

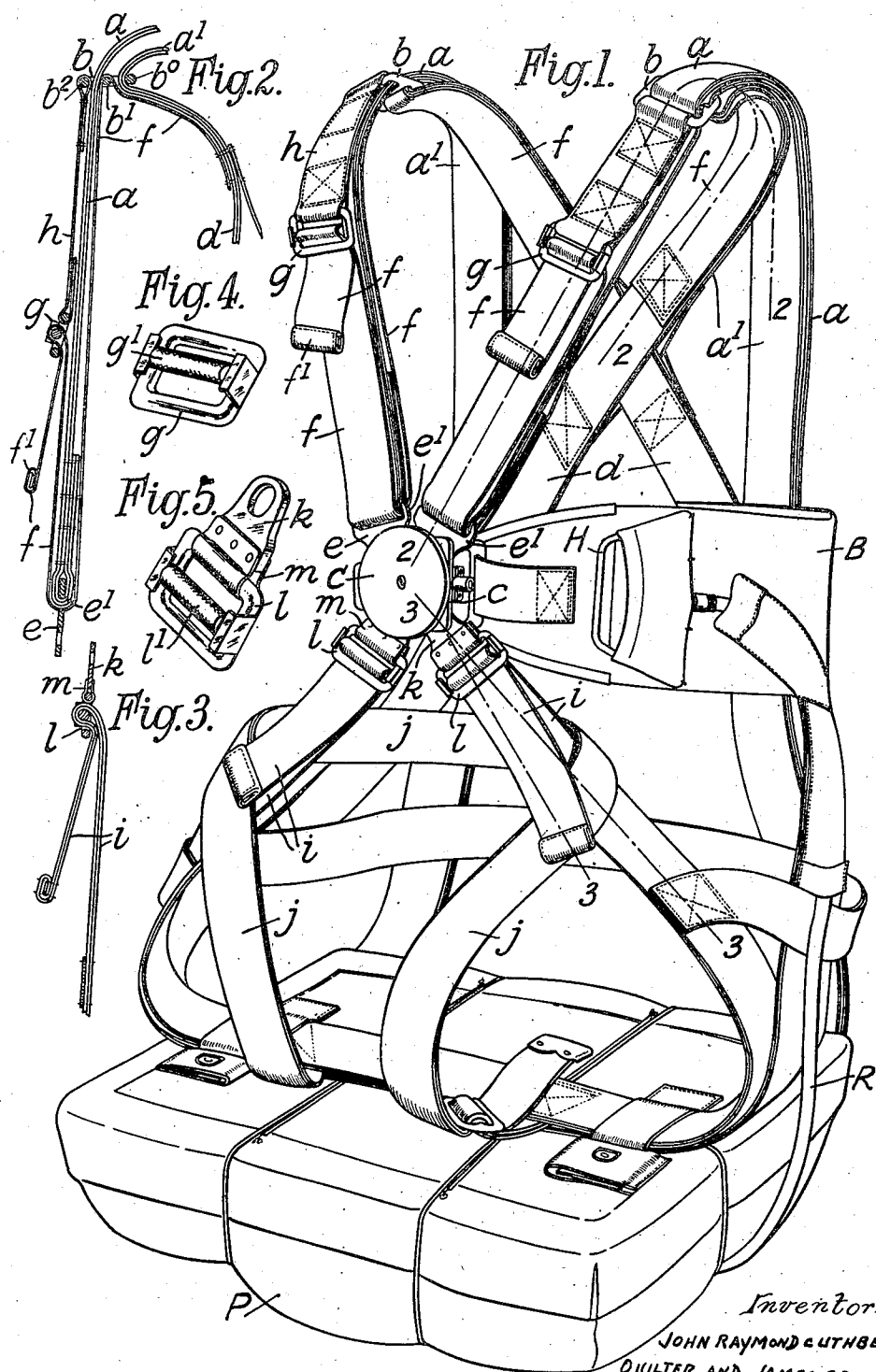
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PARACHUTE HARNESS

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PARACHUTE HARNESS

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This invention relates to parachute harness of the well-known type in which the front and rear lift webs pass through adjustable spacers located over the wearer's shoulders, the front lift webs being connected with a central quick-release device on his chest and the rear lift webs being connected with the back straps or cross webs; this type of harness is regular equipment in the air forces of the Allied Nations, the U. S. Army Air Force employing among other equipment an adaptation of the British (R. A. F.) quick-release harness.

The present invention has for its primary object to provide improved means for adjusting harness of this type, by shifting the spacers to suit different sizes of wearer, in a more convenient manner than hitherto, and without extensive alterations of the harness.

Another object of the invention is to provide adjusting means which can be readily operated by the wearer himself, while actually wearing the harness and without assistance from another person.

Further objects are to provide improved adjusting means which can be operated by the wearer with one hand for each side of the harness, so that the two sides can be adjusted simultaneously with both hands or can be adjusted successively if the wearer has only one hand at liberty, and to provide for a similar adjustment of the leg straps.

Other objects and advantages of the invention will hereinafter appear from the following description of a preferred embodiment, given with reference to the accompanying drawing, in which:

Fig. 1 is a perspective view of the harness in the position of wear.

Fig. 2 is a section on the lines 2—2 of Fig. 1.

Fig. 3 is a section on the lines 3—3 of Fig. 1.

Fig. 4 represents one of the adjustable front buckles.

Fig. 5 represents one of the leg-strap quick release lugs, with its buckles and the connecting clip.

Fig. 1 shows a parachute harness of the type described above, having a seat-type pack P, the opening of which is controlled by a rip cord R operated by a handle H upon the belt B, which also carries a central quick-release device C. The harness comprises main lift webs a and a^1 extending up from the pack and passing through adjustable spacers or adaptors b over the wearer's shoulders; the front lift webs a connect with the quick-release device C upon his chest, and

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the rear lift webs a^1 connect with the back straps or cross webs d which may be continuous with the webs a^1 . By shifting the spacers or adaptors b along the lift webs a and a^1 , it is possible to adjust the harness to suit different sizes of airmen; raising the spacers will give more room inside the harness, and vice versa. The spacers shown are of the usual flat buckle type, each comprising three cross bars or pins b^0 , b^1 , b^2 fixed to or integral with their side members; the main lift webs a^1 will be passed around the rearmost cross-pin b^0 of each spacer, to connect with or to continue as the back straps d , and the other main lift webs a will pass between central and front pins b^1 , b^2 of each spacer and down towards the quick release device C, to which they are normally locked by engaging their lugs e with spring studs or the like inside the quick-release box or casing c .

In harness of this type, it is now customary to provide for adjustment by means of straps anchored to the quick-release lugs e , the straps running up around the central pins b^1 on the lift-web spacers b , and down to buckles on the back straps or cross webs; by pulling or paying out the free ends of these adjusting straps through their buckles, the lift web spacers b can be lowered or raised to position the spacers at the correct point on the shoulders, according to the height or size of the airmen. Such adjustment can readily be carried out from behind the wearer by another person, but it is not conveniently done by an airman actually wearing the harness; when the same parachute harness has to serve for different airmen in turn, a fresh adjustment may become necessary at each change of personnel, which causes loss of time and usually involves assistance by another person. The present invention comprises improved adjusting means which can be readily operated from the front by the wearer himself.

In the improved arrangement shown, a pair of adjusting straps f are attached to the back straps or cross webs d to which the lift webs a^1 are connected or of which they form a continuation; these straps f are passed over the central pins b^1 upon the spacers b , as seen more clearly in Fig. 2, and down towards the quick-release connecting lugs e , following the line of the main lift webs a and being passed outwards through the slots e^1 in which the webs are engaged. From the front of these lugs e , the straps f are led upwards, again following the line of the lift webs a , and are engaged with adjustable buckles g attached by short lengths of webbing h to the for-

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ward cross-pins of the spacers *b*; the free ends of the straps *f* hang down in front of the lift webs, in a position where they are readily pulled down to tighten the harness, their extremities being coiled up to form grips *f*¹ which prevent them from slipping back through the buckles *g* by accident or inadvertence.

The adjustable front buckles *g* may be of any suitable type, preferably with frictional self-locking action produced by a knurled slide bar *g*¹ engaged by a loop portion of the adjusting strap; Fig. 4 shows a suitable construction of the buckle, the grip of which can be quickly released in order to slacken the harness, by merely raising the lower side of the buckle so that the slide bar moves towards the upper edge.

Similar adjusting means are applied to the leg straps *i* of the harness; these straps are encircled by the leg loop *j* and are normally locked to the quick-release device *C* by means of lugs *k* engaging with spring studs or the like inside the box *c*. In the improved arrangement shown, the lugs *k* are provided with adjustable buckles *l* of the same type as the buckles *g*; these buckles *l* are connected to the lugs by means of sheet metal clips *m* encircling the rounded sides of the buckles and secured by rivets or the like, as shown in Fig. 5. The leg straps *i* are looped over the slide bars *l*¹ of the buckles and back inside the buckles so as to hang down in front of the main portions of the leg straps *i*, as seen in Figs. 1 and 3, in a position where they are readily pulled down to tighten the leg straps; the grip of the buckles *l* can be quickly released by merely raising their lower edges in order to slacken the leg straps.

The improved adjustable harness is especially designed for use by pilots operating from naval aircraft carriers or warships, where the limitation of space makes it impossible to provide individually adjusted harness for all the pilots, and quick adjustments of the harness have to be made at the change of personnel with every watch or relief.

What we claim is:

1. In parachute harness of the type described, comprising front and rear lift webs, adjustable spacers through which said front and rear lift webs are separately passed, a central quick-release device, and lugs for engaging the ends of said front lift webs with said quick-release device, adjusting means comprising straps attached to the continuations of said rear lift webs below said spacers, and front buckles attached to the said spacers, said straps running up through the said spacers, thence downwards to engage the quick-release lugs of the front lift webs and upwards again to said front buckles, their free ends being drawn through said buckles to tighten the harness.

2. In parachute harness of the type described, comprising front and rear lift webs, adjustable spacers each having three parallel pins between which said lift webs are separately passed, a central quick-release device, and lugs for engaging the ends of said front lift webs with said quick-release device, adjusting means comprising straps attached to said rear lift webs below said spacers, and front buckles attached to said spacers, said straps running up over the central pins of said spacers, thence downwards to engage the quick-release lugs of the front lift webs, and upwards again to said front buckles, their free ends being drawn through said buckles to tighten the harness.

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3. In parachute harness of the type described, comprising front and rear lift webs, adjustable spacers each having three parallel pins between which said lift webs are separately passed, a central quick-release device, and lugs for engaging the ends of said front lift webs with said quick-release device, adjusting means comprising straps attached to said rear lift webs below said spacers, flexible connections attached to the front pins of said spacers, and front buckles attached to said connections, said straps running up over the central pins of said spacers, thence downwards to engage the quick-release lugs of the front lift webs and upwards again to said front buckles, their free ends being drawn through said buckles to tighten the harness.

4. In parachute harness of the type described, comprising front and rear lift webs, adjustable spacers each having three parallel pins between which said lift webs are separately passed, a central quick-release device, and lugs for engaging the ends of said front lift webs with said quick-release device, adjusting means comprising straps attached to said rear lift webs below said spacers, and front buckles attached to the front pins of said spacers, said straps running up over the central pins of said spacers, thence downwards to engage the quick-release lugs of the front lift webs and upwards again to said front buckles, their free ends being drawn through said buckles to tighten the harness.

5. In parachute harness of the type described, comprising front and rear lift webs, adjustable spacers each having three parallel pins between which said lift webs are separately passed, a central quick-release device, and lugs for engaging the ends of said front lift webs with said quick-release device, means for adjusting the lift webs on either side independently of those on the other side, comprising a strap attached to each rear lift web below the respective lift-web spacer, and a buckle attached to each of the lift-web spacers, said strap running up beneath the rear lift web and being looped over the central pin of the spacer, thence passing down behind the front lift web, through a slot in the quick-release lug, and upwardly in front of the lift web to engage said buckle, its free end being drawn through said buckle to tighten the lift webs on the respective side of the harness.

6. In parachute harness of the type described, comprising front and rear lift webs, adjustable spacers through which said lift webs are separately passed, leg straps adapted partly to encircle the wearer's thighs, a central quick-release device, and lugs for engaging the ends of said front lift webs and said leg straps with said quick-release device, adjusting means comprising straps attached to the rearward continuations of the lift webs below their respective spacers, and front buckles attached to the lift-web spacers, said straps running up through the lift-web spacers, thence downwards to engage the quick-release lugs of the front lift webs and upwards again to said front buckles, lower buckles connected to the quick-release lugs of the leg straps, said leg straps being looped through said lower buckles, and the free ends of all said straps projecting in front of the harness in the position of wear, each of the free ends of said straps being individually drawn through the respective buckle for tightening the harness.

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