

June 25, 1963

L. E. LERNER
BATHING SUIT

3,094,722

Filed Oct. 27, 1960

3 Sheets-Sheet 1

FIG. 1

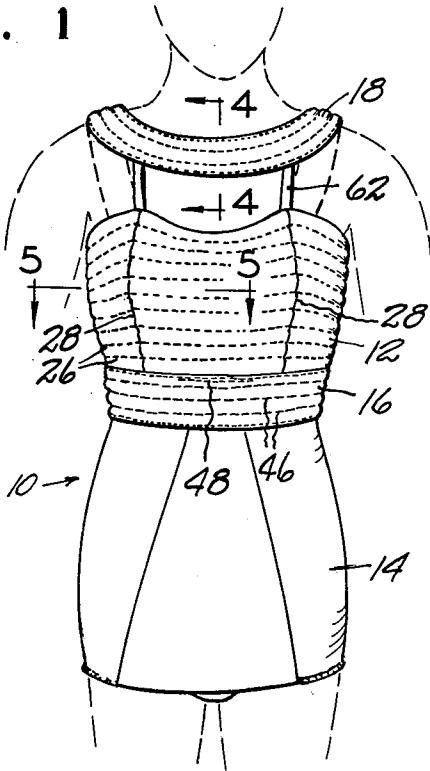


FIG. 2

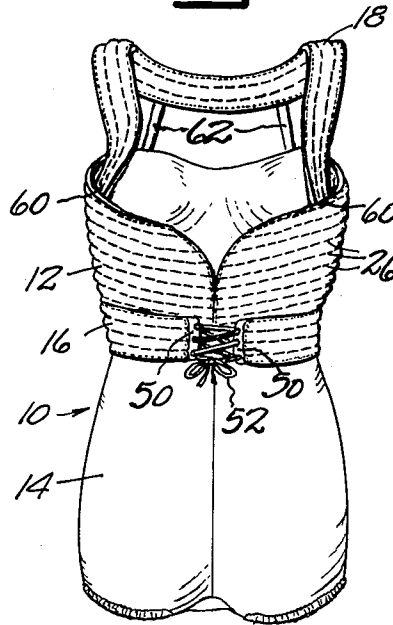


FIG. 3

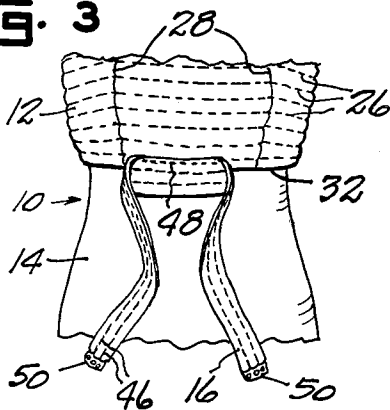
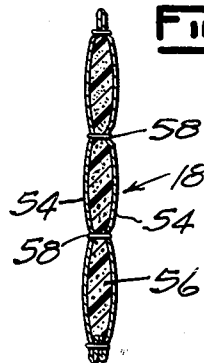


FIG. 4



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3 Sheets-Sheet 2

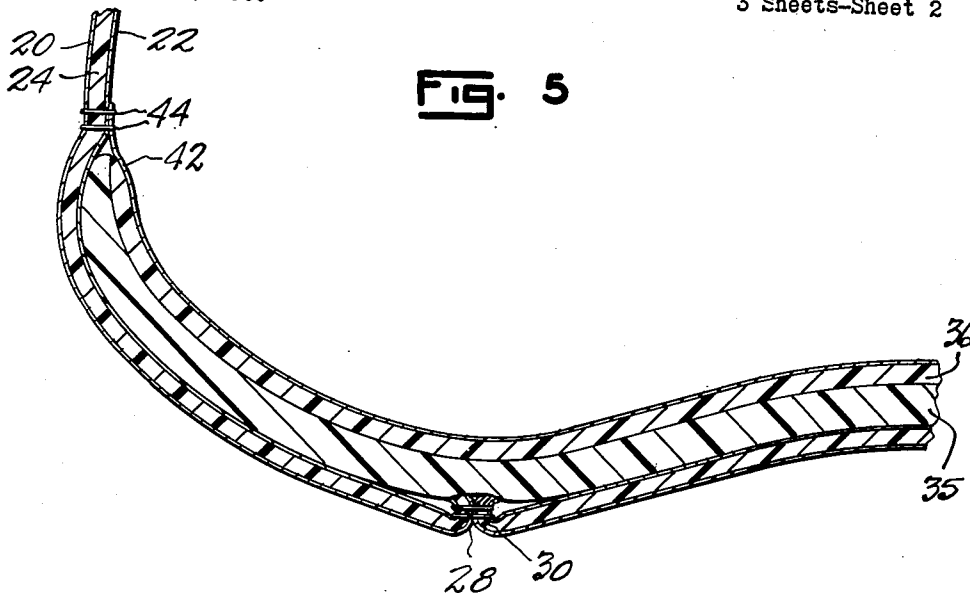


FIG. 6

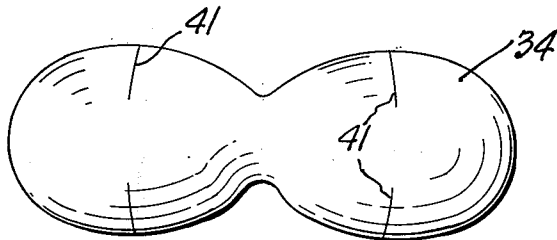
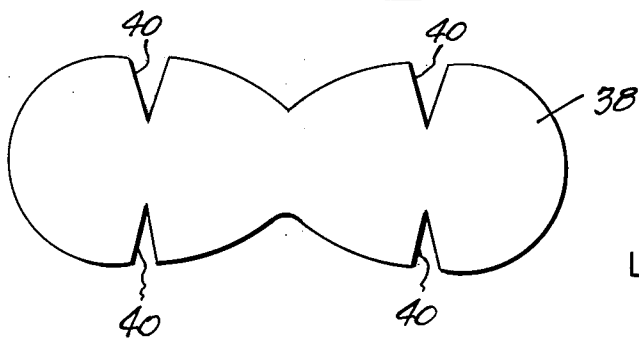


FIG. 7



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Filed Oct. 27, 1960

3 Sheets-Sheet 3

FIG. 8

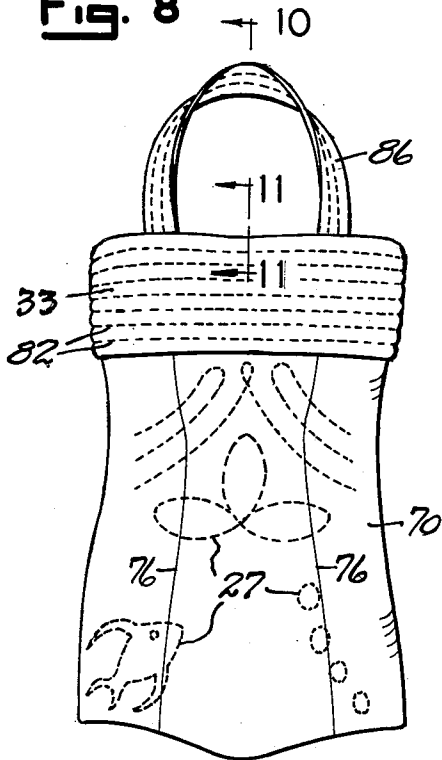


FIG. 9

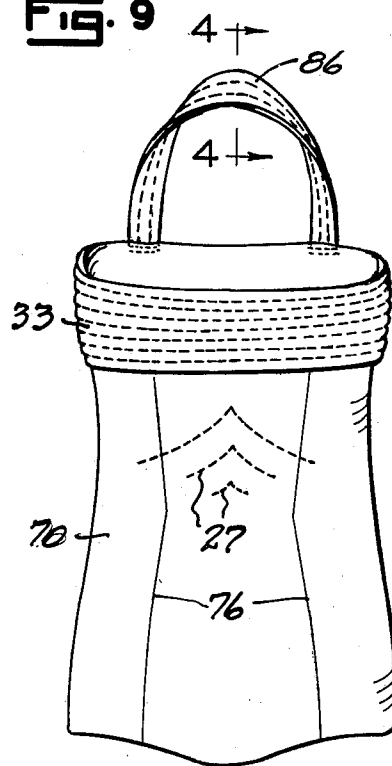
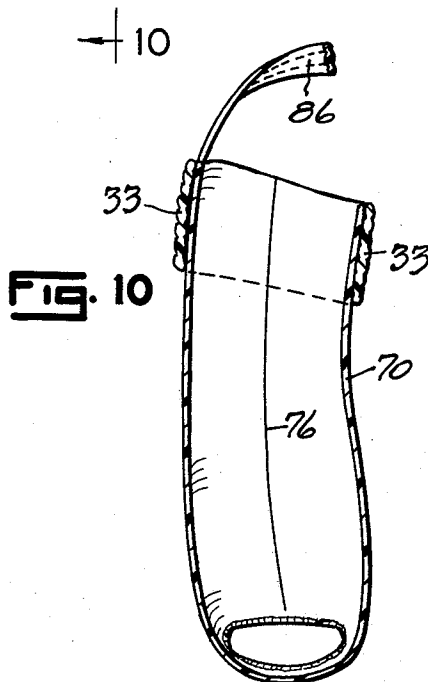
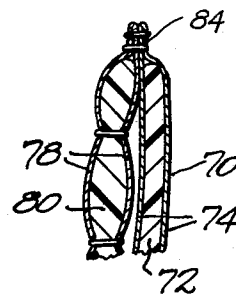


FIG. 11



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1

3,094,722 BATHING SUIT

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Filed Oct. 27, 1960, Ser. No. 65,520
17 Claims. (Cl. 9—334)

This invention relates to improvements in bathing suits, and more particularly to bathing suits which contain buoyant material to assist in maintaining a wearer thereof afloat while in the water. This invention is an improvement upon the bathing garment disclosed in my Patents No. 2,897,821, dated August 4, 1959, and No. 2,940,453, dated June 14, 1960.

The primary object of this invention is to provide a garment which is so constructed that a large quantity of buoyant sheet material may be utilized therein in such a manner as to avoid the appearance of bulkiness and in a manner to facilitate attractive styling of the garment.

A further object is to provide a garment having sheet buoyant material of unicellular character incorporated therein and secured to a fabric sheath in a manner to form or shape the sheath to desired contour and to prevent displacement of the sheath and buoyant material from desired relation to each other.

A further object is to provide a garment of this character which so distributes the location of buoyant material therein with respect to the body of the user as to provide maximum protection against drowning by a person wearing the garment in cases where such person might be unable to assist himself or herself due to fear, panic, coma or unconsciousness.

A further object is to provide a garment of this character wherein buoyant material is located across the upper portion of the chest of the wearer and close to the wearer's neck and face so as to provide buoyancy at this region to assist a wearer in maintaining his or her head out of the water without detracting from an attractive and modish appearance and without producing the appearance of bulkiness and great mass.

A further object is to provide a garment having a strap of buoyant material separated from the remaining portion of the garment and connected thereto at its end at the rear of the garment and serving to define shoulder straps which are interconnected by a portion extending across the upper chest of the wearer.

A further object is to provide a garment of this character having a belt portion connected to a garment at its center and front and filled with flexible buoyant material so as to increase the buoyancy of the garment and distribute the buoyancy factors thereof over a large area without detracting from the appearance of the garment.

Other objects will be apparent from the following specification.

In the drawings:

FIG. 1 is a front view of the garment;

FIG. 2 is a rear view of the garment;

FIG. 3 is a fragmentary front view of the garment, illustrating the belt portion thereof in free or open position;

FIG. 4 is an enlarged detail sectional view taken on line 4—4 of FIG. 1;

FIG. 5 is an enlarged fragmentary detail sectional view taken on line 5—5 of FIG. 1;

FIG. 6 is a face view of an insert portion utilized in the garment;

FIG. 7 is a plan view of a blank utilized to form the insert illustrated in FIG. 6;

FIG. 8 is a front view of a modified form of the garment;

FIG. 9 is a rear view of the garment shown in FIG. 8;

FIG. 10 is a sectional view taken on line 10—10 of FIG. 8; and

2

FIG. 11 is an enlarged fragmentary detail sectional view taken on line 11—11 of FIG. 8.

Referring to the drawings and particularly to FIGS. 1 to 6 which illustrate one embodiment of the invention, the numeral 10 designates a bathing garment having an upper or waist portion 12, a lower or pant portion 14, a belt portion 16 and shoulder strap portion 18. The lower or pant portion 14 is formed of fabric in any conventional manner or style as well understood in the art, while the upper or waist portion 12, the belt portion 16 and the shoulder strap portion 18 are shown as being filled with a flexible buoyant sheet material, such as a unicellular synthetic resin, and hence of greater thickness than the lower or pant portion 14. It will be understood, however, that the belt 16 and the shoulder strap 18 are optional and may be completely eliminated from the garment or may be formed of fabric only with no contained buoyant filler therein. It is also understood that the lower or pant portion may have a buoyant sheet filler, if desired.

The upper or waist portion 12 constitutes an envelope having an outer fabric sheath portion 20 and an inner fabric sheath portion 22. The sheath portions 20 and 22 are secured together at their margins and serve to confine and retain a sheet 24 of buoyant material, such as one or more sheets or panels of non-porous unicellular sheet material. The unicellular sheet material is preferably substantially uniform in thickness and is flexible. It preferably consists of a synthetic resin, such as a vinyl type resin, having a unicellular internal structure with its cells separated and sealed from each other so as to provide uniformly dispersed non-communicating voids. The material is light in weight, buoyant and flexible in any selected direction but it tends normally to retain its shape and to resist flexing thereof in more than one direction. The buoyant sheet material 24 is preferably of a thickness of three-sixteenth inch or more. One type of this buoyant unicellular material is now being manufactured by the United States Rubber Company in sheets of different thicknesses under the trademark "Ensolite."

I prefer to employ a comparatively thin sheet of unicellular material, such as a sheet of a thickness of three-sixteenths inch to one-quarter inch, shaped to conform to the general contour of the desired waist portion 12 and to the shape of the envelope defined by the fabric sheath portions 20 and 22. The filler sheet 24 is stitched to the fabric 20, 22 at a plurality of spaced points or lines or areas thereof, as by substantially parallel and equally spaced lines of stitching 26. When parallel lines of stitching are provided, I prefer to space them substantially uniformly and preferably between one-half inch and one inch, although this spacing is cited as illustrative and is not intended to be limiting. Stitching of the fabric sheets 20, 22 and the buoyant filler sheet may be such as to outline figures or designs, as illustrated at 27 in FIGS. 8 and 9. The stitching of the filler sheet 24 to fabric 20, 22 at 26, and stitching of the filler 24 to fabric 74 at 27 as above described, unitizes the garment by preventing displacement of the sheath and buoyant filler from desired relation, and serves further to avoid or camouflage an appearance of obesity of the wearer as might be expected due to the thickness of the buoyant filled sheath.

In order to permit the garment to conform to the contour of the body so as to fit snugly upon the wearer, as at the breasts, the waist portion may be formed of a plurality of sections or panels which are joined together along contoured edges, as at vertical seams 28. It will be understood that these panels will be so shaped that when the margins of adjacent panels are sewn together at 30 at such seams, pocket or cup portions will be produced to fit around the breasts.

The upper or waist portion 12 may be of any shape,

style or configuration desired for imparting an attractive appearance and preferably joints the pant portion 14 at or adjacent the waistline at 32, as illustrated in FIG. 3.

Additional buoyancy may be provided in the upper or waist portion 12 of the garment by incorporating therein buoyant cup members or fillers 34 at the brassiere portions thereof, as illustrated in FIGS. 5, 6 and 7. These members 34 may be formed of one or a plurality of layers of unicellular buoyant flexible sheet material, such as layers 35 and 36 illustrated in FIG. 5. Each of these layers may be formed individually to desired shape or contour providing cups similar to brassiere cups. The layers may be produced from flat sheet stock of desired thickness, which thickness need not be the same as the thickness of the sheet stock 24 used in the body of the waist portion of the garment, nor need the two layers 35 and 36 be of the same thickness. The member 34 may be formed from a blank of sheet material 38 of desired form, for example, as seen in FIG. 7, having two substantially similar ovate or part-oval portions joined at a narrow intermediate part with the blank notched by V-shaped or other tapered cuts 40 at selected points. The blanks are then reshaped by bringing the notched edges 40 into engagement and adhering them at a joint line 41, as illustrated in FIG. 6, for the purpose of maintaining them in desired cup form. The insert or members 34 are smaller than the sheet stock 24 and may be mounted in the garment as illustrated in FIG. 5. Where two layers 35 and 36, or any multiple number of layers, are employed, they will preferably be formed of such dimensions and shapes as to fit within each other, as seen in FIG. 5. The member 34 fits against one surface of the waist part, for example against the inner surface thereof, and may be held therein by a retainer sheet 42 suitably stitched around the margins of the insert at 44 to the main body or waist portion of the garment.

It will be understood that the provision of preformed inserts 34 is optional and need not be followed in cases where the garment is to be worn by children or in cases where the garment is to be worn by men. In the latter instances the buoyant material 24 may be used of a sufficient thickness to provide the desired buoyancy factor for the user, or additional bands or members 33 of desired dimension and of plain and uncontoured shape may be provided, as seen in FIG. 8.

In order to increase the area and volume of the buoyant material used in the garment without detracting from the appearance of the garment when worn, and without producing the impression of excessive bulk, the belt 16 may be provided having a filler of the buoyant sheet material and a fabric sheath enclosing the same and also having stitching to secure the sheath and filler, such as stitching 46 extending lengthwise thereof in substantially parallel lines and at suitable spaced intervals. The belt portion 16 will preferably be stitched or sewn at a margin thereof to the lower front margin of the waist portion for a short distance only at 40, so that the major portion of the belt is free of the garment, as illustrated in FIG. 3, when the garment is not being worn. The belt may be provided with end tabs 50 with suitable means for connecting its ends, such as tabs with perforations to accommodate cord or lacing material 52 adapted to be threaded in the perforations and pulled upon to draw the belt snug around the waist of the wearer, as seen in FIG. 2, and then tied or knotted. Alternatively, separate fasteners of any suitable type may be mounted upon the ends of the belt 16 to secure together the free end tab portions 50 of the belt. The belt may be of any suitable width and serves to break the vertical continuity of the upper waist portion 12 of the garment and thus camouflage the bulk of the waist portion 12. It will be understood, of course, that the tightness with which the belt is drawn will permit the garment to follow the contour of the figure and thus present an attractive appearance.

As an increased safety factor it is desirable to provide

buoyant material as close to the head of the wearer as possible. It is desirable at the same time to provide this buoyancy without detracting from the appearance of the garment. I have accomplished this result by the provision of the shoulder strap 18 which is formed of opposed fabric sheath layers 54 defining an envelope containing a buoyant filler 56, such as unicellular material, the same being quilted by stitching, such as stitches 58 extending parallel to the length thereof at spaced intervals. The ends of the shoulder strap are anchored or secured by stitching or other suitable means to the upper rear margin of the waist portion 12, preferably at the sides thereof at 60 as seen in FIG. 2. A single shoulder strap is provided which is of sufficient length to pass over the shoulders of the wearer and thence across the upper front portion of the chest of the wearer spaced above the waist portion 12. One or more straps 62 are preferably provided, extending between the waist portion 12 and the front portion of the shoulder strap 18 to maintain a predetermined spacing between the front portion of the shoulder straps and the waist, as seen in FIG. 1. This shoulder strap arrangement, through the incorporation of a buoyant filler therein, increases the buoyancy of the garment, locates this buoyant factor just below the chin of the wearer and does so in an attractive manner which avoids any objectionable appearance on the score of bulkiness. It will be understood that the shoulder straps are optional and it is further understood that the shoulder straps, where used, need not contain the buoyant filler throughout the entire length thereof, or in fact need not contain any buoyant material therein whatsoever.

FIGS. 8 to 11 illustrate an embodiment of the garment particularly intended for children. The entire body 70 of this garment is filled with thin flexible unicellular buoyant sheet material 72 confined within a fabric sheath 74 to which it is anchored by stitching 27 at spaced intervals as described above, and which may include attractive stitching designs. The laminated material, i.e. fabric sheath layers 74 and intervening sheet 72 of a buoyant material, may be formed in panels stitched together at seams 76 to produce the desired size and shape of garment. An extra panel or band 33 of buoyant material may be added at the top of the garment. The band 33 is preferably plain and includes a fabric sheath 78 and buoyant filler 80 stitched together at spaced lines 82. Band 33 is secured in place on body 70 in any manner desired, as by stitching at seams 84 at the margin thereof, and it extends in any desired length, width, thickness and shape. Thus, as shown, it encircles the garment. Halter straps 86 may be provided, and may have a buoyant filler.

While the preferred embodiment of the invention has been illustrated and described, it will be understood that changes in the construction may be made within the scope of the appended claims without departing from the spirit of the invention.

I claim:

1. A bathing suit comprising a fabric garment having a buoyant portion, said buoyant portion having inner and outer garment outlining fabric portions and a sheet of buoyant unicellular material of substantially uniform thickness interposed between said inner and outer fabric portions, and stitching securing said inner and outer fabric portions together at their margins said stitching penetrating said buoyant material for securing said fabric portions to intermediate portions of said unicellular sheet material at a plurality of spaced points in a predetermined pattern to unitize the garment and avoid an appearance of obesity of the wearer.

2. A bathing suit comprising a fabric garment having a pant portion and an upper portion connected together, said upper portion constituting inner and outer garment defining fabric portions and a filler of buoyant unicellular sheet material of substantially uniform thickness, and a plurality of spaced lines of stitching securing together said inner and outer fabric portions and said unicellular mate-

5

rial and arranged to camouflage the thickness of the filler when the garment is worn, at least some of said stitching passing through said unicellular material.

3. A bathing suit comprising a fabric garment including a buoyant upper portion constituting inner and outer garment outlining fabric portions and a filler of buoyant unicellular sheet material of substantially uniform thickness, and a plurality of spaced stitches securing together said inner and outer fabric portions and piercing said unicellular material, said buoyant upper portion constituting a plurality of unicellular panels having configured edges joined together along substantially vertical seams to produce a cupped brassiere-defining portion, said stitches being positioned and proportioned to unite the fabric and filler in a manner to create an illusion of thinness of the filler-containing part of the garment when worn.

4. A bathing suit comprising a fabric garment having an upper portion constituting inner and outer garment defining fabric portions and a sheet of buoyant unicellular material of substantially uniform thickness between said fabric portions, a plurality of spaced stitches securing together said inner and outer fabric portions and said unicellular material, some stitches penetrating said buoyant sheet, a preformed filler smaller than said buoyant sheet formed of buoyant unicellular sheet material and contoured to fit a wearer of the garment at the breasts, and a fabric sheet secured at its margins to at least the inner fabric portion of said upper portion and confining said preformed filler, said stitches connecting said first mentioned unicellular sheet and said inner and outer fabric portions to shape said first unicellular sheet and avoid an appearance of obesity of a wearer of the garment.

5. A bathing suit comprising a fabric garment having an upper portion constituting inner and outer garment defining fabric portions and a sheet of buoyant unicellular material of substantially uniform thickness between said fabric portions, a plurality of spaced stitches securing together said inner and outer fabric portions and said unicellular material, some of said stitches passing through said unicellular material said upper portion having a contoured front portion defining a pair of brassiere cups, a preformed filler smaller than said buoyant sheet formed of buoyant unicellular sheet material and contoured to substantially conform to said contoured front portion, and means securing said preformed filler to said contoured front portion in register therewith, said stitches connecting said first unicellular sheet to said fabric to shape said first unicellular sheet and camouflage the thickness thereof.

6. A bathing suit comprising a fabric garment having a pant portion and an upper portion connected together, said upper portion constituting inner and outer garment defining fabric portions and a filler of buoyant unicellular sheet material of substantially uniform thickness, and a plurality of spaced lines of stitching securing together said inner and outer fabric portions and said unicellular material, said lines of stitching extending through and being substantially uniformly spaced throughout substantially the full extent of said unicellular material to shape said filler whereby the thickness of the filler is camouflaged when the garment is worn.

7. A bathing suit comprising a fabric garment having a pant portion and an upper portion connected together, said upper portion constituting inner and outer garment defining fabric portions and a filler of buoyant unicellular sheet material of substantially uniform thickness, and a plurality of spaced stitches securing together said inner and outer fabric portions and passing through said unicellular material, and a second buoyant sheet portion smaller than and secured to the upper front portion of said first named buoyant portion, said stitches unitizing said fabric and filler to shape said filler and to create an illusion of thinness of the garment when worn.

6

8. A bathing suit comprising a fabric garment having a pant portion and an upper portion of different thicknesses connected together, a belt secured to the front portion of said garment adjacent the junction of said pant and upper portions and adjacent a longitudinal edge of the belt for a limited portion of its length intermediate its ends, and means for releasably interconnecting the ends of said belt, said belt camouflaging the difference in thickness of the pant and upper portions when the garment is worn with the belt drawn taut.

9. A bathing suit comprising a fabric garment, having a pant portion and an upper portion of different thicknesses connected together, the upper portion having inner and outer fabric portions and a buoyant filler formed of sheet stock secured between said fabric portions and a belt secured for a limited portion of its length intermediate its ends at a margin thereof to the front portion of said garment at the lower margin of said upper garment portion and in overlapping relation to said pant and upper portions to camouflage the difference in thickness of said pant and upper portions when the belt is drawn taut.

10. A bathing suit comprising a fabric garment, having a pant portion and an upper portion of different thicknesses connected together, the upper portion having inner and outer fabric portions and a buoyant filler formed of sheet stocks secured between said fabric portions by stitching arranged to shape said filler and camouflage the thickness thereof when the garment is worn, and a belt secured to said garment at the lower margin of said upper garment portion, said belt having inner and outer fabric portions and a buoyant filler formed of sheet stock secured to said fabric portions by stitching to unitize said belt, said stitching and tension on said belt cooperating to camouflage the difference in thickness of said pant and upper portions when the garment is worn.

11. A bathing suit comprising a fabric garment having a pant portion and a thicker upper portion constituting inner and outer fabric portions and a filler of unicellular buoyant sheet material of substantially uniform thickness, a plurality of spaced lines of stitching securing together said inner and outer fabric portions and penetrating said unicellular material in predetermined pattern to shape said filler, and a belt secured for a limited portion of its length intermediate its ends at a margin thereof to the lower margin of the front portion of said upper garment portion, said belt having inner and outer fabric portions and a buoyant filler of sheet stock interconnected by a plurality of lines of stitching, said belt defining a taut band between said upper and pant portions creating an appearance camouflaging the difference in thickness of said garment portions when the garment is worn.

12. In combination, a bathing suit having an upper thick buoyant part and a thin lower part, and a belt secured for a limited portion of its length intermediate its ends and at a longitudinal margin thereof to said bathing suit in a position to extend around the torso of a wearer, and overlap adjacent portions of said thick and thin parts, said belt comprising a fabric envelope and a filler of unicellular buoyant sheet material stitched together in a predetermined pattern, some of said stitching penetrating said buoyant material, said belt camouflaging the difference in thickness of said upper and lower garment parts when the garment is worn with the belt drawn taut.

13. In combination, a bathing suit, an elongated buoyant flexible member secured at its ends to the rear side portions of said suit, and a flexible strap secured at one end to an intermediate portion of said buoyant member and at its other end to the front of said suit, whereby said buoyant member defines shoulder straps for said suit interconnected by a portion extending across the upper portion of the chest of the wearer.

14. In combination, a bathing suit, an elongated buoyant flexible member secured at its ends to the rear side portions of said suit, and a flexible strap secured at one

7

end to an intermediate portion of said buoyant member and at its other end to the front of said suit, whereby said buoyant member defines shoulder straps for said suit interconnected by a portion extending across the upper portion of the chest of the wearer, said flexible buoyant member constituting a fabric envelope encasing an elongated body of unicellular buoyant sheet material.

15. In combination, a bathing suit, an elongated buoyant flexible member secured at its ends to the rear side portions of said suit, a flexible strap secured at the end to an intermediate portion of said buoyant member and at its other end to the front of said suit, whereby said buoyant member defines shoulder straps for said suit interconnected by a portion extending across the upper portion of the chest of the wearer, said flexible buoyant member constituting a fabric envelope encasing an elongated body of unicellular buoyant sheet material, and a plurality of spaced lines of stitching interconnecting said envelope and buoyant material.

16. A bathing suit comprising a fabric garment having a pant portion and an upper portion connected together, said upper portion constituting inner and outer fabric portions and a filler of buoyant unicellular sheet material of substantially uniform thickness, a plurality of substantially uniformly spaced lines of stitching extending substantially horizontally to secure together said inner and outer fabric portions and said unicellular material throughout substantially the full extent of said unicellular material, and an elongated member secured at its ends to said upper portion at its upper margin at spaced points of the rear thereof, said elongated member being of a length whereby its end portions define shoulder straps and its mid portion extends across the upper part of the chest of a wearer, said member constituting a fabric envelope encasing unicellular buoyant sheet material.

8

17. A bathing suit comprising a fabric garment having a pant portion and an upper portion connected together, said upper portion constituting inner and outer fabric portions and a filler of buoyant unicellular sheet material of substantially uniform thickness, a plurality of substantially uniformly spaced lines of stitching extending substantially horizontally to secure together said inner and outer fabric portions and said unicellular material throughout substantially the full extent of said unicellular material, an elongated member secured at its ends to said upper portion at its upper margin at spaced points of the rear thereof, said elongated member being of a length whereby its end portions define shoulder straps and its mid portion extends across the upper part of the chest of a wearer, said member constituting a fabric envelope and an elongated sheet of unicellular material of substantially uniform thickness secured to said envelope by a plurality of substantially uniformly spaced lines of stitching extending lengthwise of said member, and a member connecting the front central portions of said upper portion and said elongated member.

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