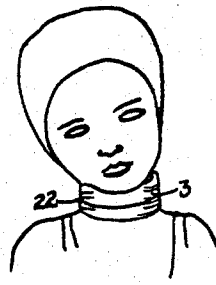
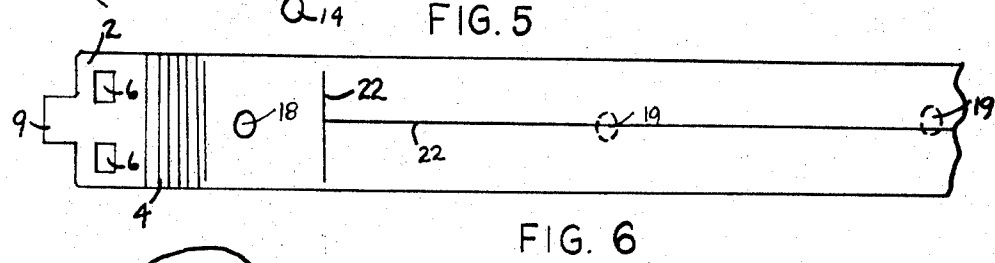
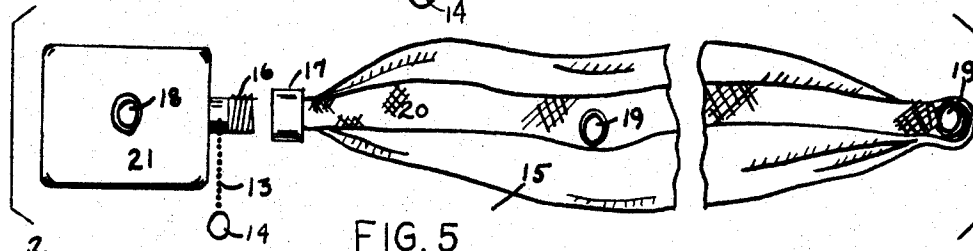
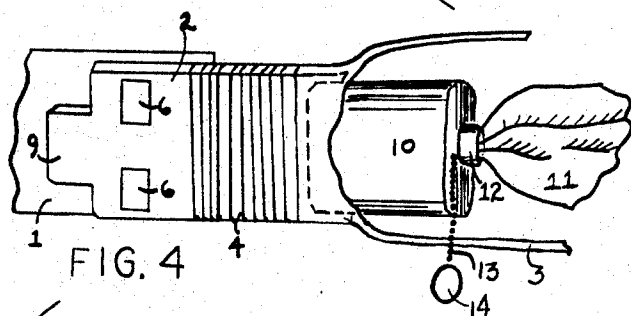
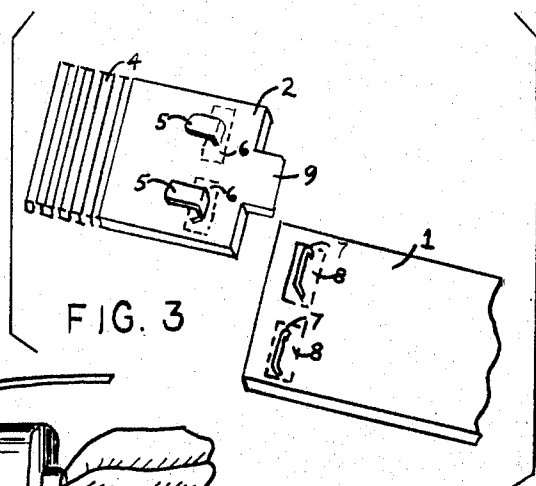
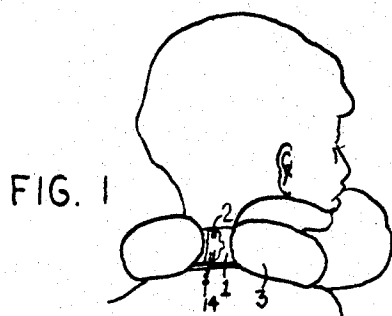


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J. R. BEATON
WATER SAFETY COLLAR
Filed Nov. 25, 1966

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INVENTOR
Joseph R. Beaton
BY *John P. Murphy*
ATTORNEY

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WATER SAFETY COLLAR

Joseph R. Beaton, Hillside Terrace, Marcy, N.Y. 13403

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1 Claim. (Cl. 9—316)

ABSTRACT OF THE DISCLOSURE

A life saving device comprising an inflatable neckband adapted to be worn inconspicuously around the neck.

This invention relates to an inflatable emergency life saving device to prevent drowning accidents, and more particularly to an inflatable neckband adapted to be worn inconspicuously around the neck while in or near the water, such as when swimming, boating, or otherwise engaged in water sports.

A principal object of this invention is to provide a neck-attached life preserver, which in its inoperative position will fit snugly and comfortably, and not impede the wearer.

A further object of this invention is to provide a neck-attached life preserver, which is characterized by its light weight.

A further object is to provide a neck-attached preserver with means to protect it from damage from debris in the water.

A further object is to provide a neck-attached life preserver with a self-contained inflatable means, so that the preserver may be placed in operative position with the minimum of effort by the wearer.

A further object of this invention is to provide a neck-attached life preserver, which is simple in construction, so as to lessen the possibility of entanglement with debris in the water.

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

FIG. 1 is a perspective view of the preserver, as seen from the back, and in inflated position.

FIG. 2 is a perspective view of the preserver, as seen from the front, and in the uninflated position.

FIG. 3 is a perspective view of the means for fastening the two ends of the neckband together when placed on the wearer's neck.

FIG. 4 is a perspective view of the preserver showing the two ends fastened together, the elastic portion of the neckband and with parts cut away to show the placement of the cartridge.

FIG. 5 shows a variation of the preserver, showing the detachable bladder and cartridge.

FIG. 6 shows a variation of the preserver, showing the neckband adapted to receive the detachable bladder and cartridge.

Referring to FIG. 1, the inflated neck preserver is shown, as seen from the back. The ends 2 and 1 are fastened together, and pull chain 14 is shown.

Referring to FIG. 2, the neck preserver is shown from the front, in the uninflated position. It is also shown that the preserver, when in the uninflated position, is inconspicuous, compact and smooth, and is therefore unlikely to get entangled in debris in the water. The outer skin 3 is formed of a resilient, stretchable material such as rubber, plastic, and the like, and is light weight, so as not to hamper the wearer. The skin 3 is hollow, and has a thin longitudinal slit 22 on the side of the skin worn away from the wearer's neck.

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FIG. 3 shows the two ends of the neck band. End 2 is made of, in this embodiment, rubber, and forms a long strip that encircles the wearer's neck, referred to as the neckband, which terminates in the other end 1. Said ends of the band are formed of sturdy material so as not to tear when placed under stress. A short portion of the neckband, placed, in this embodiment near the end 2, is elastic, so that the neckband can expand and contract, and so that the wearer is assured of a snug fit. Two short slits have been cut in the end 2, and tabs 5 with bases 6 are inserted in the slits. Similar slits are cut in end 1, to receive hoops 7 with bases 8. To fasten the ends 1 and 2 together, the wearer grasps a flap 9 that is provided on end 2, and stretches the elastic 4 enough so that the end 2 can be drawn over end 1. As the wearer releases flap 9, the elastic, which has been under tension, contracts, and the tabs 5 lock into place in hoops 7. Bases 6 and 8 prevent the tabs 5 and hoops 7 from slipping through the slits.

Referring now to FIG. 4, the rubber band is shown with ends 1 and 2 in locked position, as seen from the outside. The elastic 4 is in the contracted position. The outer skin 3 has been cut away to show the cartridge 10 and the uninflated bladder 11 attached to the cartridge 10 at joint 12. The cartridge 10, in this embodiment, is filled with carbon dioxide, etc. under pressure, and is formed in such a way that it lies flat and inconspicuously inside the skin 3, and yet is large enough to contain enough carbon dioxide, etc. under pressure to inflate the bladder 11. The cartridge 10 is connected by a permanent seal 12 to bladder 11. Bladder 11 is formed of a resilient, stretchable material such as rubber or plastic, and is very light weight. To activate the cartridge 10, the wearer grasps pull chain 13 with ball 14 attached thereto, and tugs. The tug of the pull chain 13 breaks the seal in the neck of the cartridge 10, which releases the carbon dioxide, etc. under pressure, into the bladder 11 through joint 12, and rapidly inflates the bladder 11 into a tubular shape, and forces it out of slit 22 (shown in FIG. 2).

As can be seen in FIG. 1, the inflated preserver presents a smooth exterior, when the expanding bladder blows out (from collar), so that it is still comfortable, and is somewhat resilient so as not to bruise the wearer. Also, when inflated, the bladder prevents drowning; comfort is to be considered secondary. The pull chain 13 has a ball 14 attached thereto, instead of a ring, or hook, or a similar device, which might become ensnared with debris in the water, or even in the wearer's hair, and also the ball 14 requires a minimum of dexterity to manipulate.

The above description has set forth a preserver that is to be used once only. The materials therefore may be of light weight construction, and inexpensive, and need not be particularly sturdy, since the preserver is to be discarded after inflation, and subsequent use.

FIG. 5 shows a variation of the above invention, showing a detachable bladder 15, and a detachable cartridge 21. Said detachable bladder 15 and cartridge 21 may be attached to the inside of the neck band by means of male and female snaps 18 and 19, placed strategically on the bladder 15 and cartridge 21. The cartridge 21 is refillable, so that it may be reused. The mount of the cartridge is threaded at 16, so that it can be screwed into the neck 17 of the bladder 15, to form a gas-tight connection. The cartridge 21 releases gas when pull chain 13 is tugged, and the seal is ruptured in the cartridge neck 17. It has been found that it is desirable, to reinforce the bladder 15 where the snaps 19 are set, so a strip of heavier material (in this embodiment, a twill tape) is placed the length of the bladder 15 under the snaps 19.

FIG. 6 shows the neckband, and illustrates the placement of the female snaps 18 and 19 that receive the male snaps 18 and 19 on the bladder shown in FIG. 5.

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The above preserver, which may be used many times, is practical for carrying in a suitcase or purse, and must therefore be made of sturdier material than the disposable model. The cartridge 21 must be suitable for refilling, and the bladder 15 must be of heavier stock to withstand abuse, and to withstand being pushed through slot 22 after deflation. The ends 1 and 2, and the tabs 5 and hoops 7, of course, may be substantially the same as in the disposable preserver.

It will be appreciated that the neckband will be effective to establish confidence and a feeling of safety in the wearer, so as to be a valuable adjunct to those learning to swim. At the same time, its neat appearance is such as to be attractive to experienced swimmers, who are aware that circumstances may arise where the buoyancy of the neckband may prevent drowning, or provide the swimmer with sufficient buoyancy so that in an emergency, effective aid to others may be given. The neckband may also be decorated in any number of ways, so as to be more attractive to women, and thus encourage its use.

Having the bladder encased in the neckband presents many advantages. The bladder will be protected from the sun which rots many plastics and rubbers. The bladder will be protected from foreign objects and therefore the likelihood that the bladder may be scratched or punctured is almost eliminated. Protection of the bladder is of utmost importance to ensure its performance in an emergency.

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What is claimed is:

1. A life preserver comprising a hollow neckband, and a detachable inner bladder made of a relatively low strength, and a cartridge, that is detachable, of compressed gas for inflating said detachable inner bladder, said detachable cartridge and detachable inner bladder being inserted into said hollow neckband through a slit, said hollow band having an elastic portion so as to allow for expansion and contraction, said detachable bladder being attached to the inside of the neckband by means of removable fasteners.

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MILTON BUCHLER, *Primary Examiner*.

T. W. BUCKMAN, *Assistant Examiner*.

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