WATER SAFETY FLAG

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ABSTRACT
A safety flag for a life jacket alerts nearby boaters when a user is in the water. The safety flag comprises a flag assembly secured to a backside of a life jacket, and a flag holder secured to a front side of the life jacket. The flag assembly includes a flexible, resilient flag pole and a flag attached adjacent an upper end of said pole. The flag pole bends over the shoulder of a user in a stowed position and stands upright in a deployed position. The flag holder secures the upper end of the flag assembly when the flag assembly is in the stowed position.
WATER SAFETY FLAG

RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Patent Application 60/822797, filed Aug. 18, 2006, which is incorporated herein by reference.

BACKGROUND

[0002] The present invention relates generally to water sports equipment, and more particularly, to a water safety flag for attachment to a life jacket to improve visibility of persons in the water.

[0003] The sport of water skiing by towing a skier behind a boat has gained popularity steadily since the 1950's. As a result the number of accidents from this activity has spurred the need for better equipment, safety devices, and better life jackets. It has been common practice for a person who has fallen off their skis, referred to herein as a “downed skier”, to simply point their ski up and out of the water to aid in signaling their location. In the 1980's the introduction of the one foot square orange “skier down flag” began to increase the level of safety on the water by alerting nearby boaters that a downed skier or ski equipment was in the vicinity of the skier's boat. This is done by raising the flag on the boat from the time the skier has fallen, until the time they either resume skiing or get back on the boat. This flag is currently mandatory in twelve states and has dramatically improved safety for downed skiers and passing boat traffic.

[0004] Today, the number of boats towing skiers, wake boarders, and towable ride-on toys, and the increased popularity of Personal Water Craft on the water, has made water safety an even greater priority than ever before. The increased volume of traffic, types of activities, and the speed at which they travel is now surpassing the capability of the standard boat-bound “skier down flag” to effectively signal all craft and traffic of the presence and location of downed skiers in the area. It is even difficult for the driver of the downed skier's boat to monitor all of the water traffic and effectively spot and track the downed skier they are trying to retrieve. Many of today's popular recreational boating activities are such that the participant is only a “passenger” riding on a device. When the rider falls off the device they are left in the water with only their life jacket. Without an actual ski or other object to hold up in the water, their visibility is minimal, leaving only the person's head and maybe a small portion of the shoulders of the life jacket above water. This small silhouette can be very difficult to see at high speeds, choppy water or bad light conditions consisting of either too much or not enough light, making it far too easy for a downed skier to go undetected and fall victim to a collision.

SUMMARY

[0005] The present invention relates to a water safety flag that attaches to a life jacket for improving the visibility to watercraft in the area of a "downed skier" or other person in the water. The safety flag comprises a flag assembly secured to a backside of a life jacket, and a flag holder secured to a front side of the life jacket. The flag assembly includes a flexible, resilient flag pole and a flag attached adjacent an upper end of said pole. The flag pole bends over the shoulder of a user in a stowed position and stands upright in a deployed position. The flag holder secures the upper end of the flag assembly when the flag assembly is in the stowed position. The safety flag can be used in a wide variety of water sports, such as canoeing, boating, sailing, swimming, fishing, and kayaking.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] FIG. 1 is a perspective view from the front of a life jacket with a safety flag in the stowed position.

[0007] FIG. 2 is a perspective view from the back of a life jacket with a safety flag in the stowed position.

[0008] FIG. 3 is a perspective view from the front of a life jacket with a safety flag in the deployed position.

[0009] FIG. 4 is a perspective view from the back of a life jacket with a safety flag in the deployed position.

[0010] FIG. 5 is a perspective view of the flag assembly.

[0011] FIG. 6 is an exploded perspective view of the flag assembly.

[0012] FIG. 7 is a section view of the flagpole of the flag assembly.

[0013] FIG. 8 is a perspective view of a securing member of the flagpole assembly as seen from the front.

[0014] FIG. 9 is a perspective view of a securing member of the flagpole assembly as seen from the back.

[0015] FIG. 10 shows a perspective view of the flag holder from the front.

[0016] FIG. 11 shows a perspective view of the flag holder from the back.

[0017] FIGS. 12A-12B illustrate the attachment of the flag assembly to the life jacket.

[0018] FIGS. 13A-13B illustrate the attachment of the flag holder to the life jacket.

[0019] FIG. 14 illustrates the insertion of the flag into the flag holder.

[0020] FIG. 15 illustrates an optional D-ring for attachment to a life jacket.

[0021] FIG. 16 illustrates the flag ring attached to the front of a life jacket with a D-ring.

DETAILED DESCRIPTION

[0022] Referring now to the drawings, FIGS. 1-4 illustrate a life jacket 10 with a safety flag 100 according to one exemplary embodiment of the invention. The life jacket is a conventional design and comprises a flotation vest 12 that is worn around the torso of a user. The vest is secured in place by torso straps 14 that extend around the vest 12 and pass through belt loops 16. The torso belts includes buckles 18 to fasten the ends of the torso belts.

[0023] As shown in FIGS. 1-4, the safety flag 100 attaches to the backside of the life jacket 10. In a stowed position (FIGS. 1 & 2), the safety flag 100 bends over the shoulder of the user and the upper end of the safety flag 100 releasably secures to the front of the life jacket 10. When the user falls or jumps into the water, the user can release the safety flag 100. When released, the natural resiliency of the safety flag
100 causes the safety flag 100 to rise to a deployed position (Figs. 3 & 4) to increase the user’s visibility in the water.

[0024] The safety flag 100 includes two main components: a flag assembly 102 and flag holder 150. In one exemplary embodiment, the flag assembly 102 and flag holder 150 may detachably secure to the lifejacket 10. This embodiment can be adapted to most lifejackets 10 and can be easily removed and re-attached to lifejackets 10. In other embodiments, the flag assembly 102 and flag holder 150 may be permanently secured to, or integrated into, the lifejacket 10.

[0025] FIGS. 7-11 illustrate the flag assembly 102. The flag assembly 102 comprises a flexible, resilient flagpole 110, a securing member 124 for securing the flagpole 110 to the back of the lifejacket 10, and a flag 140. The securing member 124 attaches to the lower end of the flagpole 110. The flag 140 attaches to the upper end of the flagpole 110. Referring to FIG. 7, the flagpole 110 includes flexible, resilient rods 112, 114. Rods 112, 114 are made of a flexible, resilient material, such as a fiberglass or polystyrene. Rod 112 extends substantially the entire length of the flagpole 110. Rod 114 extends approximately half the length of the flagpole 110. Rod 114 is secured to rod 112 by bands 116 to make the lower portion of the flagpole 110 stiffer than the upper portion of the flagpole 110. Rubber end caps 118 are secured to the opposing ends of rod 112. Rods 112, 114 are enclosed in a polyethylene foam tube 120 as padding to prevent the fiberglass rods 112, 114 from contacting the user. A tabular fabric cover 122 encases the foam tube 120.

[0026] FIGS. 8 and 9 illustrate details of the securing member 124. Securing member 124 is made, for example, of a nylon webbing, canvas, plastic, rubber, or other similar material. The securing member 124 includes a pocket 126 in which the lower end of the flagpole 110 is received. The securing member 124 includes first and second sets of securing straps 130, 132. The securing straps 130 are adapted to loop around or through a belt loop 16 on the lifejacket 10 as hereinafter described. Fasteners 134, such as a snap or Velcro fasteners, are provided to secure the free ends of the securing straps 130 to the back side of the securing member 124. Similarly, the securing strap 132 is adapted to loop around the torso belts 14 on the lifejacket 10 as hereinafter described. Fasteners 136 are provided to secure the free ends of the second securing straps 132 to the front side of the securing member 124.

[0027] Flag 140 attaches to the upper end of the flagpole 110. The flag 140 is made of a brightly-colored waterproof material, such as a nylon fabric with PVC coating. Flag 140 includes a sleeve 142 in which the upper end of the flagpole 110 is received. A ripcord 144 is sewn or otherwise affixed to the flag 140, which is pulled to release the flag assembly 102 as hereinafter described. The ripcord 144 comprises a strap made of nylon webbing that is sewn or stitched to the flag 140 or, alternatively, to the fabric cover 122 of the flag assembly 102. The ripcord 144 includes a fastener 146, such as a VELCRO® fastener or snap, to secure the end of the ripcord 144 to the flag holder 150. The flag holder includes a mating fastener 148 for securing the rip cord 144.

[0028] The flagpole 110, securing member 124, and flag 140 are locked together by sewing the parts together in a specific sequence to avoid the use of glue or epoxy. The flagpole 110 is assembled first and inserted into the pocket 126 of the securing member 124. The securing member 124 and flagpole 110 are secured together by sewing or stitching together the nylon web of the securing member 124 and fabric cover 122 of the flagpole 110. The flag 140 is inserted over the upper end of the flagpole 110 and is permanently affixed to the flagpole 110 by sewing or stitching together the flag 140 and fabric cover 122 of the flagpole 110.

[0029] FIGS. 10 and 11 illustrate details of the flag holder 150. The flag holder 150 is made of a nylon webbing, canvas, plastic, rubber, or similar material and includes a pocket 152 to receive the upper end of the flag assembly 102 as hereinafter described. The flag holder 150 includes a first set of securing straps 154 to loop around or through belt loops or rings on the lifejacket 10. Fasteners 156 secure the free end of the securing straps to the back side of the flag holder 150. The flag holder 150 further includes securing straps 158 to loop around the torso belts 14 of the lifejacket. Fasteners 160 secure the free ends of the securing straps 158 to the back side of the flag holder 150.

[0030] To use the safety flag 100, the flag assembly 102 is secured to the back side of the user’s life jacket 10 and the flag holder 150 is secured to the front side of the life jacket 10. The flag assembly 102 is then bent over the shoulder of the user and the flag 140 is inserted into the pocket 152 of the flag holder 150. The fastener 146 on the ripcord 144 is then engaged with a corresponding fastener 148 on the outer surface of the flag holder 150 to prevent the flag assembly from inadvertently releasing.

[0031] FIGS. 12A-12B illustrate the attachment of the flag assembly 102 to the backside of a lifejacket 10. The securing member 124 is slipped underneath the torso belts 14 of the lifejacket 10 as shown in FIG. 11A. Securing straps 130 are then looped around the belt loops 16 of the lifejacket 10 and secured by engaging the fasteners 134. Securing straps 132 are pulled over the torso belts 14 of the lifejacket 10 and secured by engaging the fasteners 136.

[0032] FIGS. 13A and 13B illustrate the attachment of flag holder 150 to the front of the lifejacket 10. Securing straps 154 of the flag holder 150 are inserted through corresponding belt loop 16 on the lifejacket 10. The flag holder 150 is then folded over and the securing strap 154 is secured to the backside of the flag holder 150 by engaging fasteners 156. Securing straps 158 are then looped around corresponding torso belts 14 on the lifejacket 10 and secured to the backside of the flag holder 150 by engaging the fasteners 160.

[0033] Some lifejackets may not have belt loops 16. For this situation, the safety flag 100 may be provided with D-rings 120 as shown in FIGS. 15 and 16. The D-rings 120 can be attached to the torso belt 14 of the lifejacket 10 adjacent the buckle 18 as shown in FIG. 15 to provide an attachment point for the flag holder 150 and/or flag assembly 102. The securing straps 130 of the securing member 124, and the securing straps 154 of the flag holder 150, can be inserted through the D-ring 120 to secure the flag assembly 102 and/or flag holder 150 to the lifejacket 10 as shown in FIG. 16.

[0034] FIG. 14 illustrates the insertion of the flag assembly 102 into the flag holder 150. The flag 140 is bunched or wrapped around the end of the flag pole 110 and inserted into the pocket 152 of the flag holder 150. After the flag 140 is inserted into the flag holder 150, the fastener 146 on the
ripcord 144 is attached to the mating fastener 148 on the outer surface of the flag holder 150. This secures the flag 140 in a stowed position as shown in FIGS. 1 and 2. When the user falls into, or otherwise enters the water, the user can grasp and pull the ripcord 144 to pull the flag 140 from the flag holder 150. Once the flag 140 is out of the flag holder 150, the natural resiliency of the flag pole 110 will cause the flag assembly 102 to stand up as shown in FIGS. 3 and 4. Deploying the flag 140 alerts bosters in the area that the user is in the water. The flag 140 makes it easier for bosters to spot the user in the water so that the user can be retrieved and collision with the user can be avoided.

[0035] The present invention may, of course, be carried out in other specific ways than those herein set forth without departing from the scope and essential characteristics of the invention. The present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive, and all changes coming within the meaning and equivalency range of the appended claims are intended to be embraced therein.

What is claimed is:

1. A safety flag for a life jacket comprising:
   a flag assembly secured to a backside of a life jacket; said flag assembly including a flexible, resilient flag pole and a flag attached adjacent an upper end of said flag pole, wherein said flag pole bends over the shoulder of a user in a stowed position and stands upright in a deployed position;
   a flag holder secured to a front side of said life jacket, said flag holder including a pocket to receive the flag when the flag pole is in the stowed position; and
   a rip cord connected to the flag assembly and adapted to be pulled by the user to release said flag from said flag holder when the user is in the water, such that said flag will rise to a deployed position when released to alert watercraft to the presence of the user.

2. The safety flag of claim 1 wherein said flag assembly detachably secures to the front side of said life jacket.

3. The safety flag of claim 2 wherein said flag holder includes first and second sets of securing straps for securing said flag holder to said life jacket, said first set of securing straps adapted to loop around belt loops or rings on said life jacket, and said second set of securing straps adapted to loop around torso belts on said life jacket.

4. The safety flag of claim 3 further comprising fastening means to fasten said first and second securing straps in a loop around said belt loops or rings and said torso belts respectively.

5. The safety flag of claim 1 wherein said flag assembly includes a securing member for securing said flag assembly to the back side of said life jacket.

6. The safety flag of claim 5 wherein said securing member detachably secures to the back side of said life jacket.

7. The safety flag of claim 6 wherein said securing member includes first and second sets of securing straps for securing said securing member to said life jacket, said first set of securing straps adapted to loop around belt loops or rings on said life jacket, and said second set of securing straps adapted to loop around torso belts on said life jacket.

8. The safety flag of claim 7 further comprising fastening means to fasten said first and second securing straps in a loop around said belt loops or rings and said torso belts respectively.

9. The safety flag of claim 1 further comprising a releasable fastener to fasten an end of said rip cord to said flag holder.

10. An article holder for attachment to a life jacket, said article holder comprising:
   a pocket member having a pocket to receive an article;
   a first set of securing straps adapted to be inserted through vertical loops or rings on said life jacket;
   a second set of securing straps adapted to loop around horizontal torso belts on said life jacket.

11. The article holder of claim 10 further comprising first fasteners to secure said first set of securing straps, and second fasteners to secure said second set of securing straps.

12. The article holder of claim 11 further comprising a flap to cover an opening to said pocket.

13. A safety flag for a life jacket comprising:
   a flag assembly detachably secured to a backside of a life jacket; said flag assembly including a flexible, resilient flag pole and a flag attached adjacent an upper end of said flag pole, wherein said flag pole bends over the shoulder of a user in a stowed position and stands upright in a deployed position;
   a flag holder detachably secured to a front side of said life jacket to secure the flag pole and flag in the stowed position.

14. The safety flag of claim 13 further comprising a pocket formed in said flag holder to receive the flag and means for releasing the flag from said pocket.

15. The safety flag of claim 14 wherein said means for releasing said flag from said pocket comprises a rip cord attached to said flag and adapted to be pulled by the user.

16. The safety flag of claim 13 wherein said flag holder includes a first set of securing straps adapted to be inserted through vertical loops or rings on said life jacket, and a second set of securing straps adapted to loop around horizontal torso belts on said life jacket.

17. The safety flag of claim 13 wherein said flag assembly includes a securing member for securing said flag assembly to the back side of said life jacket.

18. The safety flag of claim 17 wherein said securing member includes first and second sets of securing straps for securing said securing member to said life jacket, said first set of securing straps adapted to loop around belt loops or rings on said life jacket, and said second set of securing straps adapted to loop around torso belts on said life jacket.

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