

1,121,616.

Patented Dec. 22, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

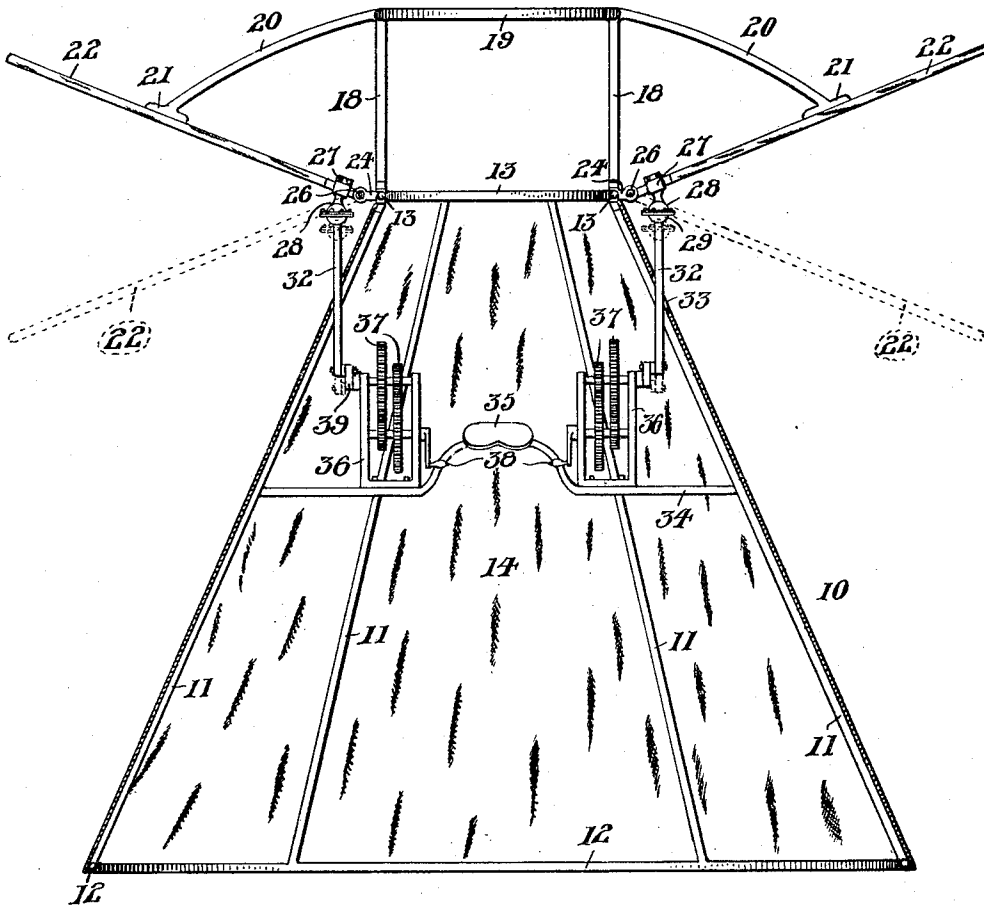
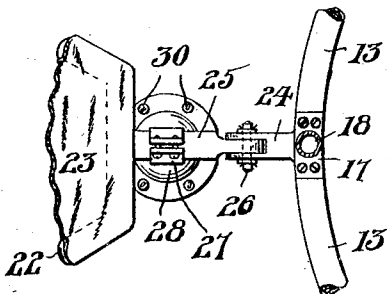


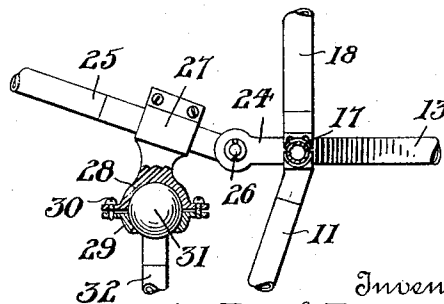
Fig. 4.



Witnesses
H. B. Kovalik

McLowry

Fig. 5.



Inventor
Paul Drocac

By

A. M. Wilson
Attorney

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2 SHEETS--SHEET 2.

Fig. 3.

11, 31, 32, 34, 35, 36, 38

Patented

334

A. M. Wilson
Attorney

UNITED STATES PATENT OFFICE.

PAUL DROCAR, OF TARRS, PENNSYLVANIA.

PARACHUTE.

1,121,616.

Specification of Letters Patent.

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Application filed June 19, 1914. Serial No. 846,110.

To all whom it may concern:

Be it known that I, PAUL DROCAR, a subject of the Emperor of Austria, residing at Tarrs, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Parachutes, of which the following is a specification.

This invention relates to certain new and useful improvements in parachutes.

An object of the invention is to provide a parachute with lateral wings operated by mechanism supported on the parachute frame and controlled from a seat within the frame so that the wings may be reciprocated to either hold the parachute in an elevated position or decrease the velocity of descent.

A further object of the invention is to provide a parachute comprising a conically-shaped frame having a flexible covering, with a neck yoke at the upper end of the frame, with a cross-bar supported on the frame and carrying mechanism having a connection with the wings.

With the above general and other objects in view that will appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts to be hereinafter more fully described and then claimed.

In the accompanying drawings which show the preferred embodiment of the present invention and to which reference is had herein by like characters designating corresponding parts throughout the several views: Figure 1 is a vertical sectional view of my parachute. Fig. 2 is a top plan view of the same. Fig. 3 is a horizontal sectional view. Fig. 4 is a top plan view of a portion of the wing and frame showing the wing hinge, and, Fig. 5 is a side elevational view of Fig. 4, showing in section the hinged joint of the operating member for the wings.

Briefly described, the invention comprises a conically-shaped frame provided with a flexible covering and having a neck yoke at the upper end thereof, the upper end of the frame being further provided with a pair of upright members carrying a horizontally-disposed arm with downwardly-curved ends to provide stops for wings pivoted to the upper end of the main frame. A cross-bar is carried by the frame and arranged interiorly of the covering and supports mechanism having a pitman connection with the wings, such mechanism being operated from

a seat carried by the cross-bar for controlling the movement of the said wings.

Referring more in detail to the accompanying drawings, the reference numeral 10 designates in general, the parachute frame comprising in detail the inwardly-inclined vertical bars or rods 11 connected at their lower ends by a ring 12, preferably formed integral therewith and at their upper ends by a ring 13. A covering 14 of canvas or other suitable material incloses the frame 11, being entirely open at the bottom as indicated in Fig. 1 and carrying at the upper end of the frame at the ring 13, a neck yoke 15 embodying a draw string 16 to securely fasten the same about the neck of the user. The ring 13 has connected thereto by the fastening members 17 shown in Fig. 4, upright arms 18 provided at their upper ends with a horizontal connecting arm 19, the connecting arm 19 extending laterally of the uprights 18 as at 20 and provided on their ends with stops 21. The present invention also employs a pair of oppositely-disposed wings in connection with the parachute frame 10, such wings being preferably of triangular shape as shown in Fig. 2 and comprising the frame 22 provided with a flexible covering 23 similar to the cover 14 for the frame 10. The wings 22 are pivotally connected to lateral projections 24 carried by the ring 13 and better illustrated in Figs. 4 and 5. Each wing 22 carries an inwardly directed arm 25 having the end thereof reduced to be received in the bifurcated outer end of the arm 24 and retained in such position by the pivot pin 26. The pivotal connection 26 will permit a vertical reciprocal movement of the wings 22.

Connected to the arms 25 by clamping members 27 is the upper section 28 of a ball socket joint, the lower section 29 being secured thereto by the fastening bolts 30 and retaining in such position the ball 31 carried by the upper end of the pitmen 32. These pitmen 32 are arranged to have vertical longitudinal movement and extend through openings 33 provided in the cover 14 and connected at their lower ends to the mechanism for reciprocating the wings.

A cross-bar 34 is provided on the frame 10 and has the central portion thereof upwardly curved and provided with an operator's seat 35, there being provided at each side of the operator's seat a U-shaped bracket 36. Journaled on shafts in the

brackets 36 are the meshing gears 37 operated by the crank handles 38 disposed inwardly of the brackets to a position adjacent the operator's seat 35. The upper shafts 5 supporting the meshing gears extend outwardly of the frames 36 and have eccentric connections 39 with the lower ends of the pitmen 32.

In the operation of the device, in descending movement, the wings 22 will be normally held upward into engagement with the stops 21 carried by the downwardly-inclined horizontal arms 20 with the neck yoke 15 securely fastened about the neck of the user 15 so that the air entering the open lower end of the frame 10 cannot escape from the upper end thereof and in use, the operator is on the seat 35. When it is desired to decrease the velocity of descent of the parachute, the meshing gears 37 are operated through the medium of the crank handles 38 by the pitman and eccentric connections 32 and 39 with the ball connection 31 to the wings 22; the said wings may be moved 25 in a vertically reciprocatory movement by the mechanism herein stated.

While I have shown and described the preferred embodiment of my invention, I do not wish to confine myself to the exact 30 details of construction shown, as various forms, modifications and arrangement of the parts as shown may be had without departing from the spirit and scope of the invention as claimed.

35 What I claim as new is:—

1. In a parachute, a conically-shaped frame, a covering therefor, a neck yoke carried by the upper end of said frame, vertical arms connected to the upper end of the 40 frame, a horizontal arm connecting the upper ends of the vertical arms and provided with lateral extensions, a wing pivoted to each side of the frame and adapted

to engage the lateral extensions in the limit of their upward movement, and means 45 within said frame connected to said wings to cause the same to be reciprocated.

2. In a parachute, a frame, a flexible covering for the frame, wings pivoted to said frame, meshing gears supported on said 50 frame, pitman connections between the meshing gears and the wings, the connection between the pitmen and wings consisting of a ball and socket joint, and means for operating said gears. 55

3. In a device of the class described, a conically shaped frame, a flexible covering therefor, a neck yoke carried by the upper end of the frame, lateral wings pivoted to the upper end of the frame, means carried 60 by the frame to limit the upward movement of the wings, and means disposed within the frame and engaging said wings to cause the same to be reciprocated.

4. In a parachute, a frame, a cover for 65 said frame, a cross-bar carried by the frame, wings pivoted to the frame, a pair of bracket arms carried by the cross-bar, meshing gears mounted in each bracket, means for operating the gears, and means connect- 70 ing the gears to the wings to cause the wings to be reciprocated.

5. In a parachute, a frame, a flexible cover for the frame having a head opening at the upper end thereof, wings pivoted to 75 the frame exteriorly of the cover, pitmen having ball connections with the wings, and operating mechanism for the wings connected to the other ends of the pitmen.

In testimony whereof I affix my signature 80 in presence of two witnesses.

PAUL DROCAR.

Witnesses:

TOM HOHOL,
JOHN DROCAR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."