Dec. 26, 1922. 1,440,151

L. L. IRVIN.
AVIATOR'S BODY HARNESS.
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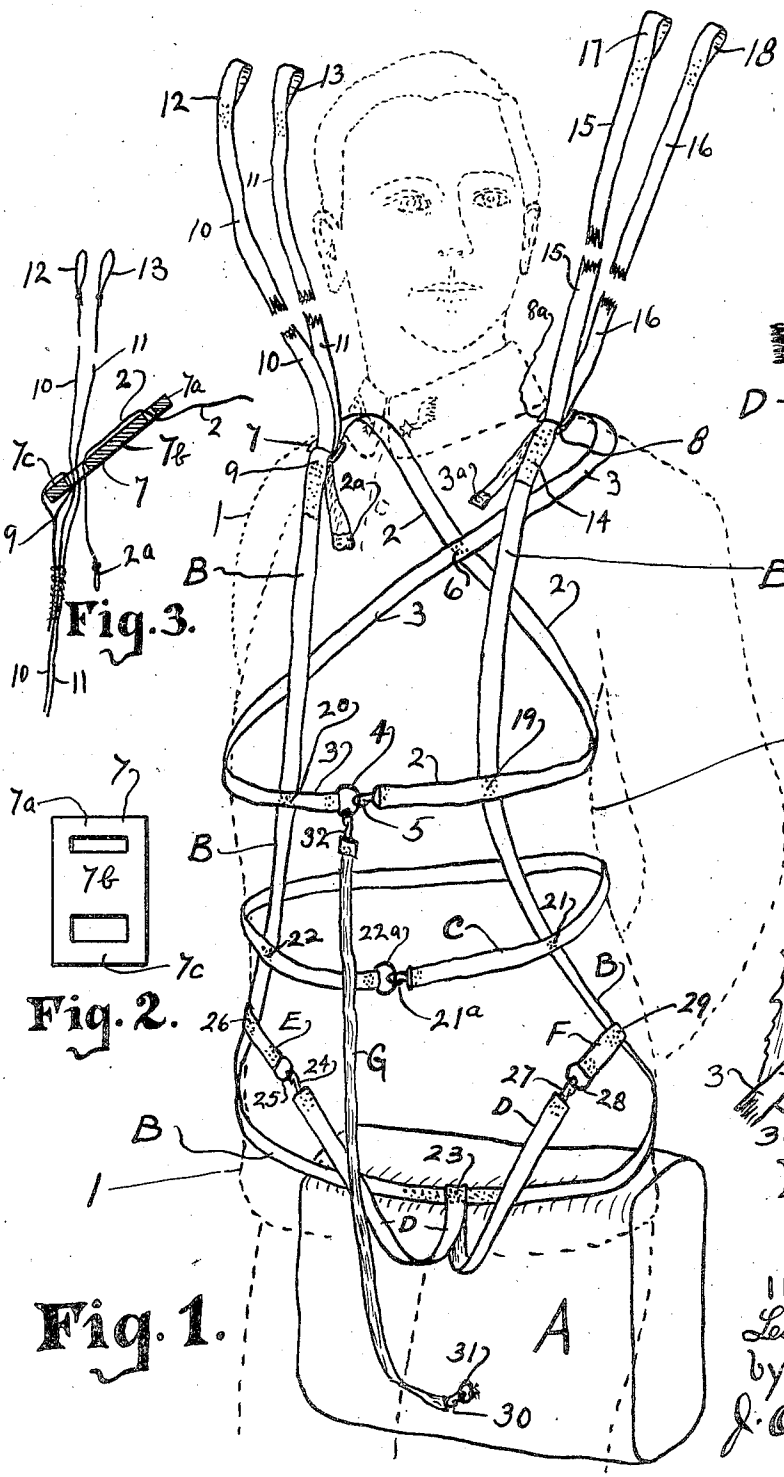



Fig. 1.




Fig. 2.




Fig. 3.

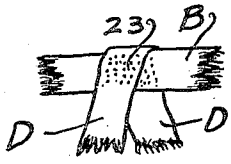



Fig. 5.

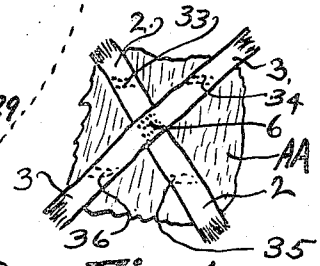



Fig. 4.

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# UNITED STATES PATENT OFFICE.

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## AVIATOR'S BODY HARNESS.

Application filed January 9, 1920. Serial No. 350,485.

*To all whom it may concern:*

Be it known that I, LESLIE L. IRVIN, a citizen of the United States, residing at Kenmore, in the county of Erie and State of New York, have invented certain new and useful Improvements in Aviators' Body Harnesses; and I do hereby declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form part of this specification.

Like figures of reference refer to like parts.

This invention relates to body harnesses for aviators.

One of the objects of this invention is to provide a harness, the parts of which are so arranged as to give ease to the aviator, both in the plane and when falling with a parachute.

Another object is so to support the aviator that he can descend in a sitting posture with the parachute if he so desires until he nears the earth, when he can easily straighten himself to land in a standing position.

A further object is to provide a harness which is adjustable and quickly attached and one which suspends the aviator at the shoulders.

Other objects will appear from an examination of the specification and of the drawings which form a part thereof and in which—

Figure 1 is a perspective view of a complete harness shown arranged on the dotted outline of an aviator.

Figure 2 is a plan view of a buckle used in connection with the harness.

Figure 3 is a longitudinal section of the buckle shown in Figure 2 illustrating the manner of arranging the straps therethrough.

Figure 4 shows a method not disclosed in Figure 1 of attaching a sack to a crossing of shoulder straps at the back of the aviator when desired.

Figure 5 shows the attachment of the hip bands to the seat band.

In the drawings, on the dotted form 1 of the aviator is shown one embodiment of my invention comprising two straps 2 and 3, joined in front below the breast by the ring 4 and snap hook 5 and passing back under the arms, crossing at 6 and there joined securely, after which they continue on over the shoulders. The strap 2 passes through a buckle 7 and is threaded up between bars $7^a$ and $7^b$ and down between bars $7^b$ and $7^c$ terminating at $2^a$. The strap 3 passes through a buckle 8 in a similar way and terminates at $3^a$. Looped on the bar $7^c$ of the buckle 7, is the strip 9, to which are fixed the two suspension straps 10 and 11, terminating in the respective loops 12 and 13. The straps 10 and 11 pass through the space in the buckle 7, between the bars $7^c$ and $7^b$. Looped on the bar $8^a$ of the buckle 8, is the strip 14, to which are fixed the two suspension straps 15 and 16, terminating in the respective loops 17 and 18.

The straps 10, 11, 15 and 16 are shown here in an extended position, as that taken when suspended from a parachute, but when not so used, they pass down the aviator's back into the sack A, and connect with the suspension cords of the parachute folded within the sack A.

The strap B may be a continuation of the straps 10 and 11, or it may be a separate strap connected with the strip 9. This strap B passes down the right breast over the right hip behind and across the body, thence up and forward across the left hip and over the left breast either terminating and fixed at the strip 14, or merging into the strip portions 15 and 16. The strap B is securely fixed at the points 19 and 20, where it crosses the respective straps 2 and 3.

Positioned at the waist line is the belt C, which is fixed to the strap B at the points 21 and 22, and has a snap $21^a$ hooked into a ring $22^a$. An adjusting buckle, not here shown, may be inserted in the belt C to adjust its length. The same means may be provided on other straps of the harness where desired, to adjust the length of the parts.

Fixing the strap B in position at the hips, is the strap D and connections E and F. The strap D passes around and is fixed centrally to the strap B at the point 23. The ends are brought up between the legs, one end terminating in the snap 24, which is hooked into the ring 25, on the short strip connection E, which is preferably wound four times about the strap B at 26, and there sewed.

The opposite end of the strap D terminates in a snap 27 which is hooked into the

ring 28, on the short strip connection F, which is preferably wound four times about the strap B at 29 and there sewed, as E is on B, at 26.

The sack A, which contains the parachute, connected with the straps 10, 11, 15 and 16, is attached to the strap B at and about the point 23, in position to act as a cushion seat for the aviator while in the plane. To keep the sack A against the legs, an elastic strap G is employed; which is attached by the snap 30 hooked into the ring 31, fixed on the sack A. The upper end of the strap G terminates in a snap 32 hooked upon the ring 4.

If desired, the sack can be secured to the straps 2 and 3 where they cross at 6. Figure 4 shows a fragment of the sack here designated as AA sewed at the points 33, 34, 35 and 36, as well as at 6 to the straps 2 and 3.

The harness is put on like a coat, and snapped together at 4 and $22^a$. The ends of the strap D and the elastic strap G are brought up between the legs and are snapped on at the respective rings 25, 28 and 4. The lower part of the sack when mounted as in Fig. 4, is fixed to the belt C.

Having described my invention, I claim,

1. A body harness for an aviator adapted for attachment to a parachute, comprising a vertically positioned member passing under the seat of the body of the aviator and having the ends brought up in front, suspension straps connecting said member with said parachute, shoulder straps connecting with the said member passing over and down from each shoulder and crossing at the back and being brought down and forward and around in front of the aviator, crossing and attached to vertical legs of said member, means for releasably attaching the lower ends of said shoulder straps, and other means for holding said member fixed to said body.

2. A body harness for an aviator adapted for attachment to a parachute, comprising a vertically positioned member passing under the seat of the body, and having the ends brought up in front, suspension straps connecting said member with said parachute, means for holding said member fixed to said body, a sack fixed to said member at the seat of said body, and an elastic member connecting said sack with said means at the front of said aviator for holding the same pressed against his legs.

3. A body harness for an aviator adapted for attachment to a parachute, comprising a vertically positioned member passing under the seat of the body and having the ends brought up in front, suspension straps connecting said member with said parachute, shoulder straps adjustably fixed at the upper ends of said member and positioned to pass over the shoulders and down the back crossing and extending downward and forward having their ends terminate in a snap and ring in front, a strap element connected with said member at the seat of said aviator, and adapted to have its ends brought up between the legs of said body and releasably attached to connections with said member at the hips of said aviator, a sack fixed to said member at the seat of said aviator, and an elastic band having connection with said sack and passing between the legs of said aviator, and up in front of his body and having releasable attachment with the ring connected with said shoulder straps.

4. A body harness for an aviator including members formed with shoulder engaging portions, and means for the connection of said members at the front of the aviator's body in combination with a member connected to said shoulder engaging portions at the front of the aviator's body and extending under the aviator's body, a parachute sack fixed to said last named member in position to serve as a cushion on which the aviator may sit when in the aeroplane and suspension straps connected to said harness and to which the parachute is attached.

LESLIE L. IRVIN.