W. P. HARRIS.

AIRSHIP.

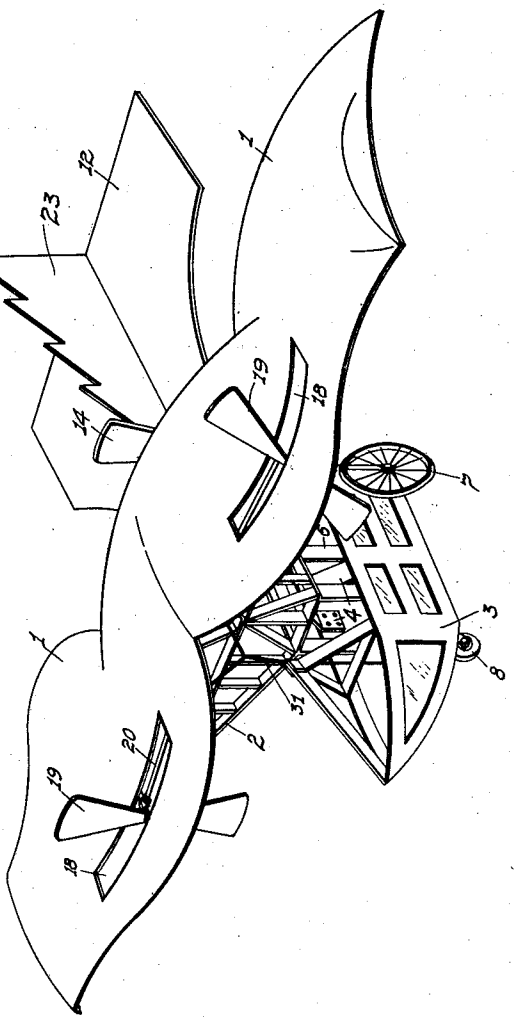
APPLICATION FILED DEC. 19, 1911.

1,047,937.

Patented Dec. 24, 1912.

3 SHEETS—SHEET 1.

Fig. 1



Witnesses

Frank H. Carter

J. B. Webster

Inventor

W. P. Harris

By Berry & Webster

Attorney

W. P. HARRIS.

AIRSHIP.

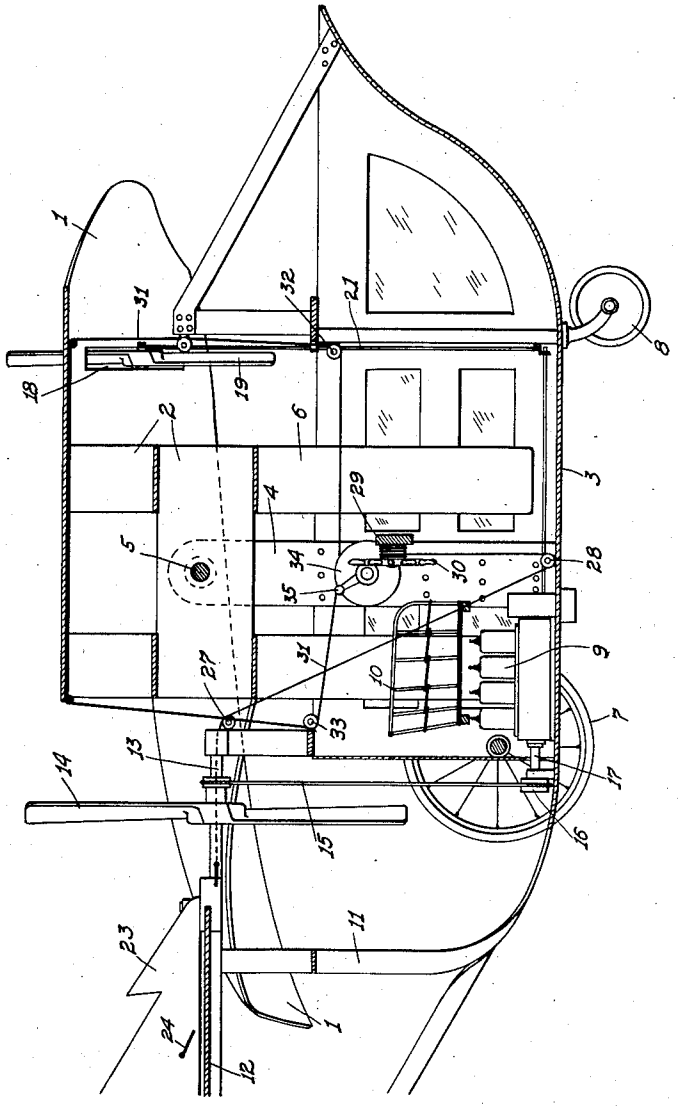
APPLICATION FILED DEC. 19, 1911.

1,047,937.

Patented Dec. 24, 1912.

3 SHEETS—SHEET 2.

Fig. 2



Witnesses

Frank H. Carter

J. Blumstein

Inventor

W. P. Harris

By Percy S. Webster

Attorney

W. P. HARRIS.

AIRSHIP.

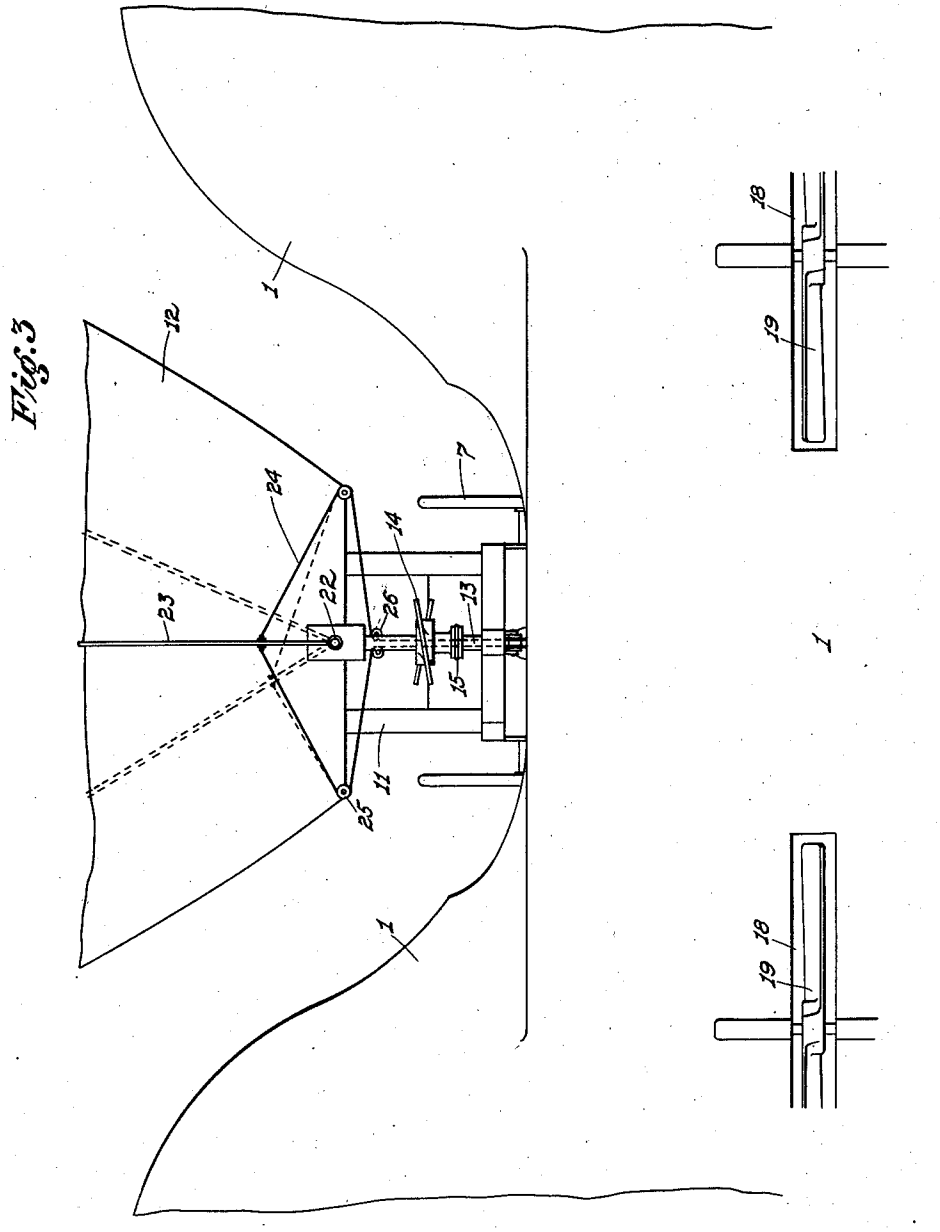
APPLICATION FILED DEC. 19, 1911.

1,047,937.

Patented Dec. 24, 1912.

3 SHEETS—SHEET 3.

Fig. 3



Witnesses

Frank H. Carley

J. B. Webster

Inventor

W. P. Harris

By Berry S. Webster

Attorney

UNITED STATES PATENT OFFICE.

WILLIAM P. HARRIS, OF STOCKTON, CALIFORNIA.

AIRSHIP.

1,047,937. Specification of Letters Patent. Patented Dec. 24, 1912.

Application filed December 19, 1911. Serial No. 666,806.

To all whom it may concern:

Be it known that I, WILLIAM P. HARRIS, a citizen of the United States, residing at Stockton, in the county of San Joaquin, State of California, have invented certain new and useful Improvements in Airships; and I do 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 the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in aerial ships, and is a departure from the aerial ships commonly known as aeroplanes in that I do not depend on the usual structure of planes commonly used for the purpose of maintaining the equilibrium of the ship when it is in the air.

The object of my invention is to produce an airship, the principle of which is directly taken from that of a bird; adding, of course, certain mechanical improvements which permits of the ship being balanced even better than is the bird in air.

In constructing my improved invention I first provide wings and a tail patterned after the wings and tail of a bird, the body of the car being then suspended from and below these wings and centrally thereof, whereby the weight of the car acting on the wings as the car tips one way or the other will continually cause the ship to maintain its equilibrium for the reason that when the same tips to one side the air is relieved from under one of the wings and more air pressure is taken on under the other wing and the weight of the suspended car then pulls on the wings having the least air pressure thereunder, and which causes the ship to right itself again.

A further object of the invention is to produce a simple and inexpensive structure and yet one which will be exceedingly effective for the purposes for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claim.

In the drawings similar characters of reference indicate corresponding parts in the several views.

Figure 1 is a perspective view of the complete ship. Fig. 2 is a sectional view of the wings and car. Fig. 3 is a top plan view of a portion of the car.

Referring now more particularly to the characters of reference on the drawings, I first provide spreading wings 1 having under portions 2 inclosed as shown.

The numeral 3 designates the car of the ship which has upwardly projecting beams 4 carrying a central shaft or pin 5 on which the wings 1—2 are pivotally mounted, said wings 1—2 having guide members 6 disposed within the sides of the car 3 which maintains the car 3 in normal vertical position with respect to the said wings. On the car 3 are the usual running wheels 7 and a front steering wheel 8. Within the car 3 is the operating engine 9 above which is the operator's seat 10. Secured on a frame 11 connected with the car 3 is a tail structure 12 fashioned after the tail of a bird when it is outspread. Between the car 3 and the tail 12 is a shaft 13 on which is mounted a propeller 14 operated by a cable 15 connected with the drum 16 on the drive shaft 17 of the engine 9. In each of the wings 1 is cut a slot 18 in which is journaled a propeller 19 driven by suitable gearing 20 and 21 connected with the engine 9.

Mounted on a pin 22 on the forward end of the tail 12 is a rudder 23 and on each side of said rudder 23 is a cable 24 passing over pulleys 25 and 26 and thence through the shaft 13 which is hollow and then over pulleys 27 and down under pulleys 28 and thence over a drum 29 operated by a steering wheel 30 disposed in front of the operator's seat 10, whereby the rudder 23 may be deflected to one side or the other in order to steer the ship in whatever direction it is desired to go.

By reason of the pivot 5 the wings 1—2 may be thrown upward or downward for the purpose of balancing the ship in the following manner, namely: a cable 31 is fastened to said wings 1—2 at the forward and rearward end and passes thence around pulleys 32 and 33 to a drum 34 having an operating handle 35 within reach of the operator's seat 10, whereby by moving said handle 35 one way or the other, the wings 1—2 will be thrown upward or downward for the balancing purposes, as aforesaid.

In practice a propeller 14 will drive the

ship and the propellers 19 may be also used for the same purpose driving the air backward under the wings 1—2 which will give it a greater forward impetus and at the same time maintain its equilibrium at a greater degree.

As before set forth the weight of the car 3 being suspended centrally below the wings 1—2 when the ship tips to one side and immediately relieves the air from under the wing which goes upward and takes a greater pressure under the wing which drops downward and the weight of the car tipping to the side under which the air pressure has been relieved immediately pulls downward on that side and the pressure of the air under the other wing and the weight of said car as aforesaid, pulls the entire ship to upright position again.

From the foregoing description it will readily appear that I have produced such an airship as substantially fulfils the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention.

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

A device of the character described comprising a car having sides, an upwardly projecting beam rigidly secured to each of said sides, a shaft turnably mounted in the upper ends of said beams, wings having an under frame mounted on said shaft, guide members rigidly secured to said wings and projecting within the sides of said car and adapted to bear against such sides, such guides being capable of moving along said sides as said wings are moved with the movement of said shaft, a drum provided with a handle disposed within said car, and a cable connected with each end of said wings and being disposed around said drum, as described.

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

WILLIAM P. HARRIS.

Witnesses:

JOSHUA B. WEBSTER,

FRANK H. CARTER.