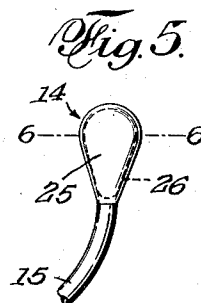
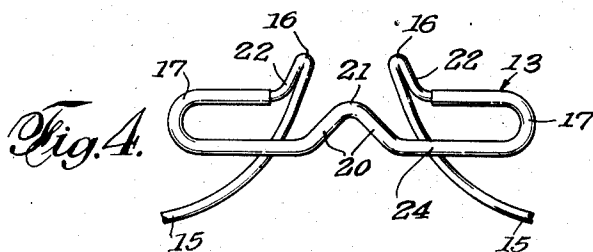
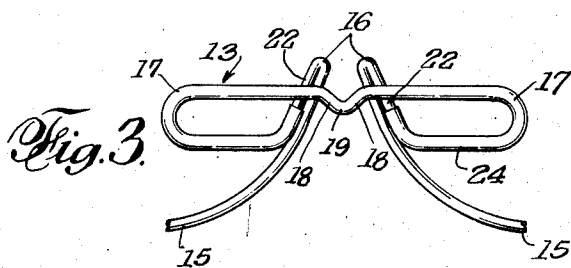
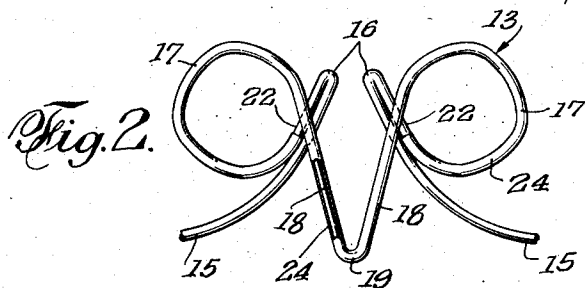
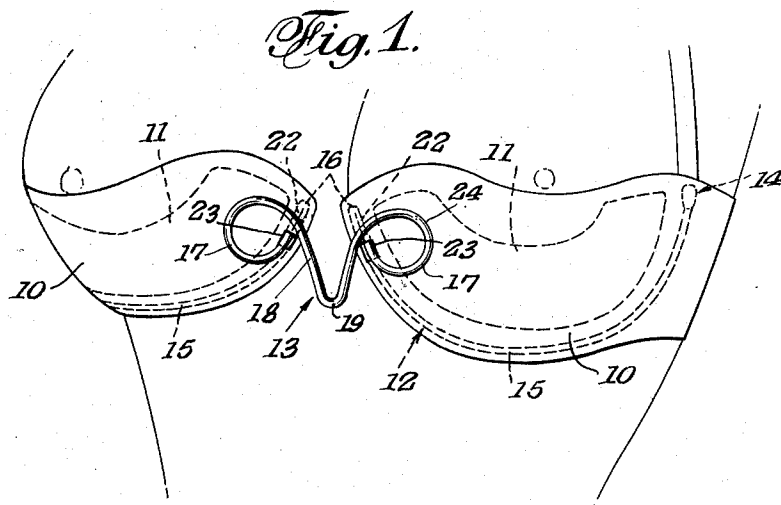


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BRASSIERE CONNECTING ELEMENT

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BRASSIÈRE CONNECTING ELEMENT

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5 Claims. (Cl. 2-42)

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This invention relates to brassière structures and more particularly to an element for resiliently connecting breast supporting cups, for effecting outward separation of the cups and thereby desired separation of the breasts, and for adjusting the cups, relatively. This application is a continuation of my pending application titled "Brassière," filed December 23, 1946, Serial No. 717,941.

The mentioned application discloses a brassière in which a wire element functions as outlined in the paragraph above and which further includes a stiffener in each breast-supporting cup rendering said cups rigid, yet suitably flexible. The wire element mentioned, being provided with lateral loops which bear against the cups and, therefore, against the adjacent portions of the stiffeners therein, laterally spread said cups and the breasts supported thereby. Some friction and wear on the fabric of the cups results. Further, the outer end of each curved end portion of the wire element that resides within the cups, also tends to frictionally wear the fabric.

An object of the present invention, therefore, is to provide an improved wire element for a brassière which embodies means obviating or, at least, reducing attrition resulting in frictional wear on the fabric of the brassière cups.

Another object of the invention is to provide an improved wire element of the character indicated which embodies desired resiliency and suitable adjustability, and effectively functions as a brassière cup separator.

My invention also has for its objects to provide such means that are positive in operation, convenient in use, easily installed in a working position and easily disconnected therefrom, economical of manufacture, relatively simple, and of general superiority and serviceability.

The invention also comprises novel details of construction and novel combinations and arrangements of parts, which will more fully appear in the course of the following description. However, the drawings merely show and the following description merely describes embodiments of the present invention, which are given by way of illustration or example only.

In the drawings, like reference characters designate similar parts in the several views.

Fig. 1 is a front perspective view of a brassière in use and embodying features of the invention.

Fig. 2 is an enlarged front view of the middle part of the brassière cup connecting wire element, slightly modified.

Figs. 3 and 4 are similar views of other modifications.

Fig. 5 is an enlarged front view of the end of each curved end portion.

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Fig. 6 is a cross-sectional view as taken on line 6-6 of Fig. 5.

As illustrated in Fig. 1, the brassière comprises a pair of similar but oppositely formed breast-supporting cups 10, a pre-formed stiffener insert 11 in each cup, and wire means 12 inter-connecting the cups at the middle of the body between the breasts. According to the present invention, said wire means 12 is provided with a friction reducing covering 13 for that portion thereof which resides outside of the cups 10, and friction reducing means 14 on the outer ends thereof.

The wire means 12 comprises a single length of wire which is inherently stiff and yet capable of being bent and having limited resiliency and springiness. The wire means is formed to have curved end portions 15 which reside in suitable pockets provided in the cups whereby they each extend along the bottom edge of each respective cup and are each upwardly directed in a smooth curve to terminate at the respective upper side points of the cups.

The adjacent ends of the end portions 15 are each reversely bent at 16 and then bent to form similar but opposite loops 17. As shown in Figs. 1, 2 and 3, said loops have their ends 18 directed angularly downward and toward each other to be integrally joined by a bend 19 at the symmetrical middle of the wire means. As shown in Fig. 4, the loops 17 have their ends 20 directed angularly upward and toward each other to be integrally connected by a bend 21.

It will be noted that the reverse bends 16 are common to the several forms of the invention, that the loops 17 may be variously formed—generally circular in Fig. 1, somewhat cushion-shaped in Fig. 2, and horizontally flattened in Figs. 3 and 4; that the V-shaped connection between the loops may vary both in degree of size and disposition downward and upward; and that the loops may be full as in Figs. 1, 2 and 3, or merely partial loops as in Fig. 4.

In each of the forms of wire means shown, the loop portions 22, which join at the bends 16, provide means for bringing the loops 17 and their connecting parts through an opening 23 in each cup 10 to the outside thereof, whereby the loops are adapted to engage the outer adjacent portions of the cups to urge them apart as described. According to the invention, the means 13, which is shown as a tubular covering 24 for the exposed portions of the wire means, is provided. Said covering, sometimes called "spaghetti" is formed of a plastic and smooth material which not only readily slides along the cups during normal body movements, but also has limited torsional rotation about the wire to effect reduction of friction as indicated.

The means 14 may comprise a suitable friction reducing cap 25 on the outer end of each curved

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end portion 15. In the form shown in Figs. 5 and 6, each wire end is preferably flattened, as at 26, to be of ovoid or tear-drop shape so as to lie flat in its pocket, and a plastic covering is applied, as by dipping, to form the cap 25. The reduction of friction resulting from this structure minimizes wear on the brassière at these points.

The bend at 19 provides means whereby the wire means is adapted to be secured to a garment should the brassière be incorporated as part of dress, swim suit, halter, or the like. Any suitable tie, such as a tape, stitching, etc., may be engaged with the bend 19 to effect securement to a garment.

While I have illustrated and described what I now regard as the preferred embodiments of my invention, the construction is, of course, subject to modifications without departing from the spirit and scope of my invention. I, therefore, do not wish to restrict myself to the particular forms of construction illustrated and described, but desire to avail myself of all modifications that may fall within the scope of the appended claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A connecting element for a brassière having separate breast-supporting cups, comprising an integral length of wire having curved end portions adapted to extend through and along the lower edges of the cups and to terminate at the sides thereof, said wire being formed with a connecting portion having opposed laterally directed loops adapted to reside outside of and to bear against adjacent outer portions of the cups, and a non-frictional covering for said connecting portion of the element.

2. A connecting element for a brassière having separate breast-supporting cups, comprising an integral length of wire having curved end portions adapted to extend through and along the lower edges of the cups and to terminate at the sides thereof, said wire being formed with a connecting portion having opposed laterally directed loops adapted to reside outside of and to bear against adjacent outer portions of the cups, said loops having angularly directed ends extending toward each other and a bend in the wire connecting said ends, and a non-frictional covering tube for said connecting portion of the element.

3. A connecting element for a brassière having separate breast-supporting cups, comprising an integral length of wire having curved end portions adapted to extend through and along the lower edges of the cups and to terminate at the sides thereof, said wire being formed with a con-

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necting portion adapted to extend outside of the cups from adjacent reversely bent ends of the curved end portions, opposed laterally directed loops formed on the reversely bent ends arranged to bear against adjacent outer portions of the cups, said loops having angularly directed ends extending toward each other and a bend in the wire connecting said ends, and a non-frictional covering tube for said connecting portion of the element.

4. A connecting element for a brassière having separate breast-supporting cups, comprising an integral length of wire having curved end portions adapted to extend through and along the lower edges of the cups and to terminate at the sides thereof, said wire being formed with a connecting portion adapted to extend outside of the cups from adjacent reversely bent ends of the curved end portions, opposed laterally directed loops formed on the reversely bent ends arranged to bear against adjacent outer portion of the cups, said loops having angularly and downwardly directed ends extending toward each other and a bend in the wire connecting said ends, and a non-frictional covering tube for said connecting portions of the element.

5. In a brassière having breast-supporting cups, a wire element having a middle portion extending between and connecting said cups, said middle portion being provided with oppositely directed loops each bearing against adjacent outer portions of the respective cups, a smooth-surfaced plastic tube on each loop for reducing frictional wear between the loops and the cups, and said wire element being provided with curved oppositely directed end portions extending along the lower edges of the cups.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,009,297	Gabeau	Nov. 21, 1911
1,837,958	Ferrero	Dec. 22, 1931
2,380,978	Licht	Aug. 7, 1945
2,420,593	Gluckin	May 13, 1947
2,454,152	Glick	Nov. 16, 1948

FOREIGN PATENTS

Number	Country	Date
413,228	Great Britain	July 12, 1934
528,598	France	Aug. 22, 1921
781,297	France	Feb. 18, 1935