3' may be formed as continuations of the respective wires 1 and 1' or may be welded or soldered thereto. These ends are dipped, sprayed or coated with a suitable plastic material 10 (Fig. 4), which also may be colored in the event blending color effects are sought to be attained with the textile material of which the bra is formed.

The lateral textile bands 4 and 4' extend from the outside edges of the breast cups C and C' and may be laced together at the back of the bra to adjust the fit of the garment to the individual wearer, which adjustment is particularly useful when the same is used as a maternity or nursing bra. Supporting straps 5 and 5' may extend from the top of the respective breast cups C and C' for adjustable engagement with the rearwardly extending bands 4 and 4' to supplement the support of the breasts by the wire reinforced breast cups.

Fig. 2 shows the obverse relationship of the parts shown in Fig. 1, including the flap support F for the breasts, as well as a waterproofing lining L therefor, which features are well known in such brassières. However, the provision of two breast cups which are individually reinforced at the lower portions thereof and are independently disengageable from each other at the front of the brassière, provides an independent supporting and lifting effect for each breast cup on each side of the universal joint between the frames. The coupling between the frames retains the breasts in their proper places in front of the body and prevents their movement towards the arms. Even in the course of exercising the nursing function, when one of the breast cups is removed from one of the breasts, the other breast is retained in place by the wire-reinforced breast cup which is maintained substantially in its original position by the respective lateral supporting band and the strap attached thereto and connected to the top of the respective breast cup.

Fig. 5 shows the application of the invention to an all-in-one foundation garment of the long-line bra type. In this garment, the supports for the breasts are afforded by the wire reinforcements 11, 11', which are tacked at their ends 12 and 12', respectively, and are provided with hooks 13 and 13' at the adjoining ends. Below the breast cups C and C' are provided Lastex portions capable of horizontal stretching in order to enable a convenient but restricted movement of the breasts to and fro, within the limitations permitted by the breast cups and the positively en-

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gaging hooks 13 and 13' extending therebetween. These hooks may be of various lengths and graded corresponding to the spacing of the breasts of different persons, thereby a long-line bra of the type under consideration may be designed to produce a desired seductive "valley" between the breasts which will prove particularly appealing for evening wear. The convenient engagement and disengagement of the breast cups at the front of the garment by means of hooks 13 and 13' are supplemented by the zipper closure 16 between the main portions of the garment 15 which are capable of stretching in a vertical direction only. The stretchable portions of the garment 15' may move relatively to the fixed elements of the slide fastener by virtue of the Lastex tapes which connect the slide fastener tapes to the garment, whereupon the limited vertical stretch which the garment is capable of experiencing corresponding to the movements of the wearer is not impeded thereby. The conventional slide element is shown at 17. In some circumstances a laced tape fastener arrangement may be used in lieu of the zipper slide fastener. A finely fitting garment is obtained by the combination of the vertically stretching body portions 15 and 15' with the brassière portion embodying the wire supported and reinforced breast cups attached to the horizontally stretching portions 14 and 14'.

Fig. 6 is a front view of a third embodiment of the invention which may assume the form of a strapless bra by the elimination of the suspending straps or tapes 25 and 25'. This bra is formed of breast cups C and C' as in the previously described constructions. The breast cup C may be fabricated from parts 26 and 27 and which in this instance is shown bounded by the tape 28 in which is incorporated a circular wire frame 21. The hook 23 is connected integrally to the frame 21 and extends laterally therefrom at approximately the horizontal diameter thereof. The mating breast cup C' is similarly formed from lower and upper portions 26' and 27', respectively, and the bands 24 and 24' are designed to extend from the outer sides of the breast cups C and C' for fastening at the rear of the body. If a conventional bra is desired, the vertical suspending straps 25 and 25' extend from the top of the breast cups C and C' to the encircling bands 24 and 24'. On the other hand, as stated above, these may be eliminated in order to provide a style bra designed for evening wear. In this case as well, the plastic coated hooks 23 and 23', which are engageable and disengageable at the front of the bra, serve to give a floating but secure support to the breasts, which is healthy and practical.

In lieu of the circular frames 21 and 21' shown in Fig. 6, the frame shown in Fig. 7 may be used, which is shown as formed of wire frames 31 and 31'. Part of the frame is formed by a distensible spiral spring 32 of curved outline corresponding in curvature to the remainder of the circular frame, the ends of which are engaged in the eyes 33 of the open ends of the frame 31. While the spiral spring may be disposed at different points of the periphery of the reinforcing frame, the lower outer quadrant has been found most desirable, as shown in Fig. 7. The mating frame 31' is formed correspondingly with a spiral spring portion 32' engaging the ends of the wire frame at 33'. The frames include cooperating hooks 34, 34' which are coated with plastic 35. These hooks are engageable and disen-

gageable at the front of the bra. The material in which such frames are enclosed is preferably of a stretchable fabric such as knitted fabrics, jersey, Lastex and the like, so that the cupped configuration is maintained despite variations in the circumferential boundaries of the reinforcing frame. The expedient of a spring forming part of the breast cup frame permits a bra of one size to be worn by persons who might otherwise require different sizes, resulting in a direct economy in the marketing of such items.

A frame such as shown in Fig. 7 is particularly suitable as an adjunct to bathing suits, jerseys, halters or kerchiefs which may be worn over a simple pair of breast cups formed of stretchable fabric and reinforced by frames which are circumferentially expansible and in effect breathe in conformity with the breathing actions of the wearer which is the case when the wearer participates in strenuous physical activity such as swimming, athletic contests, etc. Of course, fastening bands or other fastening means may be used to maintain the foundation bra with distensible frames in place on the body of the wearer.

While I have described my invention as embodied in a specific form and as operating in a specific manner for purposes of illustration, it should be understood that I do not limit my invention thereto, since various modifications will suggest themselves to those skilled in the art without departing from the spirit of my invention, the scope of which is set forth in the annexed claims.

I claim:

1. A breast supporting garment comprising a pair of breast cups reinforced at least at the bottom portions thereof by metallic wire frames and adapted to give support and to impart good form to the breasts, and a pair of stiff hook projections rigidly connected to said frames and extending from the adjacent sides of said breast cups for selective interengagement at the front of the garment.

2. In a breast supporting garment comprising a pair of flexible breast cups, and means extending across the back of a wearer to connect the outer sides of said cups to one another: a pair of wire reinforcing frames, means to incorporate each of said frames in a different one of said breast cups with parts of said frames at the

peripheries of the breast cups, each of said frames including a portion adjacent the inner side edge of its associated breast cup, a stiff member rigidly attached at one end to the mentioned portion of one of said frames and having a stiff bight rigidly mounted adjacent its other end, the opening through said bight extending in a substantially vertical direction, a second stiff member rigidly attached at one end to the mentioned portion of the other of said frames and having adjacent its other end a substantially vertically extending portion adapted to be thrust vertically through the bight to detachably couple the two frame portions over the sternum of a wearer, and means to rigidly detachably lock the bight and vertical portion together against relative vertical movement when on a wearer.

3. A breast supporting garment as set forth in claim 2 wherein a body-encircling panel is provided which opens at the front center of the garment and wherein a slide fastener is included to detachably couple the ends of the panel at the center of the garment.

4. A breast supporting garment as set forth in claim 2 wherein the reinforcing frames have a circular configuration and include a distensible spring portion.

SYD COUSINS.

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