Sept. 9, 1969 L. LOCKWOOD ET AL 3,465,754

BRASSIERE

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FIG. 1

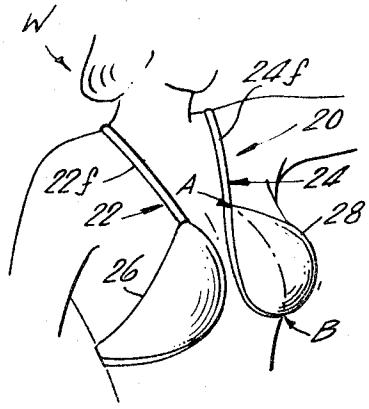


FIG. 2

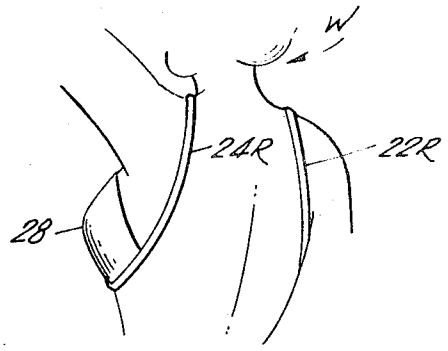


FIG. 3

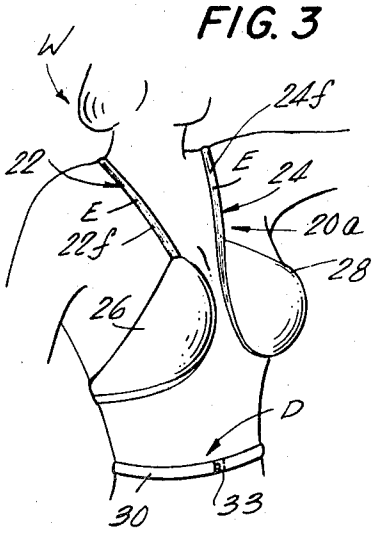


FIG. 4

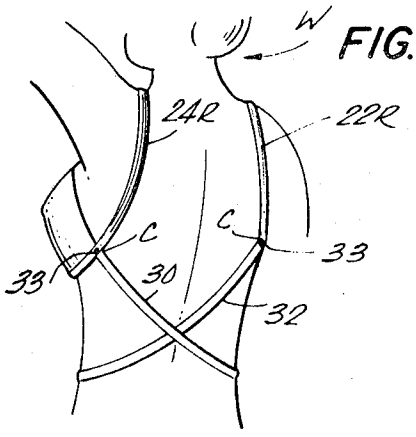


FIG. 5

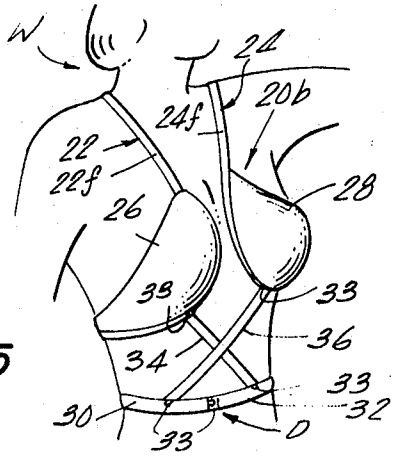
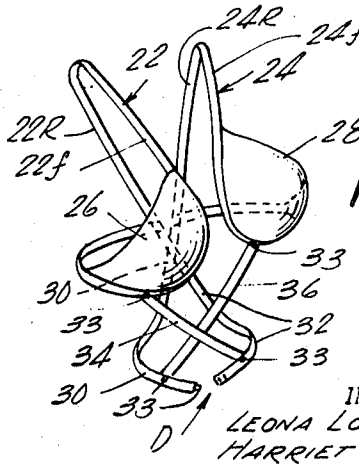


FIG. 6



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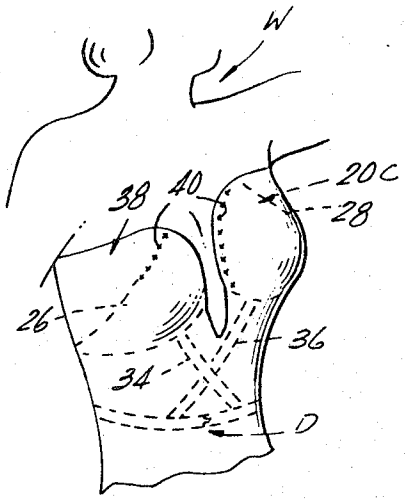


FIG. 7

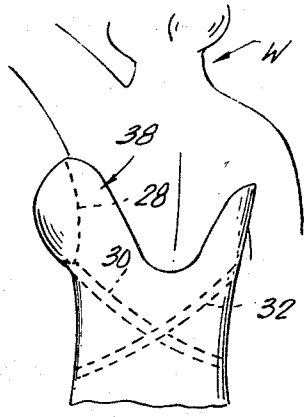


FIG. 8

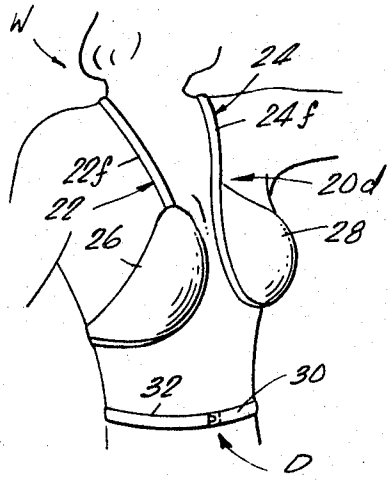


FIG. 9

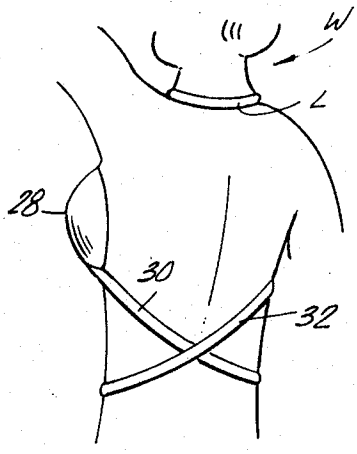


FIG. 10

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BRASSIERE

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U.S. Cl. 128—425 9 Claims

ABSTRACT OF THE DISCLOSURE

A brassiere which does not have any front connection between its brassiere cups. In a preferred embodiment, this is achieved with two loops respectively supporting each brassiere cup and each of which is worn in a sling-like position over one of the wearer's shoulders. As an optional feature, front and rear pairs of straps are worn to aid in holding the brassiere cups in position and are at a location which do not adversely affect the wearer's appearance when wearing garments with a low-cut front and rear neck line.

The present invention relates generally to brassieres, and more particularly to an improved brassiere which, by obviating the need for a front connection between the brassiere cups, has greatly expanded fashion possibilities.

The need in presently known brassieres of a connection in the form of some type of part spanning the two-brassiere cups seriously limits the fashion possibilities of this product. However, this structural feature in a typical prior art brassiere cannot readily be eliminated since basically the brassiere is formed as a closed loop which retains its position on the wearer by being placed in a position of encirclement about her and then contracting about her to hold its place. In the usual case, the contraction is achieved with elastomeric materials of construction. Thus, a discontinuity in the loop construction of a typical prior art brassiere, as would result from eliminating the connection between the brassiere cups, undermines the basic functioning of the product and thus its ability to retain its proper position over the wearer's bosom. Such product is also ineffective in achieving the desired brassiere function of providing support to the wearer's bosom.

Broadly, it is an object of the present invention to provide an effectively functioning brassiere which is free of any connection between the brassiere cups. Specifically, it is an object to provide an improved brassiere which, in practice, is adapted to be worn in a sling-like fashion by the wearer and, in this manner, is effective to retain its position on the wearer. Cooperating with this position of wearing a basic embodiment of the brassiere are optional attachments, in the form of straps, which when added to the basic embodiment aid in maintaining the position of the brassiere on the wearer and yet do not in any way restrict the uses or fashion possibilities of the product.

A basic brassiere embodiment, as just noted, which demonstrates objects and advantages of the present invention includes a body formed as two, separate loops, each of which is adapted to be worn in a sling-like operative position about each shoulder of a wearer. As explained more fully herein, the diameter of each loop is of a minimum extent which, in turn, minimizes any hiking or other movements of the loops, particularly the respective portions thereof in the bosom cleavage, and thus the loops effectively retain their operative positions on the wearer. The unconnected pair of brassiere cups are respectively appropriately secured to each loop at a location to assume a covering position over the wearer's bosom. At the wearer's option, front and rear pairs of straps can be

added to the basic embodiment to aid in maintaining the operative positions of the brassiere cups.

The above brief description, as well as further objects, features and advantages of the present invention will be more fully appreciated in reference to the following detailed description of presently preferred, but nonetheless illustrative embodiments in accordance with the present invention, when taken in conjunction with the accompanying drawings, wherein:

FIGS. 1 and 2 relate to a first embodiment of a brassiere according to the present invention, FIG. 1 being a front perspective view and FIG. 2 a rear perspective view;

FIGS. 3 and 4 are similarly respectively front and rear perspective views of a second embodiment of a brassiere according to the present invention;

FIGS. 5 and 6 are both front perspective views of a third brassiere embodiment according to a present invention;

FIGS. 7 and 8 are respectively front and rear perspective views of a fourth brassiere embodiment according to the present invention in which over-the-shoulder supporting straps are eliminated; and

FIGS. 9 and 10 are respectively front and rear perspective views of a fifth halter-type brassiere embodiment.

In the description which follows, each brassiere embodiment is discussed and described. From this discussion it will be apparent that all embodiments have in common certain important and significant structural features as well as a common mode of achieving the desired brassiere function of providing support to the wearer's bosom. One such significant common feature is that the brassiere breast-supporting portions or the brassiere cups are maintained in position over the wearer's breasts without any front connection between these brassiere cups. Among other desirable features, the absence of this front connection between the brassiere cups enables the wearing of garments with a low front neck line. Additionally, none of the four embodiments of FIGS. 1–8 require any supporting straps crossing the wearer's back at a location in which they visibly detract from the wearer's appearance when wearing a garment with a low-cut back. In this respect, even the fifth brassiere embodiment of FIGS. 9 and 10, although requiring a supporting strap positioned across the back of the wearer's neck, can also be used with a garment having a low-cut back since the presence of the supporting strap results in only minimal unsightliness.

Reference is now made to FIGS. 1 and 2 showing a first brassiere embodiment, generally designated **20**. Brassiere **20** exemplifies the basic construction as well as the inventive concept underlying all of the brassiere embodiments hereof which enables each, as already noted, of supporting brassiere cups in position over the wearer's breasts without any need for any front connection between the brassiere cups. More particularly, the body or the brassiere cup supporting structure of the brassiere **20** consists of a pair of loops **22** and **24** which are each worn in a sling-like operative position over each of the wearer's shoulders, as clearly shown in FIGS. 1, 2. The loops **22**, **24** are preferably identically constructed of non-extensible material, as exemplified by the materials of construction of the first brassiere embodiment **20**, or alternatively are fabricated, at least in part, of extensible or elastomeric material, as exemplified by the second brassiere embodiment of FIGS. 3, 4, soon to be discussed. The only difference between using non-extensible material or extensible material is that the latter renders it somewhat easier for the wearer to place the loops in position, but both forms or versions are nevertheless practical and are within the contemplated scope of the present invention.

The sling-like operative position for each loop **22, 24** more particularly consists of that position in which each front loop portion **22*f*, 24*f*** has a length portion thereof along which extends through the bosom cleavage and encircles the inner portion of each of the wearer's breasts, as illustrated for example by the length portion delineated by reference points A and B on the front loop portion **24*f***. The operative position of each rear loop portion **22*r*, 24*r*** is that position in which this loop portion is essentially vertically oriented from a point starting from under each of the wearer's arms to an elevated point crossing her shoulder, all as clearly shown in FIG. 2. An understanding of how the loops **22, 24** function can best be understood by considering that in circumscribing the shoulder portion of the body just described, that the diameter of each loop is, and need only be, of a minimum extent due mainly to the length portion of each passing through the cleavage. That is, in any other position of a supporting loop **22, 24**, as for example the position that would be occupied if the loop passed over rather than along the breast portion forming the cleavage and thus followed the path between the reference point A and B delineated by the dot-dash line, the diameter of each loop would of necessity have to be a somewhat greater size. Thus, by making the diameter of each loop **22, 24** of a predetermined minimum extent tailored to the specific size of the wearer, it has been found that the loops **22, 24** will remain in the sling-like operative position during normal activity of the wearer and, lacking the length or size to do so, will not "hike" over the wearer's breasts. This is particularly the case with a mature figure where a larger breast size provides a correspondingly larger size differential between the previously noted full line and dot-dash line compartive lengths between the reference points A and B.

Completing the brassiere **20** are a pair of unconnected brassiere cups **26** and **28** which may be of conventional construction and which are appropriately secured, as by stitching or the like, to each of the loops **22** and **24** along the length portions thereof which encircle the wearer's breast so that cups **26** and **28** are advantageously located to assume their position over the wearer's bosom.

Reference is now made to the second brassiere embodiment of FIGS. 3, 4, generally designated **20*a***. Brassiere **20*a*** is very similar to brassiere **20** except for those structural features subsequently to be specifically noted, and thus similar structural features are designated by the same reference numerals as used for the previously described brassiere **20** and such previous description will be understood to be applicable also to brassiere **20*a***. A previously noted, brassiere **20*a*** exemplifies the use of extensible loops **22, 24** having elastomeric material E and which loops are thus easily placed in position on the wearer W since they can be expanded during positioning and thereafter radially contract about the wearer's shoulders in their sling-like operative positions. Brassiere **20*a*** also exemplifies an embodiment which is more suitable for a younger woman whose bosom may not yet have fully developed and whose activity is comparatively more rigorous. In these circumstances it is advisable to include on the brassiere **20*a*** the pair of straps **30** and **32** which at one end are connected at points C along the rear loop portions **22*r*, 24*r***, extend in criss-cross fashion across the base of the wearer's back, and then encircle the waist of the wearer and terminate, in a preferred embodiment, in a front closure or connection D. Like the loops **22, 24**, the straps **30, 32** may also be non-extensible or rendered extensible by being fabricated in whole or in part of elastomeric material. Additionally, the straps **30, 32** at their respective points of attachment C to the rear loop portion **22*r*, 24*r***, can either be permanently or detachably attached. That is, a permanent attachment can be achieved by stitching or, alternatively, use can be made of cooperating connecting members **33** such as a conventional hook and eye appropriately secured on the straps **30, 32** and the rear loop portions **22*r*, 24*r*** so that a detachable attachment can be achieved between these elements. The front closure D, for obvious reasons, is preferably achieved with a cooperating connecting means of a hook and eye **33** since this makes it easier for the wearer to place the brassiere **20*a*** in position.

The criss-crossed angled position of the straps **30, 32** by virtue of their attachment at points C to the rear loops **22, 24** aid in maintaining the operative position of each rear loop portion **22*r*, 24*r***. In other words, the straps **30, 32** prevent the rear loop portions **22*r*, 24*r*** from hiking up and moving out of their sling-like operative positions. In this brassiere embodiment, however, the presence or position of the wearer's breasts inside each of the loops **22, 24** is still mainly relied upon to maintain the operative positions of each front loop portion **22*f*, 24*f***, and, in practice, has been found to be effective in achieving this result.

In the third brassiere embodiment **20*b*** of FIGS. 5, 6, there is illustrated an additional pair of straps **34, 36** which when added to the brassiere **20*a*** provides further assurance that the front loop portions **22*f*, 24*f*** will maintain their operative positions. In all other respects brassiere **20*b*** is similar to brassiere **20*a*** and is designated by the same reference numerals and adequately described by the descriptions previously given. In the brassiere embodiment **20*b*** advantageous use is made of the pair of straps **30, 32** which are attached to the rear loop portions **22*r*, 24*r*** and which encircle the wearer to function as anchoring structure for front straps **34, 36** which are arranged to aid in maintaining the operative positions of the front loop portions **22*f*, 24*f***. To this end, the second pair of straps **34** and **36** are connected between the brassiere cups **26, 28** and the front encircling portions of the straps **30, 32**, the attachment at opposite ends of the straps **34, 36** preferably being achieved with a hook and eye **33** so as to provide a detachable attachment therebetween. The criss-crossed angled position of the straps **34, 36** function in an obvious manner to aid in maintaining the operative positions of the front loops portions **22*f*, 24*f***.

Reference is now made to FIGS. 7, 8 illustrating a fourth embodiment of a brassiere, generally designated **20*c***. Brassiere **20*c*** similarly has many of the structural features of the previously described three embodiments which, for brevity's sake, will not again be described and are designated with the same reference numerals. The essential difference in brassiere **20*c*** over the brassiere embodiments previously described is that it is integrated in an outer garment **38**. Specifically, the upper edges of the brassiere cups **26, 28** are attached to the outer garment **38**, as by stitching **40**. In this manner, the elevated positions of these upper edges is maintained and the supporting loops **22** and **24** are eliminated as unnecessary. However, there are provided the two pairs of straps **30, 32** and **34, 36** attached to the brassiere cups **26** and **28**, as in the manner described in connection with brassiere **20*b***, and which straps are effective to maintain the brassiere cups in a firm position covering the wearer's breasts and providing support to the wearer's bosom. As clearly shown in FIGS. 7, 8, brassiere **20*c*** is advatnageously used with an outer garment **38** having a low-cut front and back and thus has significant fashion possibilities.

Reference is now made to FIGS. 9, 10 illustrating a fifth brassiere embodiment, generally designated **20*d***. Brassiere **20*d*** is worn in much the same manner as a halter and differs from the previously described embodiments in that the brassiere body is not formed as two separate loops but is a single elongated part. Thus, brassiere **20*d*** is worn with a length portion L disposed about the back of the wearer's neck and with adjacent front portions **22*f*, 24*f*** in an operative position in the bosom cleavage, in the same manner as in the previously described brassiere embodiments. The respective free ends **30, 32** of the elongated body function similar to the previously noted rear straps **30, 32** and to this end extend, as clearly shown in

FIG. 10, in a criss-cross fashion at any angle across the base of the wearer's back, encircle the wearer's waist and terminate in a front closure D. Thus, the halter-type brassiere **20***d* also has the essential distinguishing characteristic of achieving the desired brassiere function of providing support to the wearer's bosom without any front connection between the brassiere cups **26** and **28**.

From the foregoing it should readily be appreciated that each brassiere embodiment **20**, **20***a–c* represents a significant advance in this art in that each avoids any need for a front connection between the brassiere cups and thus has greatly expanded fashion possibilities over prior art brassieres which do require a front connection. In this respect, each brassiere embodiment may not only be used with a dress or garment having low-cut front and rear neck lines, but it is also contemplated that each may also be used in association with a wide range of apparel including, but not necessarily limited to, bathing suits, sleepwear, sportswear, casual and formal wear, as well as with theatrical costumes. Moreover, the use may be as a foundation garment separate from the apparel as well as integrated with such apparel, as in the case of a bathing suit where the bathing suit top would be constructed in accordance with the principles of the present invention. Still further, it will be understood that the brassieres of the present invention are not limited to any particular model or style but may be made as a so-called long line, torsolette, corsolette or as some other style, the differences between these styles being the lowermost extent of the brassiere and thus the body area over which body-flattening forces are applied. Still further, it should be readily appreciated that a brassiere according to the present invention is not necessarily limited to any particular material of construction but can include, without limitations, all types of stretch fabrics, plastics and regular fabrics, and may also include stiffening elements such as boning, plastic or wire, and also may include padding. In other respects as well, a latitude of modification, change and substitution is intended in the foregoing disclosure and in some instances some features of the invention will be employed without a corresponding use of other features. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the spirit and scope of the invention herein.

What is claimed is:

1. A brassiere comprising at least two, radially contractable brassiere cups supporting loops, each loop respectively having an operative sling-like position about each shoulder of a wearer positioning a rear portion of each loop along the rear upper torso of said wearer and a front portion of each loop in a position encircling each breast of said wearer, strap means joining said loops to each other attached to said loops only at points located along said loop rear portions to aid in maintaining said operative positions of said rear loop portions, and a pair of unconnected brassiere cups respectively connected to said breast-encircling front loop portions and held by said loops in position over said wearer's breasts without any front connection between said brassiere cups.

2. A brassiere as defined in claim **1** wherein said strap means comprises a first pair of straps of sufficient length and operatively arranged to completely encircle the waist of said wearer and further including a second pair of straps respectively connected between said brassiere cups and the front of said encircling portions of said first pair of straps to thereby aid in maintaining said operative positions of said front loop portions.

3. A brassiere as defined in claim **2** wherein said first and second pair of straps and said front and rear loop portions include cooperating connecting means thereon providing a detachable attachment therebetween.

4. A brassiere as defined in claim **1** including a first and a second pair of strap means, said first pair of strap means being attached at one end to said loops only at points along said loop rear portions and at their other end being operatively arranged to completely encircle the waist of said wearer and attached to each other to thereby aid in maintaining said operative positions of said rear loop portions, and said second pair of strap means respectively connected between said brassiere cups and the front of said encircling portions of said first pair of strap means to thereby aid in maintaining said operative positions of said front loop portions.

5. A brassiere as defined in claim **4** wherein said first and second pairs of strap means and said front and rear loop portions include cooperating connecting means thereon providing a detachable attachment therebetween.

6. A brassiere as defined in claim **5** wherein each of said first and second pairs of strap means and said front and rear loop portions includes an elastomeric material to facilitate the placement thereof in its operative position on the wearer.

7. A brassiere comprising at least two brassiere cup supporting members each in the form of an elongated body, said bodies having operative positions on a wearer positioning one of the ends of each in a position between and encircling a portion of each breast of said wearer and the remaining portions thereof encircling the waist of said wearer and connected to each other, a pair of unconnected brassiere cups respectively connected to said breast encircling ends of said bodies, edge-supporting means along the upper edges of said brassiere cups operative to maintain each edge in an elevated position, and a pair of straps connected between said brassiere cups and the front of said waist-encircling portions of said connected bodies, said straps being criss-crossed and oriented at an angle across the front of the upper torso of the wearer to cooperate with said bodies to hold said brassiere cups in position over said wearer's breasts without any front connection between said brassiere cups.

8. A brassiere as defined in claim **7** wherein said edge-supporting means comprises stitching connecting said upper edges to an outer garment worn by said wearer.

9. A brassiere as defined in claim **7** wherein said straps and said bodies include cooperating means thereon providing a detachable attachment therebetween.

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U.S. Cl. X.R.

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