

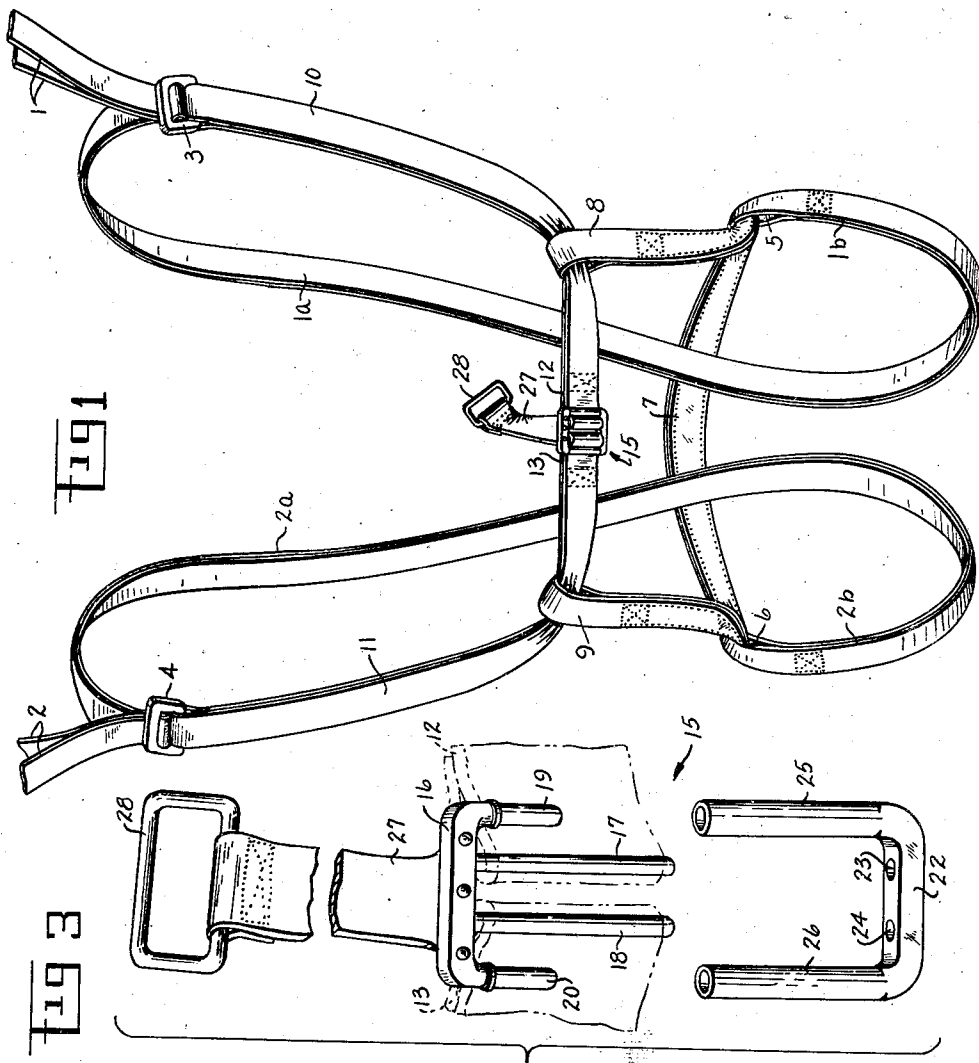
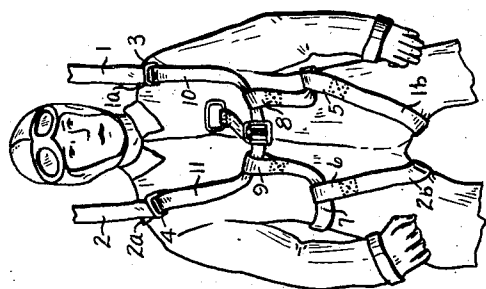
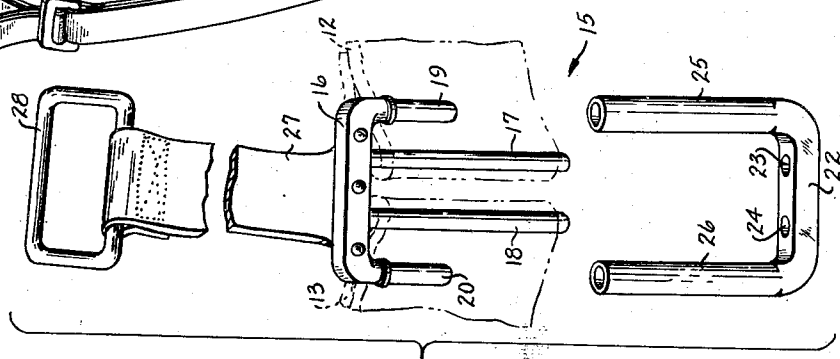
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QUICK-RELEASE PARACHUTE HARNESS

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QUICK-RELEASE PARACHUTE HARNESS

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5 Claims. (Cl. 244-151)

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The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

The present invention relates to a parachute harness for supporting the wearer during a parachute descent.

It is the general object of the present invention to provide a simple parachute harness of the quickly detachable type which is self-adjusting to accommodate itself to the wearer and which involves the use of a minimum amount of hardware and adjustable connections.

Other objects of the invention will become apparent by reference to the detailed description hereinafter given and to the appended drawings in which:

Fig. 1 is a diagrammatic view of the harness in its assembled form;

Fig. 2 is a view similar to Fig. 1, showing the harness in position on the body of the wearer;

Fig. 3 illustrates the details of a novel quick-release mechanism employed in the harness of Figs. 1 and 2.

Referring now to Figs. 1 and 2, the novel parachute harness is seen to comprise a pair of generally parallel lift webs 1 and 2, having a portion thereof looped through conventional adjustable adapters 3 and 4, respectively, from whence the webs extend downward in parallel arrangement to form back strap portions 1a and 2a respectively, which terminate in leg strap portions 1b and 2b respectively, which pass through the legs of the wearer and terminate in enlarged loop portions 5 and 6 disposed at the front of the wearer at about waist level. A back strap 7, which extends across the back of the wearer, has its terminal portions respectively threaded through loops 5 and 6 of the leg straps and the terminal ends of the transverse or belt strap 7 are formed as enlarged loops 8 and 9 respectively. A pair of shoulder straps 10 and 11 are connected at their upper ends to the adapters 3 and 4 respectively and are threaded through the respective loops 8 and 9 and secured at their inner ends at 12 and 13 respectively to a novel quick-release device generally indicated by the reference numeral 15.

As seen in Fig. 2, the loops 5 and 6 of the leg straps are slidable along the back strap 7, and the terminal ends 8 and 9 of the back strap are respectively slidable on the shoulder straps 10 and 11, so that once the adapters 3 and 4 are properly adjusted, the leg straps, shoulder straps, and back strap automatically adjust themselves

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into a comfortable position on the wearer, due to the provision of the guiding loops and thus eliminate the use of hardware in making adjustments to fit individual wearers. As further seen in Fig. 2, the lifting stresses from the parachute (not shown) are transmitted from the wearer's shoulders downward on each side to be finally equilibrated through the connections provided by means of the back strap 7, and upon landing it is only necessary to release the terminal ends 12 and 13 of the shoulder straps 10 and 11 by means of the releasable connection 15 and the entire harness will slide off of the wearer, loops 8 and 9 sliding over the terminal ends 12 and 13 of the shoulder straps and the leg strap loops 5 and 6 sliding off the ends of the back strap.

The novel release mechanism 15 illustrated in Fig. 3 comprises a metal transverse arm 16, which is provided with a pair of downwardly extending parallel pins 17 and 18 which are adapted to be slipped through the looped portions of the terminal ends 12 and 13 of the shoulder straps 10 and 11, and the arm 16 being further provided with a pair of short projecting pins 19 and 20 which extend downward on the outer side of the shoulder strap terminal ends 12 and 13. A yoke member 22 is provided with spaced apertures 23 and 24 adapted to receive the lower ends of the pins 17 and 18 and the legs 25 and 26 of the yoke member are hollow and adapted to be forced on to the projecting pin portions 19 and 20 of the upper release member 16. The legs 25 and 26 rest in frictional engagement with the shoulder strap terminal portions 12 and 13. The leg portions 25 and 26 may be arranged slightly out of parallel so as to give sufficient frictional engagement with the pins 19 and 20 to prevent inadvertent separation of the release mechanism prior to landing with the parachute harness. A strap 27 is secured to the upper release member 16 by means of rivets or the like and provided at its upper end with a grip ring 28 which is grasped by the wearer of the harness and pulled upward when it is desired to release the harness. Upon release, the upper member 16 moves with the release ring 28 and connecting strap 27, pulling the pins 17 and 18 from the apertures 23 and 24 of the lower member 22, and finally releasing the pins 19 and 20 from the tubular legs of the lower member 22, and finally the pins 17 and 18 are pulled from the looped ends of the terminal portions 12 and 13 of the shoulder straps, thus releasing the entire harness. The pins 17 and 18 are made of sufficient diameter to withstand all of the tensile stresses exerted

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by means of the shoulder straps 10 and 11 during descent in the parachute harness. The release mechanism, as described, is of very simple and positive acting character, but it is to be understood that the present invention is not necessarily limited to the use of such a release mechanism, since any quick-acting release for uncoupling the terminal ends 12 and 13 of the shoulder straps 10 and 11 may be employed.

It is further obvious that in the harness as above described, guiding loops might be provided on the terminal ends of the shoulder straps 10 and 11 in place of the loops 5 and 6 on belt 7 and terminal ends of the belt 7 interconnected by means of the quick-release mechanism. And it is further obvious that the belt member may be made of such a width and so arranged that it may constitute a seat for supporting the wearer.

While a preferred form of the invention has been illustrated and described, it will be obvious to those skilled in the art that other variations and modifications may be made therein so within the scope of the invention as defined within the appended claims.

I claim:

1. A parachute harness comprising a pair of spaced lift webs adapted to extend downward in parallel relation over the wearer's shoulders and back and thence extending through the wearer's legs and each terminating in a loop portion at the front of the wearer, a strap adapted to extend transversely across the wearer's back and having its ends threaded through said loops, the ends of said back strap terminating in loops positioned at the front of the wearer, a pair of straps extending down the front of the wearer and each passing through a respective loop of said back strap and then extending laterally across the front of the wearer for attachment to a quick-release coupling member, each of said pair of straps being secured at its upper end to one of said lift webs adjacent the shoulder of the wearer.

2. In a parachute harness, a pair of parallel lift webs extending the full length of the wearer's back and terminating in leg straps having terminal loops disposed at the front of the wearer, a strap extending across the wearer's back and having its terminal portions threaded through respective ones of said loops on said leg straps, the terminal ends of said back strap being formed in

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loops disposed in front of the wearer, a quick-release coupling member positioned at the front of the wearer, a pair of straps secured at one end thereof to said coupling member and each respectively threaded through one of the loops on the back strap and a connection between each of the other ends of said pair of straps and a respective one of said lift webs at points adjacent the wearer's shoulder.

3. In a parachute harness a pair of lift webs having shoulder portions, back portions, and terminating in leg strap portions disposed at the front of the wearer, an enlarged loop on the end of each leg strap portion, a pair of shoulder straps disposed down the front of the wearer and adjustably connected at one end to the shoulder portions of said lift webs, the remaining ends of said shoulder straps being free and disposed at the front of the wearer, a belt strap adapted to extend transversely across the back of the wearer and having free ends disposed in front of the wearer, each of one of said pairs of free ends being formed with enlarged loops and each of the remaining free ends being threaded through a pair of said loops and a quick-release connection between said remaining free ends.

4. A parachute harness comprising a pair of lift webs having back and leg portions and the terminal ends of said leg portions being formed as enlarged guiding loops disposed at the front of the wearer, shoulder straps, adjustably secured to said lift webs and having free ends disposed in front of the wearer, a transverse strap having its free ends disposed in front of the wearer, guide loops formed on the ends of one of said pairs of free ends and the other of said pairs of free ends being threaded through said guide loops and releasably connected at the front of the wearer.

5. A parachute harness construction comprising a pair of straps extending down the back of the wearer, and terminating in leg straps having looped ends disposed at the front of the wearer, a pair of shoulder straps having the terminal ends thereof releasably connected at the front of the wearer, a belt web having looped terminal ends threaded through said leg strap loops and said looped terminal ends encircling respective ones of said shoulder straps, and suspension webs formed integral with one of said pairs of straps.

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