

[54] **HARNESS FOR PARACHUTES AND THE LIKE**

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[51] Int. Cl. **B64d 17/30**

[58] Field of Search **119/96; 244/151 R, 244/151 A, 122 AG**

[56] **References Cited**

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[57] **ABSTRACT**

A harness for a parachutist or workman carrying out dangerous work liable to result in the falling of the workman. The harness has only two adjusting points. The harness has a rapid release means to which are attached a pair of shoulder straps and the ends of a pair of adjusting straps. The opposite or free ends of the adjusting straps pass through fixing means, defining the adjusting points and mounted on the shoulder straps. Adjustment of the entire harness is effected by manipulation of the free ends of the adjusting straps.

3 Claims, 4 Drawing Figures

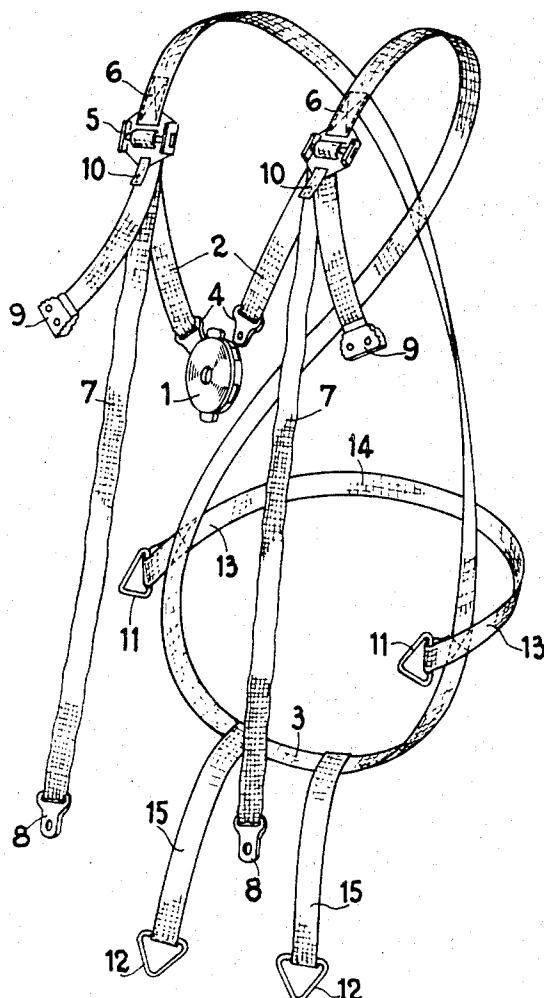


Fig.1

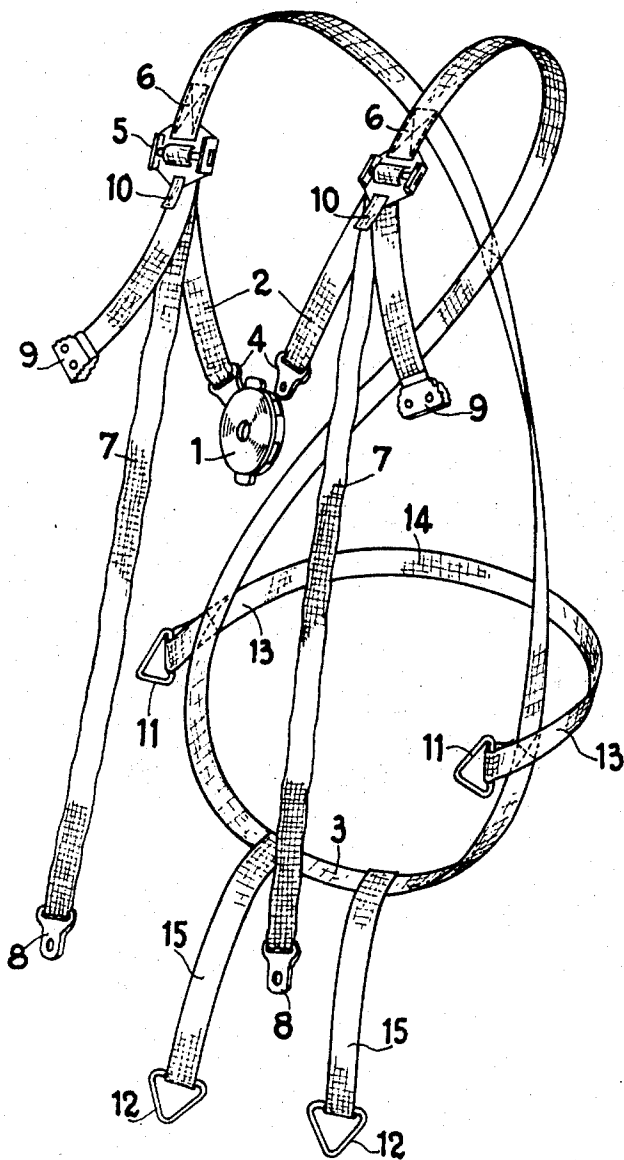


Fig.2

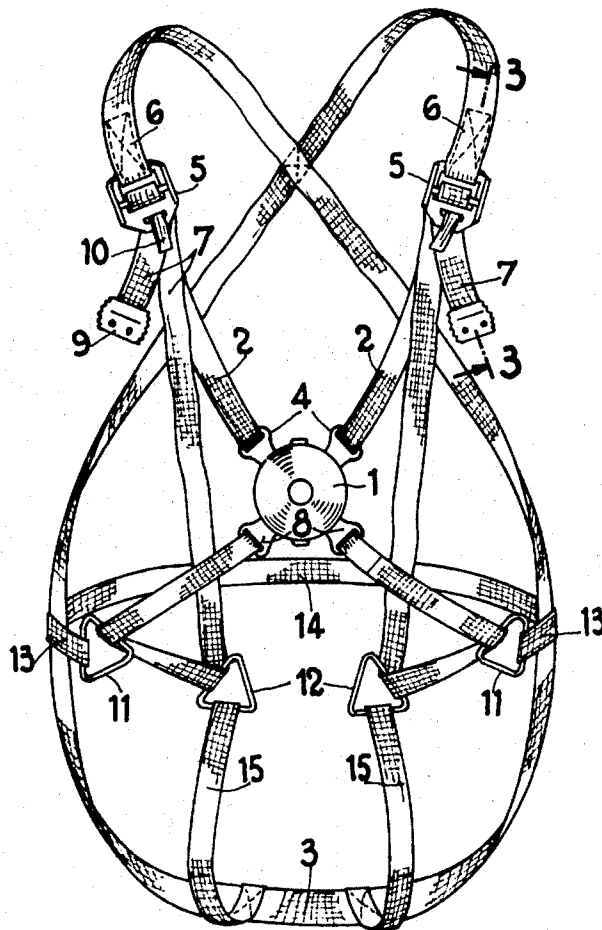


Fig.3

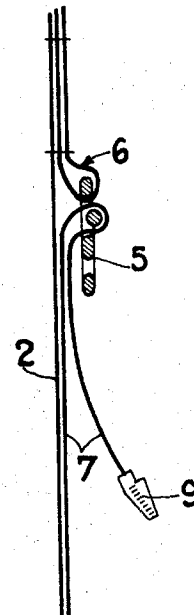
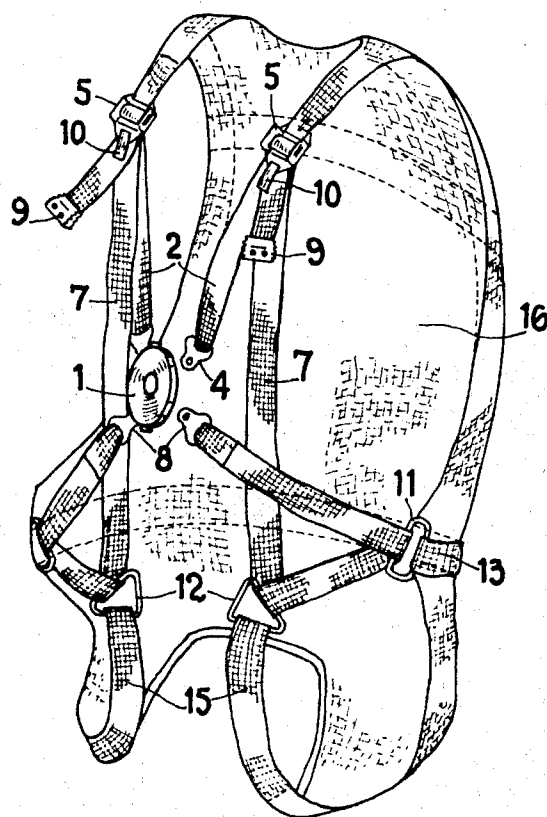


Fig. 4



HARNESS FOR PARACHUTES AND THE LIKE

The present invention relates to harnesses for parachutes and workmen carrying out dangerous work having a falling hazard.

It is known that these harnesses to which the parachute or other holding means for the workman is fixed must be capable of being rapidly adjustable to the size of the user and moreover comprise means for releasing the user rapidly and even instantaneously in the case of a parachutist who after landing would run the risk of being dragged along by the open parachute.

For adjusting purposes, known harnesses usually have four adjusting points disposed respectively on upper straps, constituting shoulder straps, and on lower straps, constituting thigh straps. Four successive operations are therefore required for adjusting.

As concerns the release, these straps are interconnected on the chest of the user by a rapid unhook or release buckle or the like and the release presents no problem.

An object of the invention is to simplify the adjustment of the harness to the size of the user.

The invention provides an improved harness which is so adapted and arranged that it has only two adjusting points.

Preferably, the two adjusting points are disposed on the straps constituting the shoulder straps.

According to one embodiment of the invention, on each side of the harness the corresponding strap, forming a shoulder strap, has an adjusting slip ring in which is engaged an adjusting strap terminating in an attaching member for attachment to rapid-release means and two straps, one being a belt strap and the other a thigh strap, each of which terminates in a ring through which is passed the adjusting strap before its engagement in the rapid release means.

Further features and advantages of the invention will be apparent from the ensuing description with reference to the accompanying drawings.

In the drawings :

FIG. 1 is a three-quarter perspective view of a harness according to the invention in the free condition;

FIG. 2 is a corresponding front perspective view of the harness in its condition after it has been placed in position on the user;

FIG. 3 is a partial sectional view taken on line 3—3 of FIG. 2, and

FIG. 4 is a three-quarter perspective view of a modification of the harness according to the invention.

In the embodiment shown in FIGS. 1—3, the harness comprises a centre rapidly releasing or unhooking buckle 1 from which upwardly extend two strap portions 2 constituting shoulder straps, these strap portions extending rearwardly in the form of back strap portions and being interconnected to form one piece by a lower connecting portion 3 adapted to support the buttocks of the user. Each belt portion 2 terminates in a member 4 for engaging or hooking in the buckle 1.

Secured to each of the shoulder straps 2 is an adjusting slip ring 5, the latter being secured for example by means of a folded strip 6 which is sewn onto the shoulder strap. Engaged in each of the slip rings 5 is an adjusting strap 7 which terminates at its lower end in a member 8 for attachment to the buckle 1. An end member 9 is secured to the upper other end of the strap 7 so as to preclude the strap 7 from slipping through the

slip ring 5, even when the strap is loosened by the operation of the usual opening tab 10 of the slip ring 5.

There are provided on each side of the harness for co-operation with the corresponding adjusting strap 7 two loop means such as triangular-or trapezium-shaped rings 11 and 12 respectively carried by a corresponding end portion 13 of an intermediate strap 14 and by a thigh strap 15 attached to the connecting portion 3 a full stop.

Before being put on by the user, the harness is as shown in FIG. 1. The rapid-release buckle 1 preferably remains connected by the corresponding member 4 to one of the shoulder straps 2. The other straps hang loosely.

To put on the harness, the user puts the two shoulder straps 2 over his shoulders and hooks the member 4 of the second shoulder strap 2 to the buckle 1. Then he engages the member 8 at the free end of each of the adjusting straps 7, first in the ring 12 of the corresponding thigh strap 15 which he raises by passing it between his thighs, then in the ring 11 carried by the corresponding end of the belt strap 14, and finally engages the member 8 in the rapid-release buckle 1.

When both adjusting straps 7 have been thus attached to the buckle 1, the harness is as shown in FIG. 2, except that the harness has not been adjusted to the size of the user, at any rate if it is the first time that the harness has been put on the user.

To adjust the harness to his size, the user merely has to slide in the suitable direction each of the straps 7 in the corresponding adjusting ring 5. These two adjusting rings 5 therefore constitute the sole adjusting points of the harness, since the adjustment of each strap 7 affects the position of the two belt strap portions 13 and the two thigh straps 15.

To release himself from the harness, the user has merely to open the rapid-release buckle 1 in the usual manner.

FIG. 4 shows a harness according to the invention in which all of the straps, identical to those just described are completed by a back piece 16, as disclosed in French Patent application No. 70,42,108 filed by the Applicant.

Having now described my invention what I claim and desire to secure by Letters Patent is :

1. In a harness for a parachutist or workman carrying out work involving a falling hazard, comprising in combination : means defining an upper harness back part for engaging the upper part of the back of the harness user and a lower harness back part for engaging under the buttocks of the user, two shoulder strap portions integral with and extending in a first part of the shoulder strap portions forwardly from said upper back part and then extending downwardly from said first part for respectively engaging the two shoulders of the user, said shoulder strap portions having lower front ends, rapid-release means for location in front of the user, said lower ends being engaged with said rapid-release means, two inner thigh strap portions integral with and extending forwardly and upwardly from said lower back part for respectively extending on the inside of the two thighs of the user and having upper ends, two first loop means respectively attached to said two thigh strap portions adjacent said upper ends, two second loop means respectively attached to said lower back part and respectively for association with said two first loop means; the provision of means for adjusting the

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harness to the user while allowing complete release of the harness from the user and comprising two adjusting straps having lower ends respectively engaged with said rapid-release means and upper ends, fixing means for fixing said two adjusting straps respectively to said two shoulder strap portions adjacent said upper ends of said adjusting straps so that said first parts of said shoulder strap portions are in the extension of and integral with said adjusting straps and constitute two strap assemblies, each of said adjusting straps extending freely through the corresponding first loop means and second loop means, and means for adjusting the length of each of said two strap assemblies for adjusting the harness to the size of the user.

2. A harness as claimed in claim 1, wherein said upper part and lower part of said harness constitute a single back piece.

3. In a harness for a parachutist or workman carrying out work involving a falling hazard, comprising in combination : means defining an upper harness back part for engaging the upper part of the back of the harness user and a lower harness back part for engaging under the buttocks of the user, two shoulder strap portions integral with and extending in a first part of the shoulder strap portions forwardly from said upper back part and then extending downwardly from said first part for respectively engaging the two shoulders of the user,

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said shoulder strap portions having lower front ends, rapid-release means for location in front of the user, said lower ends being engaged with said rapid-release means, two inner thigh strap portions integral with and extending forwardly and upwardly from said lower back part for respectively extending on the inside of the two thighs of the user and having upper ends, two first loop means respectively attached to said two thigh strap portions adjacent said upper ends, two second loop means respectively attached to said lower back part and respectively for association with said two first loop means; the provision of means for adjusting the harness to the user while allowing complete release of the harness from the user and comprising two adjusting straps having lower ends respectively engaged with said rapid-release means and upper ends, fixing means for fixing said two adjusting straps respectively to said two shoulder strap portions adjacent said upper ends of said adjusting straps, each of said adjusting straps extending from said fixing means downwardly and then through the corresponding first loop means and then through the associated second loop means to said rapid-release means, and means for adjusting the length of each of said two adjusting straps for adjusting the harness to the size of the user.

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