Aircrew Integrated Recovery Survival Vest

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AIRCREW INTEGRATED RECOVERY SURVIVAL VEST

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ABSTRACT
A vest particularly suited for survival purposes is disclosed. The vest has removably attachable pockets as well as a removably attachable hoisting harness so as to facilitate the needs for survival and, in addition, has provisions for easily adjusting the size thereof.

21 Claims, 3 Drawing Sheets
BACKGROUND OF THE INVENTION

1.0 Field of the Invention

The present invention relates to a vest that is donned by a user and, more particularly, to a vest having removably attachable pockets to accommodate survival equipment and removably attachable hoisting harness usable during emergency conditions.

2.0 Description of the Prior Art

Vests comprise a sleeveless garment and are commonly donned by users and extend from the neck region to the waist region of the user. Vests also serve survival functions such as a life preserver for floatation purposes and as well as provide facilities, such as pockets, for housing survival equipment, such as knives. Vests find frequent usage in hunting and fishing activities.

Vests commonly comprise a relatively large amount of pockets having capacities to accommodate other survival equipment such as knives, hand warmers and pistols. It is desired that the vest be provided with removable pockets providing different storage capacities so that one vest may be customized to serve the unique requirements of the many different users donning essentially the same survival vest.

Vests are commonly donned by users that sometimes find themselves in dangerous situations requiring their immediate withdrawal therefrom by airborne machines, such as helicopters. These vests find frequent usage in police activities, such as SWAT teams, and drug enforcement agencies. It is desired that vests be provided with a hoisting harness to facilitate the removal by airborne equipment from dangerous situations. Further, it is desired that this hoisting harness be removable from the vest when desired.

Vests are also commonly donned by users having different body proportionate dimensions. Unless the size of the vest is adjustable, which is of particular importance to the present invention, so as to accommodate the proportionate dimensions of the user in a manner to be further described with reference to FIG. 3.

OBJECTS OF THE INVENTION

It is a primary object of the present invention to provide a vest having removably attachable pockets.

It is a further object of the present invention to provide a vest having a removably attachable hoisting harness.

It is another object of the present invention to provide for a vest having means so as to adjust its proportionate dimensions so as to accommodate the different sizes of many users.

SUMMARY OF THE INVENTION

The present invention provides for a survival vest having removable and attachable pockets, as well as a removable and attachable hoisting harness and, in addition thereto, means for adjusting its size so as to easily accommodate different users that wear the vest.

The vest is capable of being donned by a user and covers the upper body portion of the user and extends from the neck to the waist of the user. The vest, in one embodiment, has at least one, but preferably three, separable regions that are brought together by at least one, but preferably three, straps that are inserted into rows of loops and thereafter detachably connected to the vest so that the user of the vest may quickly and easily adjust the size of the vest to make it form fit the user.

The vest, in another embodiment, comprises means for adjusting the size thereof, a cutout, a removably attachable hoisting harness, removably attachable pockets, a snap link, and a lift strap. Means for adjusting changes the size of the vest so as to accommodate the proportionate dimensions of the individual user that wears the vest. The cutout is in the shoulder region of the vest so as to provide a passageway thereat. The lift strap has first and second ends with the first end passing through the passageway and having means for affixing to the snap link. The lift strap has a second end affixed to the removably attachable hoisting harness.

BRIEF DESCRIPTION OF THE DRAWINGS

These and other objects, features and advantages of the invention, as well as the invention itself, will become better understood by reference of the following description when considered in conjunction with the accompanying drawings, wherein like reference numbers designate identical or corresponding parts throughout and wherein:

FIG. 1 is a front view of the vest of the present invention in its open position.

FIG. 2 is a rear view of the vest arranged in its open position.

FIG. 3 illustrates the means for adjusting the size of the vest of FIGS. 1 and 2.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to the drawing, FIG. 1 illustrates a front view of the vest 10 of the present invention shown in its open position. The vest 10 is capable of being donned by a user and covers the upper body portion of the user extending from the neck region 12 to the waist 14 of the user. The vest 10 has a plurality of rows 10a, 10b, ..., 10n, and is fabricated so as to provide for openings 16 and 18 for the insertion of the left and right arms, respectively, of the user. The size of the vest 10 is adjustable, which is of particularly importance to the present invention, so as to accommodate the proportionate dimensions of the user in a manner to be further described with reference to FIG. 3.

The vest 10 of FIG. 1 vest further comprises a zipper assembly 20 having portions 20A and 20B that are attached to the vest 10 of the separated sides of the vest 10 shown in FIG. 1, in a manner known in the art, and also has a slide fastener 20C and plastic teeth 20D.

The vest further comprises a snap link 22 (not fully shown) having a cover 22A, a lift strap 24 (not shown in FIG. 1 but shown in FIG. 2), and a cut-out in the vest 10 proximate shoulder region of the vest 10 so as to provide a passageway 26 partially shown in FIG. 2 thereat. The strap 24 has first and second ends with the first end passing through the passageway 26 and having means for affixing to the snap link 22, and with the second end of strap 24 being affixed to a removably attachable hoisting harness 28, to be described hereinafter with reference to FIG. 2.

The vest 10 of FIG. 1 further comprises removably attachable pockets 30, 32, 34, 36, and 38, as well as a flashlight attachment 40. The vest further comprises two collar lobe attachments 37 and two loop locs 39. The pockets...
ends with one end thereof affixed to the vest 10 and the other end thereof having means, such as rigidly attached buttons 70, 70, and 70, respectively, for being releasably attached to the vest 10. The first and second ends are separated from each other by a sufficient distance to allow the right strap 42 to pass under and therebetween.

The vest 10 further comprises a plurality of left clamping straps 72, 72, and 72, which are similar to the right clamping straps 70, 70, and 70. Each of the left clamping straps 72, 72, and 72, has first and second ends with one end thereof affixed to the vest 10 and the other end thereof having means such as rigidly attached buttons 72, 72, and 72, respectively, for being releasably attached to the vest 10. The first and second ends of the left clamping straps 72, 72, and 72, are separated from each other by a sufficient distance to allow the right strap 50 to pass under and therebetween.

The vest 10 further comprises a plurality of chest clamping straps 74, 74, located in the chest region of the vest 10. Each of the chest clamping straps 74, and 74, has first and second ends with one end affixed to the vest 10 and the other end thereof having means, such as button snap arrangements 74, and 74, respectively, for being releasably attached to the vest 10. The first and second ends of the chest clamping straps 74, and 74, are separated from each other by a sufficient distance so as to allow the chest strap 58 to pass under and therebetween.

The hoisting harness 28 further preferably comprises a first support strap 76 having first and second ends with the first end affixed to the joinder region 68 of the right strap 42 and the chest strap 58. The second end of the support strap 76 is connected to the vest by attaching means 78.

The hoisting harness 28 still further comprises a second support strap 80 that is affixed to both the left strap 50 and the chest strap 58 at the joinder region 66 previously described. The second strap 80 has a second end connected to the vest 10 by means of the attachment means 78.

The hoisting harness 28 further comprises a right leg retainer 82 having first and second ends spaced apart from each other and located proximate the waist portion 14 of the vest 10 with one end of the right leg retainer 82 affixed to the right strap 42 portion that extends downward toward the peak 48 and with the other end of the right leg retainer 82 affixed to the right strap 42 portion that extends upward from the peak 48. The affixing of the right leg retainer 82 to the right strap 42 is generally indicated by reference numbers 84 and 86.

The hoisting harness 28 further comprises a left leg retainer 88 having first and second ends spaced apart from each other and located proximate the waist portion 14 of the vest 10 with one of the ends affixed to the portion of the left strap 50 by means such as stitching, generally indicated by reference number 90, that extends downward toward the peak 56 and with the other end of the left leg retainer 88 being affixed to the portion of the left strap 50 that extends upward from the peak 46 by means such as stitching, generally indicated by reference number 92.

The vest 10 further comprises harness retainer cords 94 and 96 that are affixed to the waist portion 14 of the vest 10 and located so as to be capable of intercepting and capturing the right and left straps 42 and 50 respectively. The right strap 42 preferably further comprises an adjustment device 98, whereas the left strap 50 further comprises a harness keeper 102, whereas the left strap 50 further comprises a harness keeper 104.

It should now be appreciated that the practice of the present invention provides for a vest used for survival
purposes and having removably attachable pockets as well
as a removably attachable hoisting harness.

The vest 10 provides a unique adjustment method which
may be further described with reference to FIG. 3. FIG. 3
illustrates the vest 10 having provisions known in the art so
as to be capable of being separated into four sections 106,
108, 110 and 112, wherein sections 106 and 108 are separ-
able at a first region 114 under the arm opening 18, sections
108 and 110 are separable at a second region 116 generally
in the middle of the back of the vest 10, and sections 110 and
112 are separable at a third region 118 under the other arm
opening 16.

FIG. 3 further illustrates a right insertion strap 120 located
proximate the first region 114, a back insertion strap 122
located proximate the second region 116, and a left insertion
strap 124 located proximate the third region 118. Each of the
straps 120, 122 and 124 have attachment means, such as
velcro or other devices known in the art, at its ends and is
interlaced through respective horizontal loops 126 arranged
in rows along the vest 10 as shown in FIG. 3.

From FIG. 3 it may be determined that the four sections
106, 108, 110 and 112 may be arranged so as to overlap one
another so that the size of the vest 10 may be adjusted to
accommodate the body dimensions of the user of the vest 10,
then the straps 120, 122 and 124 may be interlaced into
respective horizontal loops 126, and finally the velcro ends
of the straps 120, 122 and 124 may be attached to the vest
10 and the vest 10 is now customized to match the size of
the wearer of the vest 10. As used herein, the size of the vest
10 is meant to represent the distance around the horizontal
circumference of the vest 10. Adjustments for the size of the
wearer are provided, for example, in one-half (½) inch increments, under each arm and in the back area of the vest
10 in a manner as described for the use of straps 120, 122,
and 124.

If desired, the practice of this invention may be accom-
plished by providing a vest 10 having the openings for the
insertion of the arms and a back region for covering the back
of the user and then providing at least one separable region
dividing the vest 10 into at least two sections, with the at
least separable region being located in the region selected
from the group consisting of under one of said arm openings
and in the middle of the back region of the vest 10. The vest
10 would further comprise at least one row of loops respective-
lly located proximate the at least one separable region;
and at least one insertion strap dimensioned to be insertable
into one row of loops and respectively located proximate the
separable region. The insertion strap has one end with means
for detachably attaching to the vest.

Further, if desired the vest 10 may have more than four
separable sections so long as the sections are brought
together in a manner as described for the embodiment of
FIG. 3.

It is understood that the invention is not limited to its
specific embodiments herein illustrated and described but
may be otherwise without departing from the spirit and
scope of the invention.

What we claim is:
1. A vest that is capable of being donned by a user and
covers the upper body portion of the user extending from the
neck to the waist of the user, said vest comprising:
(a) means for adjusting the size of the vest so as to
accommodate the proportionate dimensions of the user;
(b) a cutout in the shoulder region of the vest so as to
provide a passageway thereat;
(c) a hoisting harness removably attachable to said vest;
(d) removably attachable pockets;
(e) a snap link; and
(f) a lift strap having first and second ends with the first
end passing through said passageway and having
means for affixing to said snap link and with the second
end affixed to said removably attachable hoisting har-
ness.

2. A vest that is capable of being donned by a user and
covers the upper body portion of the user extending from the
neck to the waist of the user, said vest comprising:
(a) means for adjusting the size of the vest so as to
accommodate the proportionate dimensions of the user;
(b) a cutout in the shoulder region of the vest so as to
provide a passageway in the right shoulder region of
said vest;
(c) removably attachable hoisting harness comprising;
(i) a left strap formed in a loop having a central region
from which the left strap extends upward to the left
shoulder region of the vest and then downward past the
waist portion of the vest and continuing downward to
the left leg region of the user that dons the vest and
has a peak and then extends upward from said peak
and back to its central region;
(ii) a right strap formed in a loop having a central
region from which the right strap extends upward to
the right shoulder region of the vest and then downward
past the waist portion of the vest and continuing downward to
the right leg region of the user that dons the vest
and has a peak and then extends upward from the
peak and back to its central region;
(iii) a chest strap having a central region from which
the chest strap extends outward in opposite directions
respectively to form first and second ends;
(iv) a plurality of left clamping straps spaced apart from
each other and located in the left shoulder region of
said vest with one of said left clamping being located
proximate said passage, each of said plurality of left
clamping straps having first and second ends with one
end thereof affixed to said vest and the other end
thereof having means for being releasably attachable
to said vest, said first and second ends being sepa-
rated from each other by a sufficient distance so as to
allow said left strap to pass therebetween;
(v) a plurality of right clamping straps spaced apart
from each other and located in the right shoulder
region of said vest, each of said plurality of right
clamping straps having first and second ends with
one end thereof affixed to said vest and the other end
thereof having means for being releasably attachable
to said vest, said first and second ends being sepa-
rated from each other by a sufficient distance so as to
allow said right strap to pass therebetween;
(vi) a plurality of chest clamping straps located in the
chest region of said vest, each of said plurality of
chest clamping straps having first and second ends
with one end thereof affixed to said vest and the other
end thereof having means for being releasably attachable
to said vest, said first and second ends being separated
from each other by a sufficient distance so as to
allow said chest strap to pass therebetween;
(vii) a left leg retainer having first and second ends
spaced apart from each other and located proximate
the waist portion of said vest with one of said ends
affixed to said left strap that extends downward
toward said peak and with the other end affixed to
said left strap that extends upward from said peak;
A vest that is capable of being donned by a user and having means for adjusting the size of the vest comprising:

(a) first, second and third separable regions dividing said vest into four sections, with the first separable region being located under one of said arm openings of said vest, said second separable region being located in the middle of said back region of said vest, and said third separable region being located under the other arm opening;

(b) first, second, and third rows of loops respectively located proximate said first, second and third separable regions, each of said first, second, and third insertion straps having one end with means for detachably attaching to said vest.

The vest according to claim 1, wherein said vest is comprised of a nylon material.

The vest according to claim 2, wherein said vest is comprised of a fire resistant material.

The vest according to claim 2 further comprising a zipper assembly having plastic teeth.

A vest that is capable of being donned by a user and covers the upper body portion of the user extending from the neck to the waist of the user, said vest having first and second openings for insertion of arms and a back region covering the back of said user, said vest comprising:

(viii) a right leg retainer having first and second ends spaced apart from each other and located proximate the waist portion of said vest with one of said ends affixed to said right strap that extends downward toward said peak and with the other end affixed to said right strap that extends upward from said peak;

(ix) a connector affixed to one end of said chest strap and having means for gripping and releasably holding the other end of said chest strap; and

(x) means for affixing together the central regions of said left, right, and chest straps and means for affixing a portion of the oppositely extending chest strap respectively to said left and right straps

The vest according to claim 9 further comprising a removable attachable hoisting harness;

The vest according to claim 9 further comprising a removable attachable pockets;

The vest according to claim 9, wherein said vest is comprised of a fire resistant material.

The vest according to claim 2 further comprising a removable attachable hoisting harness;

The vest according to claim 2, wherein said vest is comprised of a nylon material.

The vest according to claim 2, wherein said vest is comprised of a fire resistant material.

The vest according to claim 2 further comprising a zipper assembly having plastic teeth.

The vest according to claim 2 further comprising a removable attachable hoisting harness;

The vest according to claim 9 further comprising a removable attachable hoisting harness.

The vest according to claim 9 further comprising removeably attachable pockets;

The vest according to claim 9, wherein said vest is comprised of a nylon material.

The vest according to claim 2, wherein said vest is comprised of a fire resistant material.

The vest according to claim 2 further comprising a zipper assembly having plastic teeth.

The vest according to claim 2 further comprising a removable attachable pockets;
19. The vest according to claim 9, wherein said vest is comprised of a nylon material.
20. The vest according to claim 9, wherein said vest is comprised of a fire resistant material.

21. The vest according to claim 9 further comprising a zipper assembly having plastic teeth.