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CHILD'S LIFE-SAVE JACKET AND SWIM BELT

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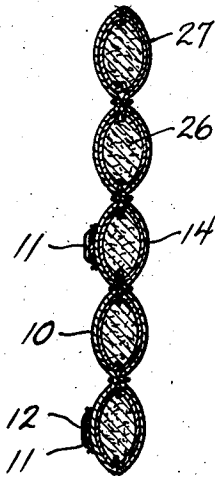


Fig 2.

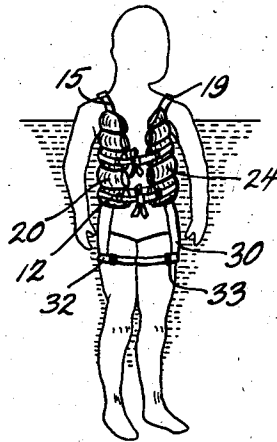


Fig 3.

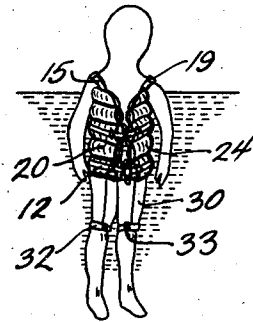


Fig 4.

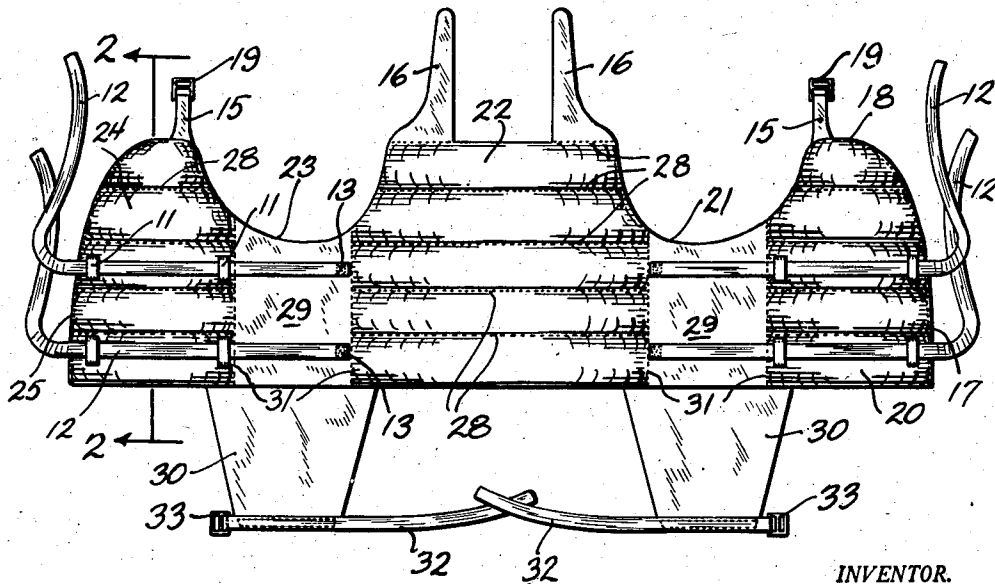


Fig 1.

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CHILD'S LIFE-SAVE JACKET AND SWIM BELT

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8 Claims. (Cl. 9—20)

The present invention relates to life saving jackets and swim belts preferably for children which may be worn comfortably during play in or near water to serve the dual purpose of a safety device and a swimming aid.

Aside from the ability of jackets embodying the invention to provide several seasons comfortable wear for a particular child while the child is growing, the invention also provides an improved fastening means by which the life-save jacket or belt can be secured comfortably to the child in a manner which prevents the jacket from being stripped off of the child is compelled to jump into the water from unusual heights or is thrown violently into the water.

A life saving jacket or swim belt for a child is practically useless if the child can drop out of it when striking the water or if the child is induced to take the jacket off when playing around water because its fastenings bind or irritate the body as at the crotch where crotch straps sometimes are employed. In fact, parents very often contribute to an unsafe removal of the life saving jacket or belt if it causes irritation or chafing since the hidden dangers or drowning are not as evident as the child's obvious irritation or persistent complaints. Furthermore, the fastening means around the chest often becomes loosened or untied during play.

In combating these dangers and to provide a child with a life-save jacket or swim belt tailored for comfort, convenience and ready donning, the crotch straps shown in my former inventions, Patent Nos. 1,950,937 and 2,331,302, have been eliminated although they were very effective to prevent the child from slipping out of the preserver while in the water, and improved leg fastening means have been provided which permits complete freedom of movement in play and in swimming; yet is equally, if not more effective than the crotch straps disclosed in the patents mentioned in keeping the preserver in place upon the body of the child. This is true even though the fastenings around the chest of the child might become loosened.

Moreover, the present invention is more adaptable to the growing size of a child in that the leg fastening provided can be effectively secured to the child's leg at any place along the thighs of the child. This materially increases the usefulness of the jacket for a given child and a given size of a jacket for a wide range of children's sizes. The thighs have an upwardly enlarging thickness which cooperates with the fastening to prevent upward movement of the fas-

tening if it is snug, whereas, if the fastening is loose enough to sag a little, an upward pull limited to the outer side of the fastening provided fore-shortens as a hitch to tighten against the leg and prevents upward movement. Furthermore thighs of different thicknesses are readily accomplished.

This method of leg securement and the means employed to accomplish the securement can be used with most styles of buoyant body portions, although an improved design is shown in the present invention which serves exceptionally well with the particular fastening means shown, the horizontal disposing of the buoyant tubes permitting a resilient yield downwardly when the thigh fastenings are drawn tight.

With these objects and results in mind, and with others which will appear in the description including the greater flexibility of the jacket for the comfort of the child in bending over, it will be observed that:

Fig. 1 of the drawing is a plan view of the preferred form of the invention as it appears after manufacture and before securement to a child;

Fig. 2 is a section taken up line 2—2 of Fig. 1;

Fig. 3 is a perspective view of the life saving jacket as it appears when secured to an older child, and,

Fig. 4 is a view similar to Fig. 3, showing how invention appears when secured to a smaller child, the larger child in Fig. 3 representing the relative maximum size and the small child shown in Fig. 4 representing the relative minimum size of a child which a given size of the life saving jacket will accommodate.

The jacket shown in Fig. 1 is made of two layers of fabric tailored to the pattern shown. The outer layer 10 has loops 11 stitched on the outer surface thereof to receive the tapes or ties 12 which at their inner ends are stitched to the back portion 22 of the outer layer as at 13. The outer layer 10 is then flattened with its outer face up and the inner layer 14 is superposed thereon with the fastener bands 15 located in place between the layers with the base ends thereof extending outwardly at the upper edges between the layers. The free ends of the blades are provided with buckles 19. The shoulder straps 16 which engage the buckles are also disposed with the base end thereof extending out from between the layers 10 and 14. The layers are then marginally stitched upwardly along one end edge 17 around the top edge 18 of the right front section 20, then around the right arm cut

away 21 across the top of the back section 22, then around the left arm cut away 23, up and over and down the left front portion 24 as at 25. This leaves the bottom open and the jacket is turned inside out, the bands and buckles 19 and the shoulder straps 16 are then straightened to assume the position in which they are shown in Fig. 1.

The buoyant material used is preferably kapok 26 but can be any one or a mixture of a number of buoyant materials such as ground cork and recognized substitutes for kapok including light sponge rubber received in a waterproofed covering. The buoyant material is preferably formed in long sticks for convenience in handling which sticks are cut to any length desired to form pillows, same preferably comprising kapok filled gauze or waterproof tubing 27. In manufacturing the long sticks, long filler tubes (not shown) are used over which the tubing is slipped and gradually removed as the kapok filling is forced out of the tube through the mouth thereof inside the tubing. The sticks are then cut into lengths as desired and if waterproof tubes are employed, the cut ends can be sealed. Otherwise if a moldable buoyant material is used, such as sponge rubber, the pillow may be molded to exact size singly or in multiples.

The pillows thus formed by cutting the sticks into appropriate lengths or molding are placed side by side between the layers 10 and 14, preferably horizontally as the preserver is worn and horizontal lines 28 of stitching are made between the pillows to form and locate them in pockets. This arrangement permits the vest to be resiliently stretched transversely to the tubes under strain, the tubes flattening slightly to absorb the stress which occurs occasionally when the lower edge is held down as in the present invention.

When the last row of pillows are stitched in place along the bottom, the edges preferably are turned inwardly and flaps 30, made of sturdy fabric either in single or double thickness, are stitched in place at their upper ends in the position shown.

After, or preferably before the pillows are in place, horizontally spaced, vertical lines of stitching 31 are made across the jacket at the ends of the pillows, leading from the bottom of the jacket to the cut away portions 21 and 23 to provide an expanse of loose material between the back buoyant section 22 and the buoyant front sections 20 and 24. The loose material 29 thus provided will collapse to any degree necessary when ties 12 are fastened in front to accommodate in comfort a child within a wide range of sizes. This also materially lengthens the useful life of the jacket for a growing child and accommodates a wide range of chest girths.

The flaps 30 are shaped approximately as shown, being longer or shorter in proportion to the jacket size. At the bottom edge of the flaps 30, belts 32 are stitched to extend horizontally with the buckle 33 thereof located close to the front edge of the flaps 30. It will be noted with reference to Figs. 3 and 4 that the flaps are so positioned that the hips of both wearers are covered and the legs may flex upwardly without straining the back edge of the flaps other than to cause a tightening which serves to prevent dislocation of the jacket even if the child drops into the water with his knees up.

With this arrangement of the flaps 30 and the belt 32, the buckles 33 are located on the top outer side of the thigh where they will not rub or bruise

other parts of the body once the belt 32 is fastened snugly around the thigh. Thus, full freedom of movement may be had without danger or fear of chafing or irritation.

In fastening the jacket in place, the buckles 19 receive the ends of the shoulder straps 16 to the extent that tightness is needed at this point to locate the jacket at a comfortable and proper height, and the ties 12 are then fastened to hold the jacket snugly against the body. The loose material 29 under the arms accommodates children of different chest sizes, the slack present at these points being taken up by the ties.

Thereafter the belts 32 are secured around the thighs at the level to which they fall, where they are tightened snugly enough that there is no slack, yet not tight enough to bind or imbed in the skin as the vest is worn when walking or swimming.

The lower end of the flaps 30 should not be any wider than necessary for full and safe securement of the belts thereto so that when an upward strain is exerted suddenly on the flaps, as when the wearer enters the water, the remaining loose portion of the belts is left free to bind against the skin and cause a hitching or snubbing action as by foreshortening against the thickness of the thigh. This will provide the function desired without injury, especially with boys, and the top of the flap needed be only wide enough to provide full positioning and support for the belts 32 without permitting the flap to wind around the leg. Preferably the flap is wide enough at the top to bridge the loose material 29 and be secured at the corners to the buoyant sections.

In some models, particularly the smaller ones, it may be desirable to eliminate some of the horizontal lines of stitching 28, if not all of them, in which case the pillow received between the two layers of fabric will be made of sufficient size to fill the compartment present. Furthermore, the life-save jacket or belt can be so constructed and arranged that depending buoyant portions are provided as disclosed in my patent No. 2,331,302 without departing from the teachings of the present invention as long as the flaps 30 are fastened to the jacket at or slightly above the fold line which is provided to permit the lower buoyant portions to fold upwardly and into overlapping relationship with the upper buoyant portion.

Having thus described the invention and certain modifications, it will be readily apparent to those skilled in the art that various and further modifications can be made without departing from the spirit of the invention, the scope of which is commensurate with the appended claims.

What is claimed is:

1. A device of the class described comprising an inner and an outer layer of fabric having two front sections and a rear section, parallel lines of spaced stitching dividing the sections into pockets, buoyant pillow members in said pockets comprising a fabric encased quantity of buoyant material for expanding the layers away from each other to shorten the width of the sections in a direction transversely to the lines of stitching, said layers of fabric being cut away between the front and back sections to accommodate the arms of the wearer, and means for fastening the jacket on the wearer including a flap for each leg depending from the sections at a point below the cut-aways, straps carried at the lower ends of the flaps adapted to be secured around the thighs of the wearer, said pillow members com-

pressibly yielding under stretch strains exerted by the flaps.

2. A combination life preserver jacket and swim belt tailored to be worn as a vest by a child comprising inner and outer layers of fabric divided into two front sections and a back section connected to the front sections by loose fabric, parallel lines of spaced stitching dividing the sections into pockets, buoyant pillows in said pockets comprising buoyant material encased in waterproof covering, and means for fastening the jacket on the wearer including a flap for each leg bridging the loose fabric and depending from said sections at a point below said loose fabric with straps carried at the lower ends of the flaps on the outside of the leg adapted to be secured freely around the thighs of the wearer to snub upward movement of the flap against the leg.

3. A life preserver jacket and swim belt tailored to be worn as a vest comprising an inner and outer layer of fabric having two front sections and a back section connected to the two front sections by an expanse of loose fabric, parallel horizontal lines of spaced stitching dividing the sections into rows of pockets, buoyant pillow members in said pockets resiliently expanding the layers of fabric away from each other to resiliently shorten the height of the preserver, and means for fastening the jacket on the wearer including fabric members depending from the sections at a point below said loose fabric and straps carried at the lower ends of the flaps adapted to be secured around the thighs of the wearer said pillows collapsing appreciably to permit the jacket to expand in a direction transversely to the horizontal lines of stitching when stressed in said direction.

4. A life preserver jacket comprising a buoyant body portion divided into front sections and one back section secured to the front sections by loose material located below the arms of the wearer, means for securing the buoyant portion around the chest of the wearer, and depending flaps disposed below the loose material and secured at their upper ends to the buoyant body portion bridging said loose material, said flaps including elements received around the thighs of the wearer in secured relationship.

5. A life preserver jacket for children compris-

ing a buoyant body portion divided into two front sections and a back section secured to the front sections by loose fabric, means for securing the buoyant portion around the chest of the wearer, a pair of leg fastening means each interconnecting the lower adjacent corners of the back and front sections and depending therefrom along the outside of the legs of the wearer, each of said leg fastening means including straps at their lower ends received around the thigh of the wearer in snug relationship.

6. A life preserver jacket and swim belt comprising a buoyant body portion tailored to be worn as a vest, fastening means for each leg of the wearer arranged to be received horizontally around the thigh, and depending flap means at the side of said jacket one only for each leg and having only one supported connection with said fastening means disposed at the side of the jacket whereby said fastening means and flap means cooperate to snub against the leg and prevent upward movement of the jacket under quick movement thereof.

7. A life preserver jacket and swim belt comprising a buoyant body portion tailored to be worn as a vest, depending flap means one only for each leg located at the sides of the jacket and on the outside of the leg, and a belt secured to the lower edge of each flap means to be received horizontally around the thigh of the wearer, said belt including a buckle disposed to rest on the outside portion of the thigh and having only one supporting connection with the flap means whereby the belt operates to snub upward movement of the flap means under quick movements thereof.

8. A life preserver jacket and swim belt comprising a buoyant body portion tailored to be worn as a vest, fastening means including an inelastic band for each leg of the wearer arranged to be received horizontally around the thigh, and depending flap means at the side of said jacket one only for each leg and having only one supported connection with said fastening means disposed at the side of the jacket whereby said fastening means and flap means cooperate to snub against the leg and prevent upward movement of the jacket under quick movement thereof.

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