

June 17, 1969

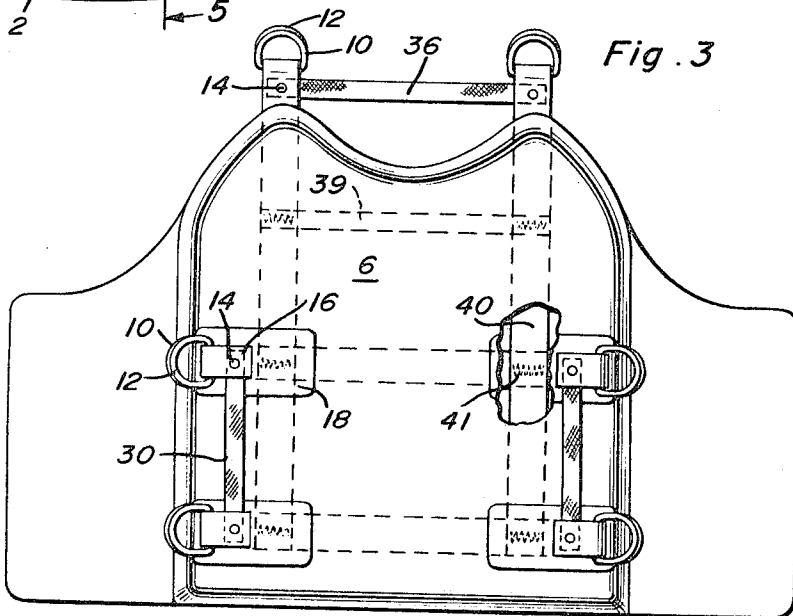
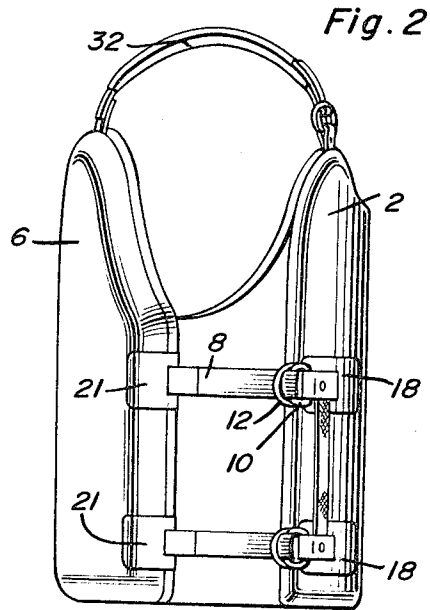
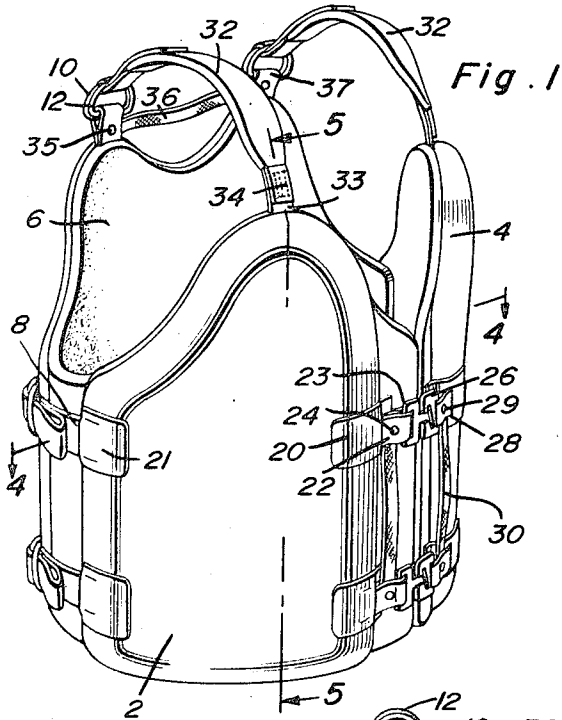
H. A. JONES

3,449,778

ADJUSTABLE WATER SAFETY JACKET

Filed Sept. 21, 1967

Sheet 1 of 2



Hermit A. Jones

INVENTOR.

BY *Clarence A. O'Brien*
and *Harvey B. Jacobson*
Attorneys

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H. A. JONES

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Fig. 4

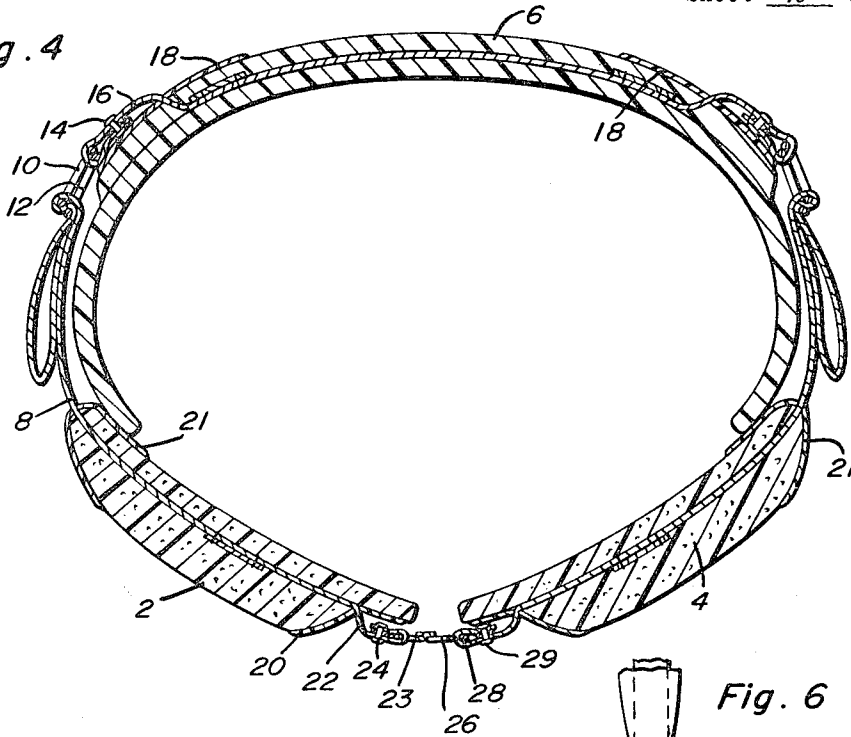


Fig. 5

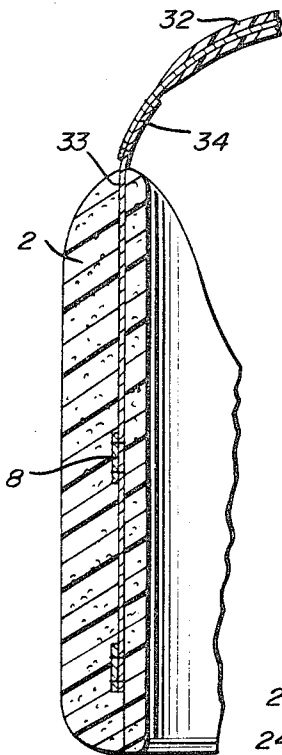


Fig. 6

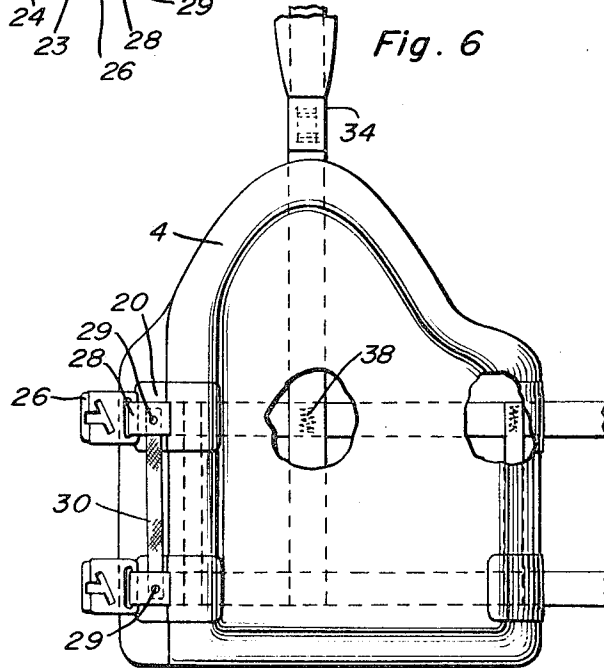
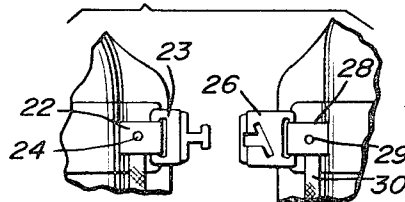


Fig. 7



Hermit A. Jones

INVENTOR.

BY *Clarence A. O'Brien*
and *Harvey B. Jackson*
Attorneys

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ADJUSTABLE WATER SAFETY JACKET
Hermit A. Jones, Canton, Miss., assignor to Jones & Yandell, Division of American Tent Company, Inc., a corporation of Mississippi

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8 Claims

ABSTRACT OF THE DISCLOSURE

A water safety jacket composed of three sections held in place with respect to each other by peripheral straps capable of adjustment by control of effective strap length achieved with metal rings. The jacket is donned by attaching hook-up buckles attached to front straps which secure the two front sections together when fastened.

The present invention relates to lifesaving jackets of the type worn by water skiing participants. In previously constructed jackets, the procedure for adjusting the size of a water ski jacket is long and cumbersome. The jacket must be adjusted anew each time it is put on even when worn repeatedly by the same person. Commonly, adjustable straps are positioned in the front of the jacket in the immediate vicinity of jacket closures. Donning and removing the jacket are therefore impeded by the concentrated profuseness of adjusting and attaching hardware. The "skate buckle" used in prior art devices is often confusing in determining just which course the strap should follow in properly fastening it, and it is possible to fasten the buckle in such a manner that it will easily loosen and allow the jacket to come off. For proper flotation attitude in water and for turning an inert person to a face up position, the stable location of the front flotation pods is of prime importance. The prior art allows the location of the pods to shift from center to side as the gap in the front closure becomes larger thereby diminishing proper flotation attitude. Further, previous jackets require extensive stocking by merchants of various size ranges instead of a single jacket which is capable of fitting the normal adult size range.

The present invention is comprised of a back section and two front sections which are held in adjacent relationship with one another by peripherally disposed straps which may be adjusted by employing metal rings attached to the jacket. Shoulder straps are provided on the jacket which may be varied in a similar manner by utilizing stationary attached metal rings. The front sections may be secured closely together after the jacket has been donned by employing front straps including T-slotted hook-up buckles. Removal of the jacket is accomplished simply by twisting the aforementioned buckles and opening the front sections. The adjusting straps located on both sides of the jacket increase the range of adjustment ordinarily possible. Therefore, one jacket may be employed to accommodate the normal adult range of sizes. The front buckle design of the present invention employing a hook-up mechanism is unhampered by adjusting components normally located in the near vicinity thereof which ordinarily impede the donning of a jacket. In addition, the present

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jacket when worn repeatedly by the same person, requires but one initial fitting to his body and can thereafter be quickly donned by hooking the front buckles only. The front buckles of the present jacket are constructed in such a manner that it can only be buckled properly and will not loosen under strain. This capability is important because the safety of a fallen skier requires that his flotation equipment remains intact about his body. An additional advantage of the present invention concerns the non-adjustable nature of the front buckles which insures the positioning of the front flotation pods in the proper location against any person's body thereby assisting a skier to maintain proper flotation attitude in the water. The instant jacket design is also constructed in such a manner as to receive official approval from governmental agencies having jurisdiction over water safety as a lifesaving device to be carried on certain classes of boats. This is in addition to its use as a special purpose skiing device. In this capacity it has the advantage over prior art constructions of properly fitting a much larger range of passengers likely to be on a boat.

The main object of the present invention is to provide a water safety jacket which may be readily and quickly adjusted to the body of any wearer requiring a size falling within the normal adult range.

Another important object of the invention is to provide means for quickly donning and removing a water safety jacket.

Still another object of the present invention is to provide a water safety jacket with adjustment hardware removed from the hook-up mechanism.

A further object of the present invention is to provide a wrap-around jacket design which protects the entire torso.

A still further object of the present invention is to provide a water safety jacket which insures correct attitude of the wearer for in-water safety and deep water ski starts.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a view in perspective of the water safety jacket.

FIGURE 2 is a right side view of the water ski jacket.

FIGURE 3 is a rear view of the back section of the jacket.

FIGURE 4 is a top sectional view taken substantially along horizontal plane 4—4 of FIGURE 1.

FIGURE 5 is a fragmentary sectional view taken substantially along vertical plane 5—5 of FIGURE 1.

FIGURE 6 is a fragmentary sectional view of the left hand front section illustrating the hook-up buckle mechanism, peripheral and shoulder strap construction.

FIGURE 7 is a fragmentary front view specifically illustrating the hook-up buckle mechanism.

In the preferred embodiment of the invention, the water safety jacket is structurally comprised of left front section 4, right front section 2 and back section 6. Each section is composed of buoyant plastic or other suitable

material. Peripheral strap 8, of nylon, plastic or other suitable material is embedded within and through each section to position these adjacent one another. Metal D rings 10 and 12 adjust the length of peripheral strap 8 thereby adjusting the overlapping area between back section 6 and front sections 2 and 4. As can be seen from FIGURE 4, the metal rings 10 and 12 are held together by the end section 16 of the peripheral strap 8 and fastened thereto by rivet 14. Reinforcing patch 18 is fixed to back section 6 and contains a slit through which end section 16 passes. Reinforced edges 20 and 21 provide additional structural strength and rigidity to the jacket. End section 22 of peripheral strap 8 contains buckle 23 characterized by a T connector, the buckle 23 being attached to strap 8 by use of rivet 24 which is received by buckle 26 characterized by a mating T-slot clearly illustrated in FIGURE 7. The last mentioned buckle is supported by end portion 28 of peripheral strap 8 which in turn is fastened by rivet 29. Restraining strap 30 is positioned between two vertically positioned rivets 29 shown in FIGURE 6 of the drawings for limiting the motion of the associated buckle which might otherwise cause accidental release of the buckle mechanism. In addition, restraint strap 30 made of nylon, plastic or other suitable material, limits twisting movement of peripheral strap 8 in the immediate vicinity of buckles 23 and 26 and thereby decreases the wear of peripheral strap 8.

Referring to FIGURE 5 of the drawings, it will be seen that shoulder strap 32 constructed from a buoyant material and vertical strap 33 are joined at connection point 34, the connection point providing reinforcement for extending wearability of the shoulder strap. Metal ring retainer 35 is joined through restraining strap 36 to metal ring retainer 37. Restraining strap 36 limits the bending movement of metal ring connectors 35 and 37 thereby increasing the wearability of the metal ring connectors.

As shown in FIGURE 6 of the drawings, strap connection 38 maintains vertical strap 33 in fixed relation to peripheral straps 8 thereby increasing the rigidity of the jacket straps.

In operation, the buckle mechanism is unfastened as clearly shown in FIGURE 7 of the drawing thereby permitting the opening of the water safety jacket. The jacket is donned by the wearer and the buckle mechanism is fastened as follows: T connector buckle 23 is mated with T-slotted buckle 26 then twisted in a manner providing collinear alignment of the buckles 23 and 26 in which position the buckle mechanism is fastened. To quickly unfasten the buckle mechanism, all that is required is a twisting and alignment of T connector and slot accompanied by a gentle pull of the connectors whereupon they will be freed from one another thus enabling the wearer to remove the jacket.

To adjust the size of the jacket, peripheral straps 8 are lengthened or shortened as desired and fixed in position by metal rings 10 and 12. The variation of peripheral strap length adjusts the overlying area between back portion 6 and front portions 2 and 4. This wrap-around design protects the entire torso.

In the actual construction of the water safety jacket, buoyant material is used in the form of "Ensolute," a unicellular vinyl foam, manufactured by the U.S. Rubber Company. The buoyant material is coated with vinyl plastic. A reinforcing strap 39 similar to strap 36 interconnects vertical straps 40, all of which are embedded in the foam plastic back 6. Suitable bar tacking 41 riveting or other suitable fastening means may be employed.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed as new is as follows:

1. A water safety jacket comprising a back section and two front sections, a plurality of peripherally disposed parallel straps embedded within the front and back sections, the straps being adapted to encircle a wearer when donned, and a second plurality of vertically disposed shoulder straps spaced parallel to one another, one end portion of each of said shoulder straps being embedded within said back section, the opposite end portion thereof being embedded within a corresponding front section, each end portion being attached to and perpendicularly intersecting said peripheral straps thereby serving to reinforce the jacket sections to withstand forces exerted by the wearer.

2. The device set forth in claim 1 together with vertically aligned buckle means attached to each said peripheral strap along a frontal segment of the jacket for securing said front sections together, and restraining strips connected between aligned buckle means for inhibiting wrenching displacement of the buckle means.

3. The device set forth in claim 1 together with a restraining strip connected between the shoulder straps, the straps being disposed adjacent points of strap entry into the back section.

4. The device set forth in claim 1 wherein the front edge portions of said back section are thinner than the central portion thereof, said thinner front edge portions curving forwardly and inwardly to conform to the shape of a wearer on the inner surface, bridging the gap between the rear section and front sections and defining a recess in the outer surface thereof for receiving the portions of said straps bridging the juncture between the rear section and the front sections.

5. A water safety jacket comprising a back section and two front sections, a plurality of peripherally disposed parallel and individually discontinuous straps journaled within the front and back sections, a plurality of sets of vertically disposed adjustment connectors located between said back and front sections for adjusting the effective length of said peripheral straps, a plurality of parallel buckle means each of said buckle means attached to one of said peripheral straps along a frontal segment thereof for securing said front sections together, and adjustable shoulder straps spaced parallel to one another, one end of each said shoulder strap connected to said back section, the opposite end thereof affixed to a corresponding front section, both ends extending to and journaled within said associated sections and intersecting said peripheral straps perpendicularly, each of said sections being constructed of a body of buoyant material having shape sustaining characteristics, said straps being embedded in said sections between the inner and outer surfaces thereof for a major portion of the length of each strap, the portions of said straps receiving the adjustment connectors being disposed along the outer surface of the front edge portions of said rear section, the front edge portions of said back section being thinner than the central portion thereof, said thinner front edge portion curving forwardly and inwardly to conform to the shape of a wearer on the inner surface, bridging the gap between the rear section and front sections and defining a recess in the outer surface thereof for receiving the portions of said straps bridging the juncture between the rear section and front sections.

6. The jacket construction as defined in claim 5 wherein the front edge portions of the rear section and the rear edge portions of the front sections have the upper corners thereof arcuately curved to form an enlarged recess to permit freedom of movement of the arms and shoulder areas of a wearer, the peripheral edge of each section being smoothly rounded thereby reducing chafing of the wearer during relative movement of the skin surface of the wearer and the jacket.

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7. The jacket construction as defined in claim 6 wherein said shoulder straps are anchored to said peripheral straps at their points of intersection, each edge portion of each section through which the peripheral straps pass having reinforcement panels secured thereto.

8. The jacket construction as defined in claim 7 wherein said buoyant material is unicellular plastic foam having a vinyl coating, each shoulder strap having a pad of buoyant material molded thereon over a major portion of the distance between the front sections and rear section to cushion engagement with the shoulder of the wearer and provide buoyancy in the shoulder region of the wearer.

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References Cited

UNITED STATES PATENTS

2,801,035	9/1957	Phillips	9—342
3,360,813	1/1968	Baker	9—342
3,360,814	1/1968	Scheurer	9—342
2,950,489	8/1960	Pattison	9—340

MILTON BUCHLER, *Primary Examiner.*

T. W. BUCKMAN, *Assistant Examiner.*

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