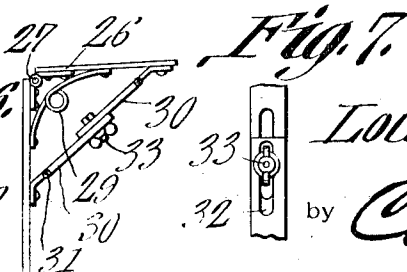
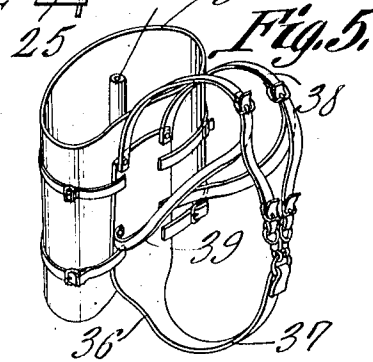
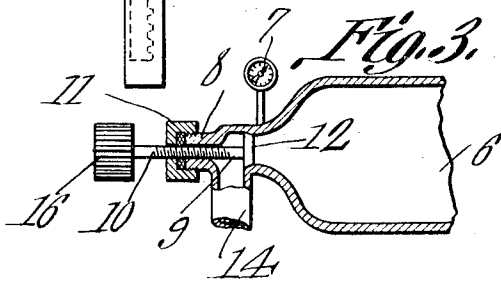
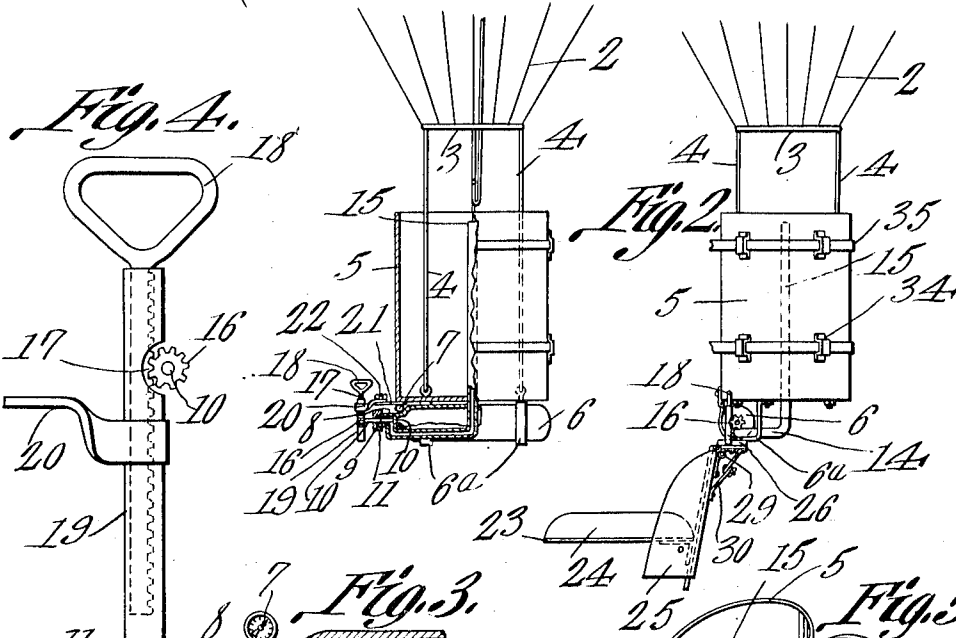
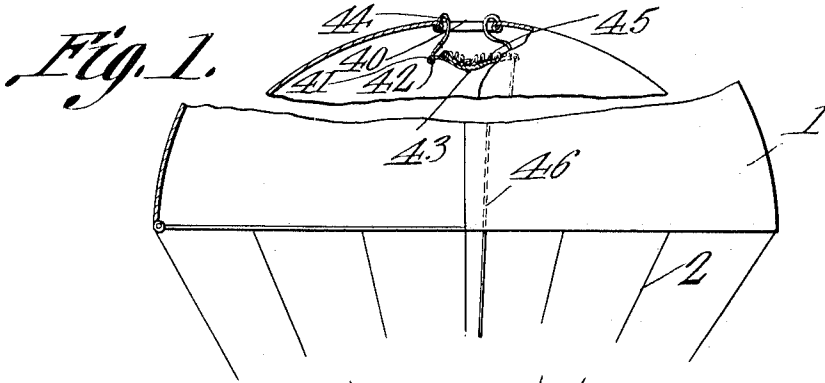


L. J. ROUCHLEAU.
PARACHUTE.
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1,040,241.

Patented Oct. 1, 1912.



Louis J. Rouchleau
Inventor

by *C. A. Snow & Co.*
Attorneys

Witnesses

J. P. Davis
L. H. W. Shaw

UNITED STATES PATENT OFFICE.

LOUIS J. ROUCHLEAU, OF ARLINGTON, CALIFORNIA.

PARACHUTE.

1,040,241.

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To all whom it may concern:

Be it known that I, LOUIS J. ROUCHLEAU, a citizen of the United States, residing at Arlington, in the county of Riverside and State of California, have invented a new and useful Parachute, of which the following is a specification.

The device forming the subject-matter of the present invention, is a parachute, adapted to be housed in a receptacle which is carried upon the back of the aviator, fluid pressure means being provided for expanding the parachute, and for forcing the same out of the receptacle, upon occasion, which fluid pressure means is under the control of the aviator.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings,—Figure 1 shows the invention in side elevation, parts being broken away; Fig. 2 is a fragmental side elevation, the view point being 90° remote from the view point of Fig. 1, and the seat being shown as an added detail; Fig. 3 is a fragmental longitudinal section of the air tank, the view showing the valve mechanism whereby the outflow of the contents of the air tank is controlled; Fig. 4 is a side elevation of the manually operable member whereby the valve of the air tank is controlled; Fig. 5 is a perspective of the receptacle in which the parachute is housed, the attaching harness being shown; Fig. 6 is a fragmental elevation of the seat; and Fig. 7 is a fragmental plan of one of the seat-braces.

The parachute includes a body 1 of the usual form, connected by means of flexible elements 2 with a ring 3. Depending from the ring 3 and entering the open upper end of a receptacle 5, are flexible elements 4, which are secured to the bottom of the receptacle, inside of the receptacle. A fluid pressure supply tank 6 is located outside of the receptacle 5, and is held upon the bottom of the receptacle removably, by means of attaching clamps 6*, the tank 6 being provided with a pressure gage 7. The neck 8

of the tank 6 is controlled by the manually operable valve, denoted generally by the numeral 9, the valve 9 including a stem 10, passing through a packing gland 11 secured to the outer end of the neck 8 of the tank, the stem 10 being threaded into the neck 8. Secured to the inner end of the stem 10 is a head 12, adapted to seat in the neck 8, and to cut off the fluid pressure supply from the tank 6 to a pipe 14 which enters the bottom of the receptacle 5 and extends upwardly, within the receptacle to form a nozzle 15, the upper end of the nozzle 15 being open.

A means is provided for manually operating the valve 9, this means including a pinion 16, secured to the outer end of the valve stem 10, and a rack 17, adapted to mesh into the pinion 16, and provided at one end with a grip 18. The rack 17 is mounted to slide in a guide 19, provided with a lateral bracket 20, adjustably held upon an arm 21 projecting from the receptacle 5, a set screw 22 preferably being employed for connecting the arm 21 and the bracket 20.

The numeral 23 serves to indicate generally, a seat which is a part of the aeroplane or other flying machine in connection with which the device herein disclosed is adapted to be used. The seat 23 may be of any desired construction, but in the present instance it includes a platform 24 and an adjustable back 25, the back 25, at its upper end, being united with a horizontally disposed supporting member 26, through the instrumentality of a hinge 27. The supporting member 26 is maintained in an approximately horizontal position, and substantially at right angles to the back 25, through the instrumentality of a spring 29, of any desired form, the spring, at one end, being connected with the supporting member 26, the other end of the spring being connected to the back 25.

The numerals 30 serve to indicate a pair of braces, connected at their remote ends to the supporting member 26 and to the back 25, respectively, a hinge 31 being interposed in each of the braces 30, the adjacent ends of the braces being overlapped, and being provided with mating slots, 32, a set screw 33, passing through the slots 32, serving to control the action of the braces 30 with respect to each other.

The receptacle 5 is provided with eyes 34, through which are passed straps 35, sup-

porting a harness denoted generally by the numeral 36. The harness 36 may be of any form. In the present instance it includes a crotch strap 37, detachably united with shoulder straps 38, the shoulder straps 38 being connected with the upper rear portion of the crotch strap 37, by means of side straps 39.

In the top of the body 1 of the parachute there is an opening 40, controlled by a valve 41, located within the parachute. The valve 41 preferably includes a ring 42, carrying a flexible, sagging body 43, of leather or the like, the valve 41 being connected with the body 1 of the parachute through the instrumentality of flexible members 44. Attached to the valve 41, preferably at a central point in the valve, is a flexible, contractile cover 45. The valve 41 is controlled by means of a valve cord 46 which extends downwardly, and ordinarily is secured at its lower end to one of the flexible elements 4.

The operation of the device is as follows;—The body 1 of the parachute, which is fashioned from light and pliable material, such as balloon silk, is collapsed and is housed within the receptacle 5, the covering 45 being placed over the upper, open end of the receptacle 5, the cover 45 preferably being retractile, so as to grip the receptacle 5 automatically, in order that the cover may be held in place upon the receptacle. The air tank 6 is charged to the desired pressure, and the receptacle 5, containing the parachute, is mounted upon the back of the aviator, by means of the harness 36. When the aviator takes his place upon the platform 24 of the seat of the flying machine, the weight of the receptacle 5 and its contents will be supported by the member 26. Therefore, when the device is not in use, the aviator will not be encumbered with the weight of the parachute, it being noted that the spring 29, supporting the member 26, will afford a yieldable means for upholding the receptacle 5. The braces 30 will have longitudinal movement upon each other, due to the screw and slot connection 33—32, thereby permitting the supporting member 26 to have the necessary movement. However, should it be desired to hold the member 26 rigidly, this result may be accomplished by tightening the set screw 33.

Should dangerous conditions arise, upon the flying machine, necessitating the use of the parachute, the aviator grasps the grip

18 of the rack 17, and manipulates the rack, the rack meshing into the pinion 16 and rotating the stem 10, whereupon the stem will be moved longitudinally, causing the valve head 12 to be unseated, whereupon the air under pressure within the tank 6 will pass through the pipes 14 and 15, and be discharged within the body 1 of the parachute, the body of the parachute being projected out of the inclosing case, into expanded condition, the cover 45 being carried off the receptacle 5, and the valve 41 moving, under the impulse of the discharged air, into closed relation with respect to the opening 40.

From the foregoing it will be seen that by manipulating the handle or grip 18, the aviator may, in an instant, expand the parachute, and dispose the same in operative condition.

Having thus described the invention, what is claimed is:—

1. In a device of the class described, a receptacle; a parachute connected with the receptacle and adapted to be housed within the receptacle; a fluid-pressure tank connected with the receptacle and discharging unrestrainedly against the receptacle and within the entire under surface of the parachute, when the parachute is within the receptacle; means for securing the receptacle against the body of a person; and mechanism under the control of the person employing the device, for controlling the discharge of the fluid pressure which is stored within the tank.

2. In a device of the class described, a parachute having an opening in its top; a valve controlling the opening; a receptacle within which the parachute is adapted to be housed, when the parachute is in collapsed condition, the parachute being connected with the receptacle; a cover for the receptacle, connected with the valve, and fluid-pressure means disposed within the receptacle, discharging and within the parachute, when the parachute is within the receptacle, to close the valve, to project the parachute from the receptacle, and to remove the cover from the receptacle.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

LOUIS J. ROUCHLEAU.

Witnesses:

E. C. SEARES,
ARTHUR BERGERON.