

PUBLISHED
JUNE 8, 1943.
BY A. P. C.

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PARACHUTES
Filed Feb. 28, 1941

Serial No.
381,154
3 Sheets-Sheet 1

Fig. 1

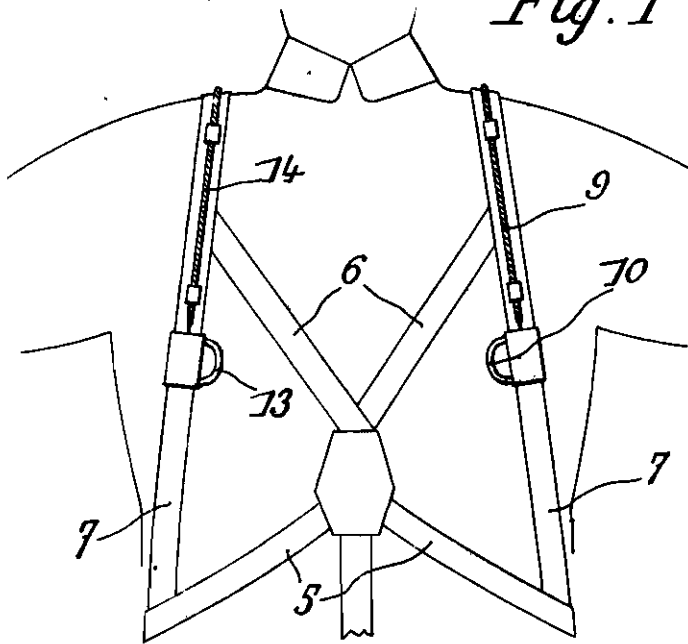
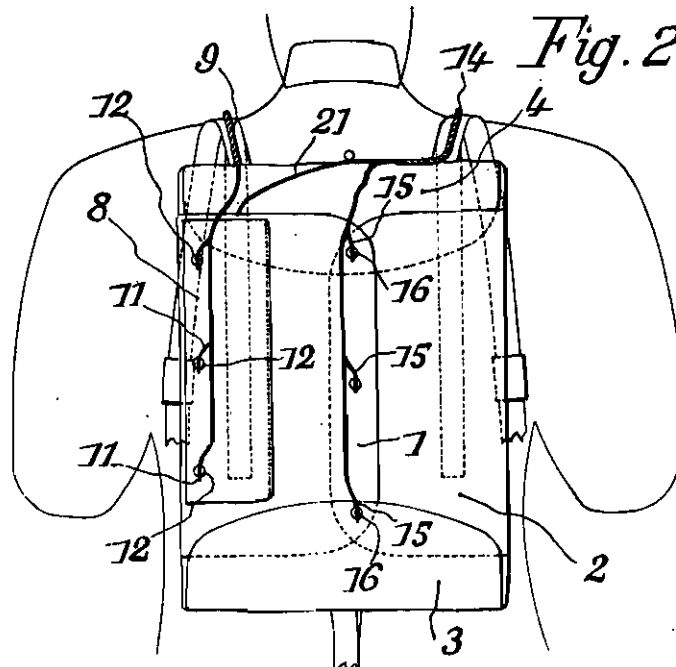


Fig. 2.



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Filed Feb. 28, 1941

Serial No.

391,154

3 Sheets-Sheet 2

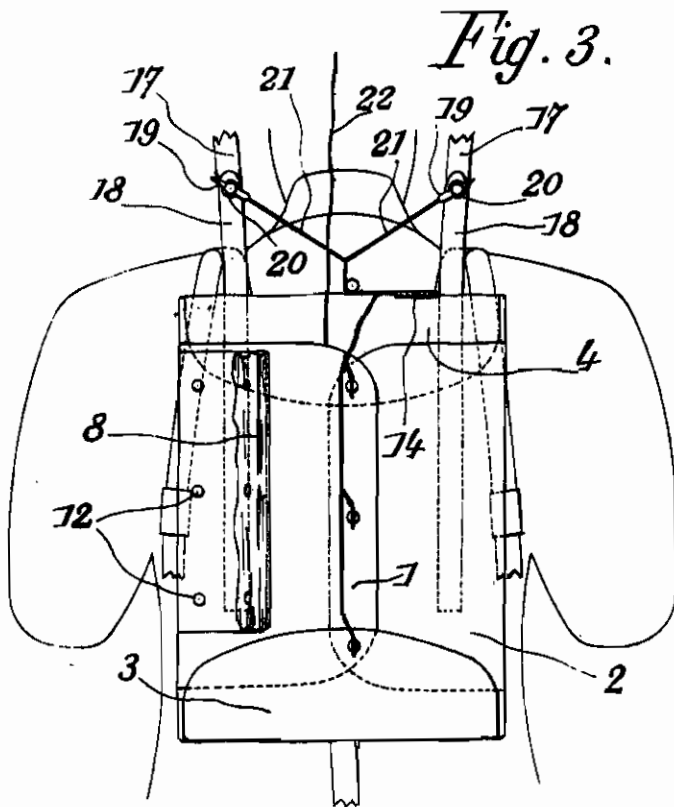


Fig. 4.

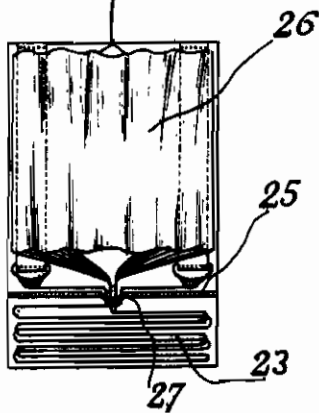
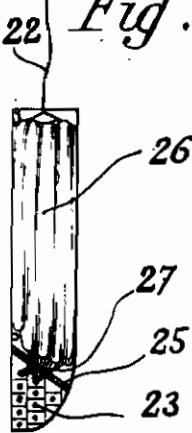


Fig. 5.



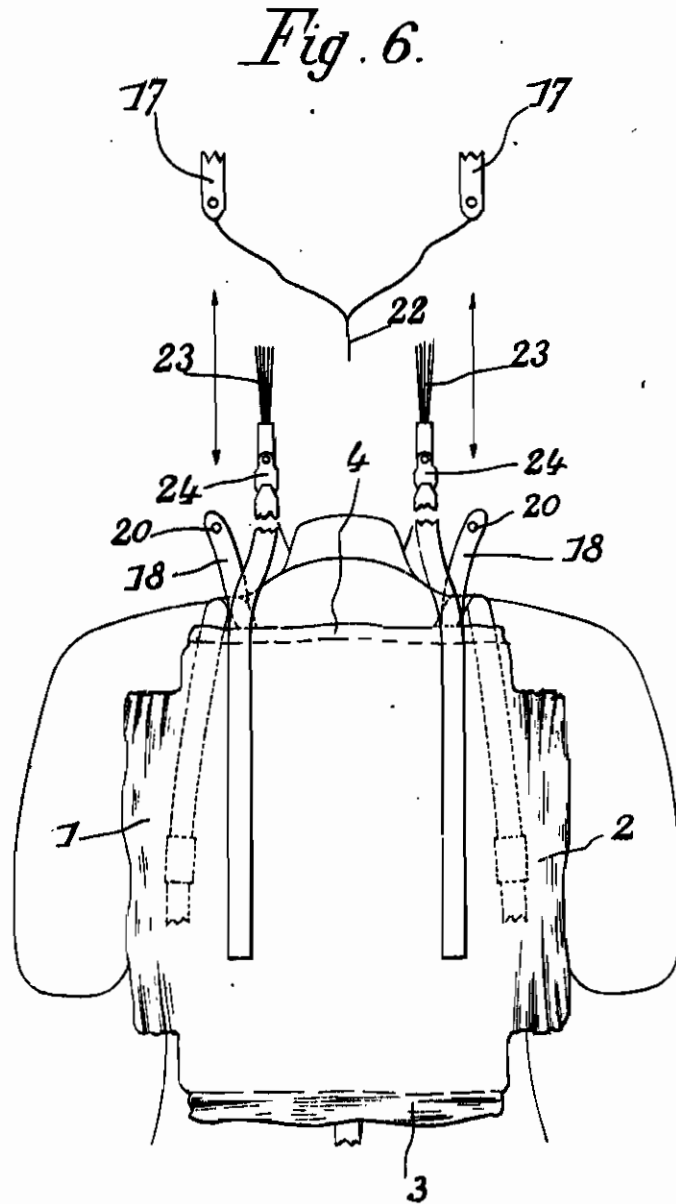
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3 Sheets-Sheet 3



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ALIEN PROPERTY CUSTODIAN

PARACHUTES

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The present invention relates to parachutes.

The object of the invention is to provide an apparatus of this type, which is better adapted to meet the requirements of practice, than the parachutes made up to the present time, and especially to increase the comfort of the parachutist when he is coming down and, therefore, his safety.

The essential features of the invention consist in the provision of means for exerting on the parachutist, while the parachute is not still open, a stabilizing action which keeps said parachutist in a given position.

Another feature of the invention concerns the parachutes including a bag with two compartments, containing respectively the parachute proper and the ropes through which the parachutist is suspended to said parachute. This feature consists in establishing, between these compartments, a communication through at least one orifice, for the passage of said ropes, said orifice being adapted to exert on said ropes a breaking action when the parachute is opening.

Other features of the present invention will result from the following detailed description of specific embodiments thereof.

Preferred embodiments of the present invention will be hereinafter described, with reference to the accompanying drawings, given merely by way of example and in which:

Fig. 1 is a front view of a parachutist's equipment, made according to an embodiment of the invention.

Fig. 2 is a rear view of the same equipment.

Fig. 3 is a view analogous to Fig. 2, showing the stabilizing parachute after it has been given out from its bag.

Fig. 4 is a diagrammatic plan view of a parachute bag (supposed to be opened) to be used in connection with the device of Figs. 1 to 3.

Fig. 5 is a sectional view of the same bag made according to the invention.

Fig. 6 is a view analogous to Fig. 2, showing the parts of the opening of the main parachute.

The invention is applicable to parachutes of all kinds, adapted to be worn on the back or the chest, or otherwise.

The whole of the parachute system is made of any suitable construction, the parachute proper and the suspension ropes being contained in a bag (for instance including four flaps designated by reference numerals 1, 2, 3 and 4), said bag being itself supported by an equipment or

harness, the different elements of which are designated by reference numerals 5, 6 and 7.

According to the invention, I further provide means for exerting on the parachutist, before the opening of the parachute proper, a stabilizing action which tends to keep him in a given position.

As a matter of fact, it becomes more and more usual to let the parachutist drop freely for a certain time after he has left the airplane, the parachute being opened only when the parachutist is nearing the ground. Now, in the course of its free drop, the body of the parachutist is wholly unstable and this may produce giddiness, so that the parachutist is unable to operate the parachute opening device when this becomes necessary.

The object of the invention is to obviate this serious drawback.

The stabilizing means above mentioned may be of many different kinds.

For instance, according to an advantageous arrangement, I make use of a small auxiliary parachute, adapted to open as soon as the parachutist leaves the airplane, either automatically, or through a manual action, this small parachute exerting for instance an action on the belt or the shoulders of the parachutist, so as to keep him in a vertical position or in any other position, provided that it is stable.

For instance, according to the embodiment illustrated by the drawings, I combine with the main bag 1, 2, 3, 4, a small bag or auxiliary pocket 8, advantageously carried by one of the flaps 1, this pocket being adapted to contain the auxiliary parachute, the surface of which has an area of one or two square meters, or even more.

Concerning bands, the means for producing the opening of the auxiliary parachute, and supposing for instance that they are of the manual control type, they are advantageously constituted by a system including a cable adapted to slide in a flexible shift 9 and operable through a hand grip 10. This system causes for instance spindles or pins 11 to move out from the corresponding logs 12, said pins and logs constituting the closing means for the pocket 8.

The above described means thus enable the parachutist to open the stabilizing parachute (which is mounted in this pocket in a known manner), as he leaves the airplane.

When the parachutist wishes to open the main parachute, he has merely to act on the usual control, which, in the drawings, is supposed to be constituted by a second hand grip 13, a cable

in a flexible shift 14 and spindles 15 coacting with logs 16.

Preferably, I further provide means for detaching the stabilizing or auxiliary parachute from the system, chiefly in order to avoid the risk of said auxiliary parachute becoming entangled with the main parachute. These last mentioned means are for instance combined with the means, designated by reference numbers 13, 14, 15 and 16, for controlling the opening of the main parachute.

On the drawings, I have shown an embodiment in which the suspension ropes of the auxiliary parachute (which are not visible on the drawings) are all secured to straps 17, which are themselves connected to other straps 18 belonging to the parachute harness. The connection between straps 17 and 18 is adapted to permit their immediate separation when so desired. For instance, straps 17 are assembled with straps 18 through spindles 19 engaged in holes provided in projections 20, carried by straps 17 and engaging in corresponding apertures provided in straps 18.

This arrangement is visible in Figure 3 of the drawings. In order to release and detach the auxiliary parachute, it suffices to operate the released device above described through wires 21, connected with wire 14, so that the fact of pulling handle 13 permits of simultaneously or successively detaching the stabilizing or auxiliary parachute and opening the main parachute.

According to another feature of the invention, it may be advantageous to make use of the first parachute for producing the extraction of the second from its bag or at least for facilitating this extraction. For this purpose, I provide for instance a wire 22 for connecting the stabilizing parachute with the centre of the main parachute.

In Fig. 6, I have diagrammatically shown the bag in its open position. This corresponds to the main parachute (not visible on the drawings) being unfolded, its supporting ropes 23 being divided into two groups, respectively connected to elements 23 of the harness. In this figure, the

stabilizing or auxiliary parachute (only portions 17 of which are visible) being shown as detached from the main parachute system.

Of course, the operations relating first to the unfolding of the stabilizing parachute, then to the detaching thereof and finally to the unfolding of the main parachute, might be obtained through a single control system, for instance a single handle, the movements of which would be divided into several successive steps.

Finally, in Figs. 3 and 5, I have shown a bag made according to another feature of the invention.

According to this arrangement, this bag is divided by a wall 25 into at least two compartments or chambers, adapted respectively to contain, on the one hand supporting ropes 23, and on the other hand the parachute proper 26. The supporting ropes extend from one of said compartments to the other, through at least one orifice or aperture 27, which is capable of exerting a breaking action when the parachute is opening.

Whatever be the particular embodiment which is chosen, I obtain a system, the operation of which is sufficiently clear from the preceding explanations for making it unnecessary to enter into further explanations.

This system has, over systems of the same kind as used at the present time, many advantages among which the following may be cited as particularly interesting:

The stability of the parachutist as he is dropping freely before opening the main parachute, is perfectly ensured;

Furthermore, the operation of the whole system is particularly reliable.

In a general manner, while I have, in the above description, disclosed what I deem to be preferred embodiments of the present invention, it should be well understood that I do not wish to be limited thereto, as there might be changes made in the arrangement, disposition and form of the parts.

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