

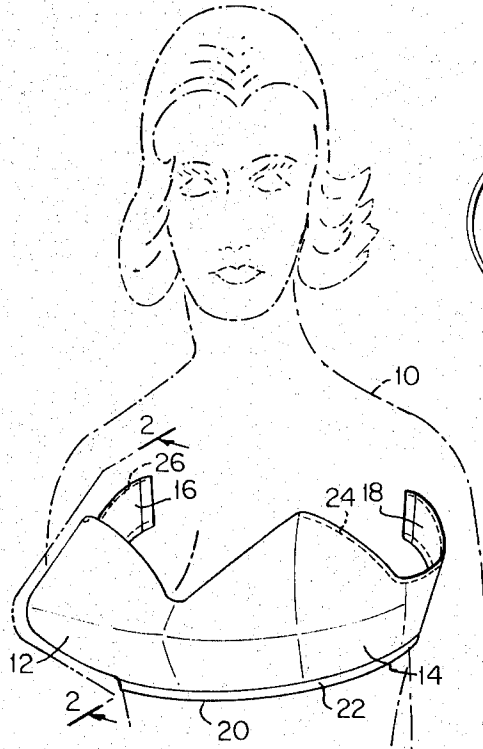


FIG. 1

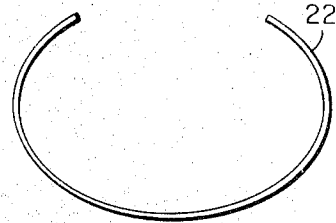


FIG. 3

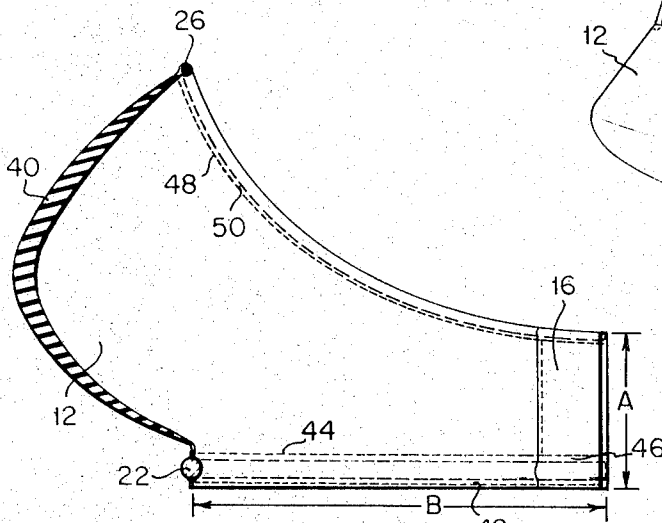


FIG. 2

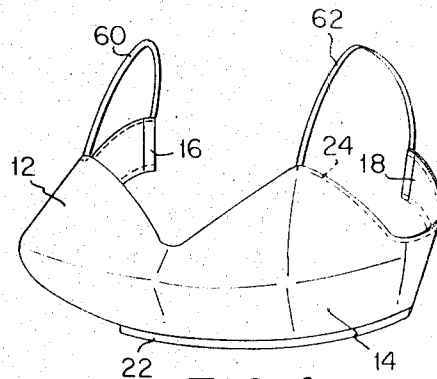


FIG. 4

INVENTOR
PHYLLIS A. BRUMFIELD

BY *Edward McKeay*
ATTORNEY

SELF-SUPPORTING GARMENT

FIELD OF THE INVENTION

This invention relates generally to articles of manufacture, and more particularly to feminine bathing suits and brassieres.

DESCRIPTION OF THE PRIOR ART

The world of feminine fashion is going through a trend of exposing more of the feminine figure to the beholder, while still striving to maintain traces of the feminine mystique. Stated more simply, girls are showing more of their bodies, both in formal and casual attire.

Certain areas of the body receive more attention than others—as a function of those who dictate fashion. Of late, there has been a significant interest in attire that reveals much of the wearer's back. Attempts to reveal backs have been complicated by the distinctive nature of feminine figures, coupled with the necessity of maintaining the front portion of one's body clothed.

To get more specific, bikini-style bathing suits have become very popular—particularly, with the younger set. Similarly, so called backless dresses have shown up more and more—both at formal and informal occasions.

The most common solution of the prior art to this problem was straps. The straps, of course, were attached to what might be termed a classical array of cup-shaped elements, well known to the art.

Many combinations, and arrangements, of straps were tried. They all had one feature in common: somewhere they had to cross the wearer's back. That one feature, by its very nature, destroyed the effect sought to be produced—namely, a truly backless effect. No matter how small, how narrow, or how colored the straps were, they still were present and visible. To a fashion conscious girl, this was a discouraging problem in and of itself.

The straps were noted for other problems. If they had to be tied in the rear, it was a frustrating task to attempt alone and it was inconvenient to seek the aid of another. Once tied, the straps could come loose due to movement, or, if on a bathing suit, they could become very difficult to untie when expanded by water.

An additional appearance problem arose when such a garment was worn outdoors in the summertime. The area of one's back covered by the straps would be a lighter color than those areas not covered. If a girl had several bathing suits, or was to wear a more formal, yet backless, dress, she would come in for an unfair share of comments directed to her striped appearance.

Strapped garments were not known to offer a feeling of security and comfort to the wearer. If tied tightly, the garment, be it brassiere or bathing suit top, offered security, but not comfort. When tied loosely, comfort was present, but not security for sports activity.

The straps and/or hardware for fastening the garment also wore out. Accordingly, garment life was shortened.

All these, and other, problems of the prior art lead me to state that it is a primary object of my invention to improve the art of feminine apparel by providing a truly backless garment for the upper portion of the female body.

A more particular object of my invention is to provide an improved garment that satisfactorily covers the front of the upper portion of the female body, while leaving the back almost totally exposed, by encircling a portion of the body in a firm, yet gentle, manner.

Other objects of the invention will be apparent from the following portions of my patent application.

SUMMARY OF THE INVENTION

In accordance with one aspect of my invention, and stated broadly, an article of apparel comprising a pair of joined and generally cup-shaped elements is disclosed. Forming an integral part of each cup-shaped element is a generally tapered, elongated extension. Each elongated extension is dimensioned

in accordance with the size of the wearer; however, it is so designed in every case to pass around the sides of the wearer, under the wearer's arm, and terminate slightly beneath the outer portion of the wearer's collar bone region. In order to provide the necessary support to keep the article of apparel in place, a resilient member of a generally elliptical shape is fitted into the lower edge of the apparel; the resilient member extends continuously from the terminus of one tapered, elongated extension, beneath the joined cup-shaped elements and then through the other tapered, elongated extension to the terminus thereof. For proper support, two additional resilient members are provided. One such resilient member passes through part of the upper edge of one cup-shaped element and then through the upper portion of its attached tapered, elongated extension. Still another resilient member passes through part of the upper edge of the other cup-shaped element, and similarly through the upper portion of its attached tapered, elongated extension.

In accordance with another aspect of my invention, shoulder straps can be provided upon the apparel. These shoulder straps run from the apex of each cup-shaped element to the upper outer edge of the associated tapered, elongated extension. The shoulder straps may be either rigidly connected to the apparel, or removably connected.

The novel article of manufacture invented by me can be used as a bathing suit top, in other types of two-piece outfits, as well as a brassiere. Since the primary commercial application may well be in the bathing suit area, some advantages of the invention in this environment will be discussed first.

As noted earlier, it is becoming increasingly fashionable to expose more of the wearer's back in the bathing suit art. My invention offers a structural solution to this problem while presenting a pleasing appearance. From a structural viewpoint, my invention is significantly simpler than the strapped bathing suit tops of the prior art. The invention can merely be slipped in and out of; that is, there is no necessity to do more than simply stretch the resilient portions of the bathing suit top and slip into it. By contrast, the prior art solutions to this problem have required the necessity of securing straps in the rear, arranging straps, and in some instances, worrying about the soundness of the straps. All of these considerations common to the prior art have been eliminated by the relatively simple structure of my invention.

The tapered elongated extensions need not be of a great length; that is, they do not have to extend around the wearer's back and conceal more than a small portion of it. By choosing suitable resilient members in both the lower and upper edges of the bathing suit top, a satisfactory covering of the front portion of the wearer's body is obtained. Similarly, a comfortable arrangement is provided for the wearer's back. The structure is so designed and cushioned as to exert the necessary pressure to maintain the bathing suit top in its desired position, yet not make the wearer uncomfortable.

With my invention, the disadvantages of the prior art regarding uneven coloring, expansion of the shoulder straps due to moisture, etc. (all noted previously) are eliminated. A maximum portion of the wearer's back area is exposed, offering an esthetically pleasing result and even providing maximum exposure to the beneficial rays of the sun.

The structure of my invention is easy to fabricate. It can be made from conventional cup-shaped elements known to the prior art and modified in a relatively simple manner. The modification comprises inserting only three resilient members within a portion of the fabric generally provided. Some simple cushioning can be added so as to make the apparel more comfortable for the wearer. The resilient members can be made from relatively inexpensive metallic, or equivalent, material, and there is no special treatment required for the metallic material. The entire garment can be manufactured inexpensively. In addition, the life of the garment is long, since there are no backstraps, snaps, etc. to wear out.

In summary, my invention offers an appealing article of apparel which is simply and reasonably manufactured, and yet is

strikingly novel. What has been said about my invention in its embodiment as a bathing suit top is, of course, applicable to the brassiere embodiment and equivalent embodiments.

The foregoing and other objects, features and advantages of my invention will be made clearer by reference to the detailed description of the invention presented in conjunction with the drawings, which follows.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a preferred embodiment of my invention.

FIG. 2 is a sectional view taken along line 2-2 of FIG. 1 and shows the internal structure of my invention.

FIG. 3 is a simplified drawing of the resilient member present in the lower edge of my invention.

Lastly, FIG. 4 shows an alternative embodiment of my invention having shoulder straps.

DETAILED DESCRIPTION OF THE INVENTION

As noted earlier, the structure of my invention is applicable to a bathing suit, a brassiere, and equivalent structures. For consistency's sake, it will be described in this portion of my patent application as a bathing suit top. However, it should be recognized that comments made about it in that regard are equally applicable to a foundation garment and other equivalent garments.

Turning then to FIG. 1, my invention is shown imposed on a female wearer 10. A first cup-shaped element 12 is joined, integrally, to a second cup-shaped element 14. Cup-shaped as used in this specification has a meaning common to the female garment industry. The joinder may be made by simply extending, in a continuous fashion, the fabric used to cover cup-shaped elements 12, 14. Associated with cup-shaped element 12 is a tapered, elongated extension 16, while a similar tapered, elongated extension 18 is associated with cup-shaped element 14. Extensions 16, 18 may be formed from the same fabric as cup-shaped element 12, 14 or from contrasting fabrics as appropriate. Mounted in the lower edge 20 of my invention is a stressed, resilient member 22. Member 22 is of a generally elliptical shape, but it is open at one side; namely, at the rear side. Member 22 extends completely through the lower edge of extension 16, cup-shaped element 12, cup-shaped element 14, and extension 18. In order to provide the necessary security and form-fitting characteristics of my invention, a resilient member 24 is mounted along the upper edge of cup-shaped element 14 and the upper edge of associated extension 18. Similarly, another resilient member 26 is mounted in the upper edge of cup-shaped element 12 and the upper edge of extension 16. Note that members 22, 24 and 26 could be inserted in a removable fashion for ease of laundering the garment.

With continued reference to FIG. 1, it can be seen that the novel structure of my invention allows the wearer 10 to slip in and out of my invention quickly, easily and in an unattended fashion. This is accomplished simply by grasping the tapered elongated extensions 16, 18 and bending them outwardly. One can then slip into the invention, release the tapered, elongated extensions 16, 18 and they will return to their original position thereby gripping securely the wearer's body. In addition, the members 24, 26 serve to give the necessary outline for modesty's sake to cup-shaped elements 12, 14 and by continuing around through extensions 16, 18 increase the gripping power exerted by extensions 16, 18. This gripping power is entirely satisfactory, or sufficient, to hold the novel article of my invention in place. This holding power is sufficient even during active sports, like swimming. Note the large area of the wearer's back which is completely exposed in this embodiment. As noted earlier, this satisfies the requirements of fashion, while complying with the necessities of apparel. To remove the novel article of manufacture, the extensions 16, 18 are gripped once again, stretched, and the wearer slips out of the bathing suit top.

The structure of my invention can be seen more fully with further reference to FIG. 2. This is a sectional view taken along lines 2-2 of FIG. 1 and, therefore, those numbers appearing in FIG. 1 will be used for like parts in FIG. 2. Cup-shaped element 12 is shown as having a certain amount of cushioning, such as shredded cotton, or other suitable material, 40 within its outer surface. Cushioning material 40 serves to make the garment more comfortable and also performs a light absorbing role when the wearer has been swimming and the garment is wet. Tapered, elongated extension 16 is shown; the taper is not critical, it merely must be pleasing to the eye and of a sufficient length so as to provide a comfortable fit for the wearer. In a preferred embodiment, the ratio of dimension A to dimension B in FIG. 2 can be approximately 1 to 5. Embodied in the lower edge of cup-shaped element 12 and extension 16 is resilient member 22. In a preferred embodiment, resilient member 22 can range from $\frac{1}{4}$ to $\frac{1}{8}$ inch diameter stainless steel rod having a spring constant. Spring constant is not critical; it need only be sufficient to maintain the novel article of my invention in place, securely and comfortably. Other flexible materials may be used, including brass, copper, and equivalents thereof. Similarly, member 22 need not be restricted to metallic materials; it may be possible to use some of the more rigid, yet resilient, plastics, hard rubbers, or equivalents thereof. Stitches 42 and 44 secure member 22 in place and, in a preferred embodiment, they could also secure a cushioning material 46 about member 22. Cushioning material 46 may be shredded cotton, foam rubber, or equivalents thereof.

Completing the description of FIG. 2, resilient member 26 passing through an upper edge of cup-shaped element 12 and tapered, elongated extension 16 is also shown. Member 26 may also be a stainless steel rod having a suitable spring constant. Preferably, member 26 would be of lighter gauge, or smaller diameter, than member 22. For example, a $\frac{1}{8}$ inch stainless steel rod has proven satisfactory. Of course, materials other than stainless steel may be used, such as noted earlier. Stitching 48, while securing member 26 in the structure of my invention, also serves to secure further cushioning material 50 for the wearer's comfort. Cushioning material 50 once again may be shredded cotton, foam rubber, or equivalents thereof.

Before leaving FIG. 2, it should be noted that members 22 and 26 should preferably be made of a nonrusting material—particularly when my invention is embodied in a swim suit. In this manner, straining of the garment or the wearer is avoided. Lastly, cup-shaped element 12 and tapered, elongated extension 16 may be formed of any fabric that offers the desired strength and wearability characteristics; for example, cotton is perfectly satisfactory as is nylon, rayon, and equivalents thereof.

Turning next to FIG. 3, the general shape of member 22 is shown. It is what may be termed generally elliptical with an open side. This is due to the elliptical cross section that would result should the wearer's body be sectioned around the rib cage area. The actual dimensions of the member 22 would vary in accordance with the dimensions of the wearer's body. As a general rule, it is desirable that as much length of the one side be left open as is possible to allow maximum exposure of the wearer's back.

FIG. 4 shows an alternative embodiment of my invention. The identifying, or distinctive, characteristic of the embodiment set forth in FIG. 4 is the addition of straps 60, 62. These straps run from the apex of cup-shaped elements 12, 14 respectively, to the terminus of associated tapered, elongated extensions 16, 18, respectively. Straps 60, 62 may be made from the same material as cup-shaped elements 12, 14 and associated extensions 16, 18, or from contrasting material. They may be permanently, i.e. rigidly, secured at either the apex of the associated cup-shaped element, or the terminus of the associated elongated extension; by contrast, they may be removably secured by means of a snap, for example. The embodiment shown in FIG. 4 is particularly applicable to a bathing suit top wherein the wearer wishes to swim vigorously

or dive. The straps provide added security and assurance of support. For more somnolent activity, the embodiments shown in FIGS. 1 and 2 are perfectly satisfactory.

It should be recognized that the invention set forth above can be embodied in arrangements other than those shown in this application and still come within the scope of my invention as set forth in the appended claims. Many choices of material are available to the manufacturer and various ways of manufacturing the novel article of manufacture are also present and apparent to one skilled in this art. It is emphasized that the primary feature of my invention is its ability to provide a garment emphasizing the current aspects of fashion, while providing security and comfort in its wearing.

The invention is described and set forth with legal particularity in the appended claims.

I claim:

1. An improved article of manufacture comprising an essentially backless garment for an upper portion of a female body, said garment comprising in combination: support means for supporting and including the pectoral regions of a wearer of the garment said support means including a pair of generally cup-shaped elements, each said cup-shaped element having a resilient member mounted in a portion of an upper edge of each said cup-shaped element; and gripping means joined to said support means for gripping the sides and a small portion of the wearer's back, thereby covering a portion of the front of the wearer's body and exposing a large portion of the back of the wearer's body.

2. An improved article of manufacture of the type set forth

in claim 1 wherein said cup-shaped elements have a lower resilient member mounted in a lower edge of said cup-shaped elements.

3. An improved article of manufacture of the type set forth in claim 1 wherein said gripping means include a first tapered, elongated extension connected to a first portion of said support means and a second tapered, elongated extension connected to a second portion of said support means.

4. An improved article of manufacture of the type set forth in claim 3 wherein said cup-shaped elements have a lower resilient member mounted in a lower edge of said cup-shaped elements and said lower resilient member extends through both said first tapered, elongated extension and said second tapered, elongated extension.

5. An improved article of manufacture of the type set forth in claim 4 wherein said resilient member mounted in a portion of an upper edge of each cup-shaped element extends through at least a portion of an upper edge of each tapered, elongated extension connected to said cup-shaped element.

6. An improved article of manufacture of the type set forth in claim 1 wherein said support means include shoulder straps.

7. An improved article of manufacture of the type set forth in claim 4 and including a first and a second shoulder strap, said first shoulder strap being connected to one said cup-shaped element and a terminus of its associated tapered, elongated extension and said second shoulder strap being connected to the other said cup-shaped element and a terminus of its associated tapered, elongated extension.

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