

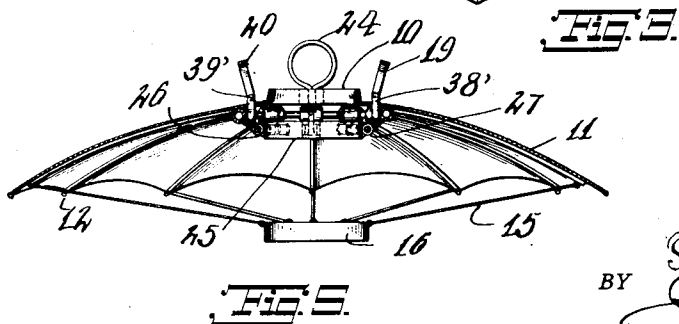
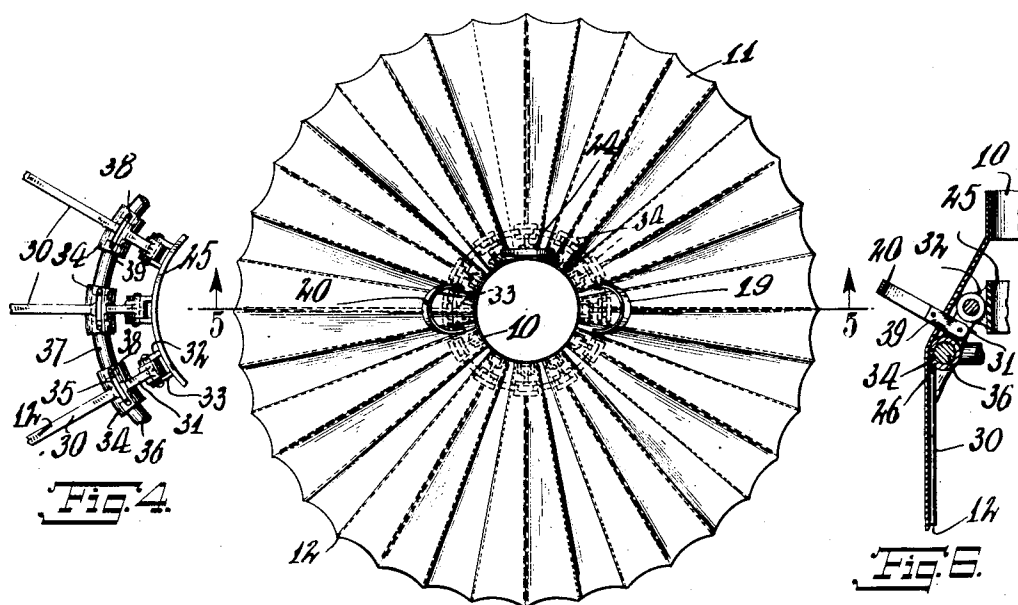
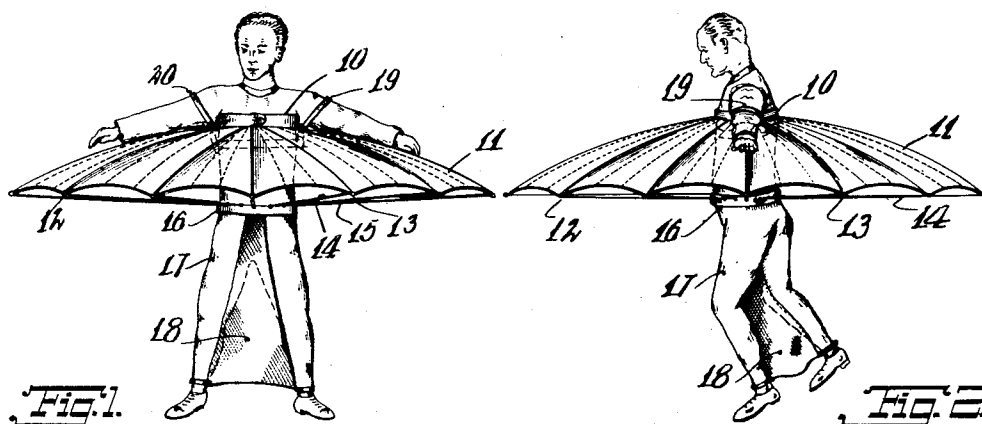
Aug. 23, 1927.

1,640,110

P. BUNEVAC

PARACHUTE SUIT

Filed March 5, 1927



INVENTOR  
Paul Bunovac  
BY *John H. Holcomb*  
ATTORNEY

## UNITED STATES PATENT OFFICE.

PAUL BUNEVAC, OF ST. LOUIS, MISSOURI.

## PARACHUTE SUIT.

Application filed March 5, 1927. Serial No. 172,966.

This invention relates to a parachute which is adaptable either for life saving, or for exhibition purposes, and its object is to provide a device which will afford adequate support for a person in the air to enable him to descend slowly and safely to the ground.

A further object is a positive means to ensure the opening of the apparatus at the proper time and under the control of the user.

Another feature is a means for guiding the course of the descending person and varying same at will.

These and other objects and advantages of the invention will be fully described and pointed out in the following specification and illustrated in the accompanying drawings, in which:

Fig. 1 shows a front view of the figure of a man with the device secured to his person and opened as in full operation.

Fig. 2 shows a side view of same.

Fig. 3 shows a top view of the device somewhat enlarged.

Fig. 4 shows an enlarged fragmentary top view of the rib lifting elements.

Fig. 5 shows a section on the line 5—5 of Figure 3.

Fig. 6 shows a fragmentary vertical section of the elements shown in Figure 4, but taken at the point of attachment of one of the arm loops.

Referring first to Figure 1 of the drawings, the apparatus comprises a supporting girdle, or frame 10 from which extends outward circumferentially, a covering 11 which may be of fabric, or of any suitable material. This covering is secured at its outer edges to ribs as seen at 12, 13 etc., which ribs are supported at their inner ends from the frame structure. Flexible tie members as seen at 14, 15 etc. limit the outward spread of the said ribs. These tie members are secured to a secondary girdle 16.

A garment of proper form and material 17 is secured to the supporting and the secondary girdles as shown. This garment is provided with a web member 18 which is secured to the legs thereof in the manner illustrated.

Loops 19 and 20 are adapted to encircle the arms of the wearer and afford a means whereby he may open, or close the cover element at will.

A top plan view of the apparatus is shown in Figure 3 and a sectional view in Figure

5. In these views a ring 24 is shown which may be used to suspend the device from a balloon, airship, or the like.

A rib supporting band is shown at 25 in Figure 5 and the ribs are pivotally secured thereto as seen at 26, 27 etc. The further description of the ribs may be best understood on reference to Figures 4 and 5 of the drawings. The construction being as follows. Referring first to Figure 4, the rib 12 is seen to have an arm 30 which terminates in the butt end 31 which is pivoted between the lugs 32 and 33. At a point a short distance from the point of attachment, a curved sleeve 34 is brazed, or otherwise suitably secured to the rib. This sleeve is provided with a slot as shown at 35. Inserted within the sleeve at each side are curved ring segments as seen at 36 and 37. These being retained by the pins 38 and 39. This form of construction is employed for the complete circumference of the apparatus at this point.

On opposite sides of the device the arm loops 19 and 20 are secured to lifting bars as seen at 38' and 39' in Figure 5, which are attached to rib members as best seen in Figure 6. These bars pass through suitable slits in the covering material.

The apparatus is secured to the wearer by means of the garment and the frame girdles and is folded in closed position in the manner of an umbrella. It may be opened at will by raising the arms as illustrated. When this is done, the arm loops act through the lifting bars to raise the ribs to which they are attached. This lifting force is communicated to the remaining ribs through the ring segments and the sleeve members, the segments sliding in the sleeves to compensate for the increased spread in the new position.

The web member 18 is used by the person descending to guide, or steer himself in the course desired. The spreading of the legs causes it to react to the air pressure in the manner of a rudder and the bending of the legs into various positions enables the user to direct his course.

While I have shown and described the preferred embodiment of the invention herewith, I do not wish to be held rigidly to the exact details of construction as illustrated, but claim the right to such minor modifications as may come within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is as follows:

1. In a parachute of the class described,  
5 central supporting members adapted to be secured about the body of an individual, a collapsible, air resisting element secured in position concentric to the said supporting members and itself supported by rib mem-  
10 bers thereto attached, and means to limit the spread of the said collapsible element and to hold it, when open, in a downwardly concave position with respect to the said supporting members, and a web element secured adja-  
15 cent to the said supporting members and adapted to be attached at its edges to the legs of the aforesaid individual and to be there retained in position between the same.
2. In a parachute of the class described,  
20 central supporting elements comprising an upper and a lower girdle and a rib supporting band, and a garment attached to the said girdles, and the whole adapted to be secured about the person of an individual,  
25 radially disposed rib members pivotally secured to the said supporting band and a flexible air resisting cover element spread thereon and secured to the said upper girdle and the said rib members and having tie  
30 members connecting the same to the said lower girdle, arm loops secured to the supporting structure of the cover element, and a web member attached between the legs of the aforesaid garment, substantially as  
35 shown and described.

3. In a parachute of the class described, a central supporting structure comprising upper and lower girdle members and a rib supporting band adjacent to the said upper

girdle and the whole adapted to be secured 40  
about the body of a person, and a garment secured to the said structure and having leg members depending therefrom and a web element secured between the said leg mem- 45  
bers, a collapsible, air resisting covering element secured centrally to the said upper girdle and resting upon and secured to rib members which are pivotally attached to the said supporting band, the said rib members being each provided with curved sleeve ele- 50  
ments which are integral therewith at points near to the base ends thereof, ring segments supported within the said curved sleeves and connecting them together, and arm loops lo- 55  
cated at opposite sides of the central structure and connected to the rib members adjacent thereto, and tie members secured to the said collapsible covering element and to the said lower girdle, substantially as shown and described. 60

4. In a parachute of the class described, a central supporting structure adapted to be secured about the body of an individual, a collapsible, air resisting cover element se- 65  
cured thereto and supported on suitable rib members, an extensible element connecting the said rib members, and arm loops secured to rib members adjacent thereto at opposite sides of the supporting structure, and tie members connecting the outer edges of the 70  
said cover element to the central structure and adapted to limit the spread of the said cover element when open and to retain it in an upwardly concave position.

In testimony whereof I have affixed my 75  
signature.

PAUL BUNEVAC.