

No. 881,837.

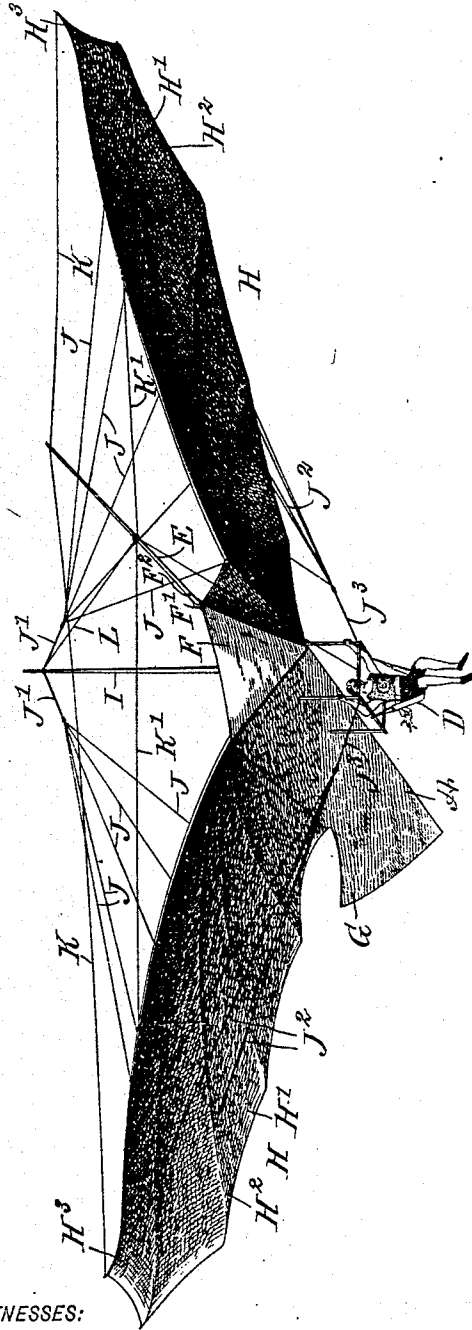
PATENTED MAR. 10, 1908.

G. WHITEHEAD.  
AEROPLANE.

APPLICATION FILED DEC. 20, 1905.

2 SHEETS—SHEET 1.

FIG. 1



WITNESSES:

*L. Sanford Handley*  
*Pho. H. Hooper*

INVENTOR

*Gustave Whitehead*

BY *Munn*

ATTORNEYS

No. 881,837.

PATENTED MAR. 10, 1908.

G. WHITEHEAD,  
AEROPLANE.

APPLICATION FILED DEC. 20, 1906.

2 SHEETS—SHEET 2.

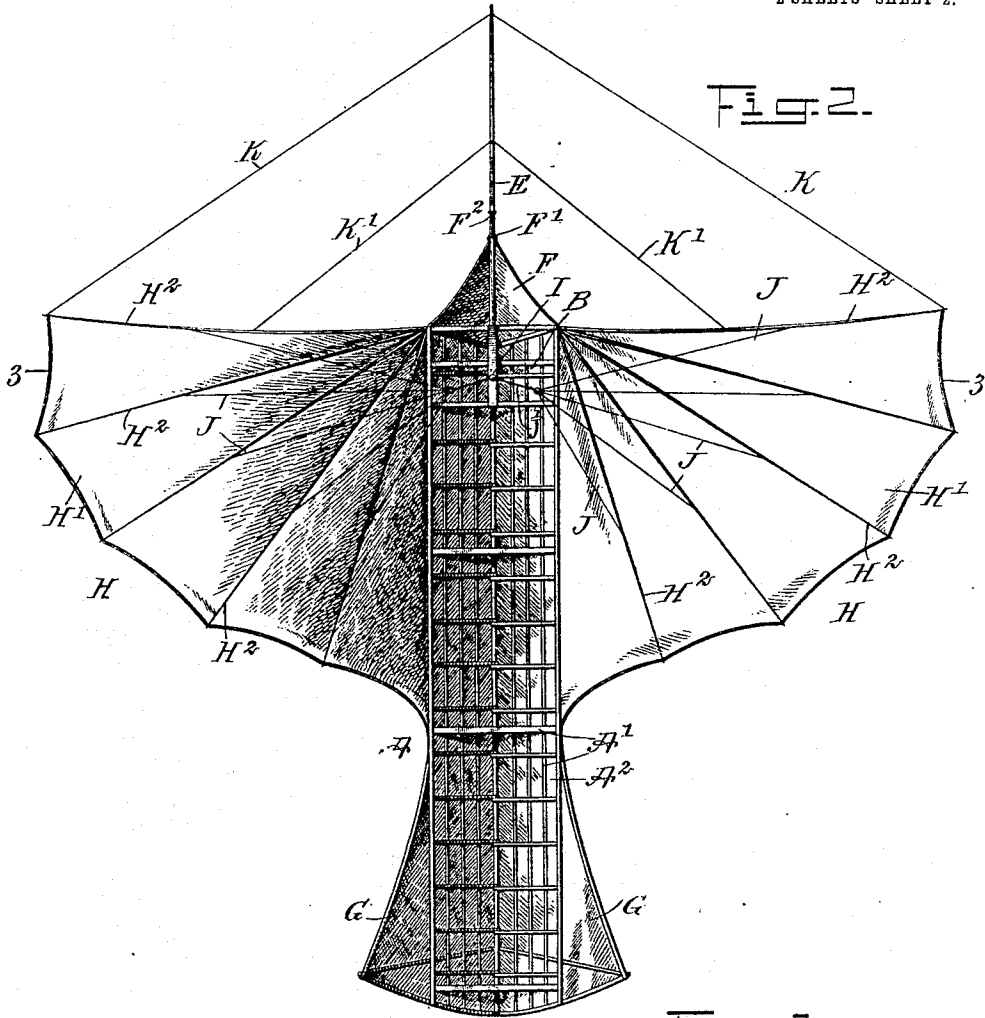


Fig. 2.

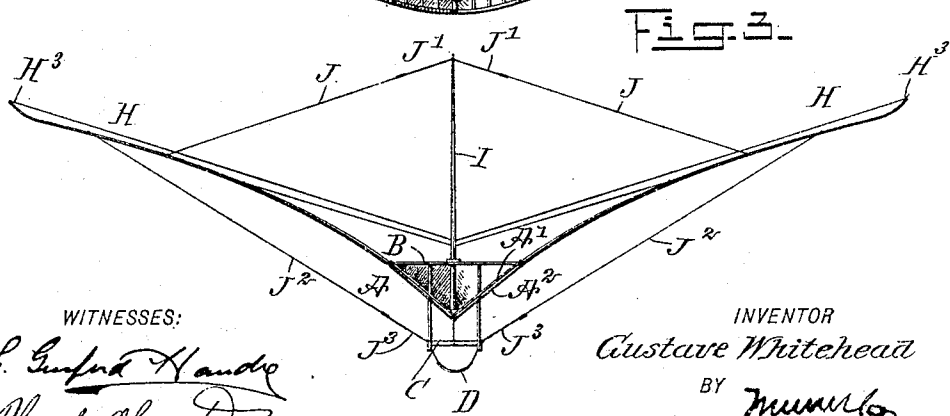


Fig. 3.

WITNESSES:

*L. Sanford Hande*  
*Rev. J. Hostet.*

INVENTOR

*Custave Whitehead*

BY

*Mumford*

ATTORNEYS

# UNITED STATES PATENT OFFICE.

GUSTAVE WHITEHEAD, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR OF ONE-HALF TO  
STANLEY YALE BEACH, OF STRATFORD, CONNECTICUT.

## AEROPLANE.

No. 881,837.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed December 20, 1905. Serial No. 292,614.

*To all whom it may concern:*

Be it known that I, GUSTAVE WHITEHEAD, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and Improved Aeroplane, of which the following is a full, clear, and exact description.

The invention relates to aerial navigation, and its object is to provide a new and improved aeroplane arranged to readily maintain its equilibrium when in flight in the air, to prevent upsetting, shooting downward head foremost, and to sustain considerable weight.

The invention consists of novel features and parts and combinations of the same which will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improvement as it appears in flight; Fig. 2 is a plan view of the same; and Fig. 3 is a transverse section of the same, on the line 3—3 of Fig. 2.

The body A of the aeroplane is trough-shaped; that is, is made approximately V-shape in cross section, and the said body A is formed of a skeleton framework A', covered, at the under side, by a covering A<sup>2</sup> of canvas or other suitable fabric material. In the front portion of the body A is arranged a reinforcing framework B, from which depends an open framework C for supporting the aeronaut, preferably by the use of a seat D, as plainly illustrated in Figs. 1 and 3. From the framework B extends forwardly a bowsprit E, to which is secured the ring F' of a head F, made of canvas or like fabric material, the ring F' being fastened in place on the bowsprit E by suitable fastening means F<sup>2</sup> in the shape of ropes or the like tied to the bowsprit E.

The head F has sides forming continuations of the sides of the body A, and the bottom of this head F is inclined upwardly and forwardly, to terminate in the ring F', in which also terminate the forward portions of the sides of the head F. Thus, the sides of the head F are both inclined toward each

other, and also upwardly and forwardly from the forward ends of the body A. The rear portions of the sides of the body A are extended upwardly and outwardly in the same planes containing the sides of the body A, so that the extensions form a tail G, which, with the head F, maintains the aeroplane in proper equilibrium, at the same time preventing the aeroplane from shooting down head foremost in case of contrary winds or the like.

From the upper edges of the sides of the body A extend wings H, slightly curved upwardly and outwardly, as plainly illustrated in the drawings, each of the wings H terminating at its rear end at the beginning of the corresponding side of the tail G, as plainly indicated in Fig. 2. Each of the wings H is formed of canvas or other suitable fabric material attached to ribs H<sup>2</sup> radiating from the front end of the body A at the top of the sides, as plainly shown in Fig. 2, the outer ends of the ribs H<sup>2</sup> being curved upwardly, as at H<sup>3</sup> (see Figs. 1 and 3), to hold the outer edge of the canvas H' likewise curved upwardly.

In the framework B and that of the body A is secured and erected a mast I, and the several ribs H<sup>2</sup> of the wings H are connected by upwardly and inwardly-extending braces J, with a single brace J' attached to the top of the mast I. Similar braces J<sup>2</sup> extend from the ribs H<sup>2</sup> downwardly and inwardly, to connect with the single brace J<sup>3</sup> attached to the suspension means C. Thus the wings H, H are properly braced, both at the top and bottom, to maintain their position relative to the body A of the aeroplane. The foremost ribs H<sup>2</sup> of the wings H, H extend approximately at right angles to the body A, at the front end thereof, and the said foremost ribs H<sup>2</sup> are connected by braces K, K' with the bowsprit E, as plainly indicated in the drawings. A brace L also connects the bowsprit E with the mast I, to give the desired strength to the entire structure, so as to enable the aeroplane to withstand heavy wind pressures without danger of disarrangement of the parts.

By constructing the body A in the manner described and providing the same with the head F, tail G and the wings H, H, a complete equilibrium of the aeroplane is main-

tained when in flight in the air, and at the same time the aeroplane is prevented from upsetting or shooting down, head foremost, as the inclined sides of the head F offer sufficient resistance to the air in the descent of the aeroplane that the body A thereof is righted or pushed upward, so as to maintain the body A practically at all times in a horizontal position.

10 The aeroplane is very simple and durable in construction, and the several parts are connected with each other and braced to such an extent as to form an exceedingly strong and durable structure.

15 Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. An aeroplane provided with a trough-like body terminating in a head and having 20 the rear portions of its sides extended upwardly and outwardly, to form a tail.

2. An aeroplane provided with a body approximately V-shaped in cross section and terminating at its front end in a head, the 25 bottom of which is inclined upwardly and forwardly, and the sides of the head forming extensions of the sides of the body.

3. An aeroplane provided with a body approximately V-shaped in cross section and 30 terminating at its front end in a head, the bottom of which is inclined upwardly and forwardly, and the sides of the head forming extensions of the sides of the body, the head sides and the head bottom terminating at a 35 point lying in a horizontal plane containing the top of the said body.

4. An aeroplane provided with a body approximately V-shaped in cross section and terminating at its front end in a head, the 40 bottom of which is inclined upwardly and forwardly, and the sides of the head forming extensions of the sides of the body, the head sides and head bottom terminating at a point intersected by a horizontal plane and a vertical 45 plane, of which the latter passes longitudinally through the bottom of the said body, and the horizontal plane extends through the top of the body.

5. An aeroplane provided with a body approximately V-shaped in cross section and 50 terminating at its front end in a head, the bottom of which is inclined upwardly and forwardly, and the sides of the head forming extensions of the sides of the body, the sides 55 of the head being inclined toward each other and terminating in a point coinciding with the forward end of the bottom of the head.

6. An aeroplane provided with a body approximately V-shaped in cross section and 60 terminating at its front end in a head, the bottom of which is inclined upwardly and forwardly, and the sides of the head forming extensions of the sides of the body, the sides of the head being inclined toward each other

and terminating in a point coinciding with 65 the forward end of the bottom of the head, and a bowsprit attached to the said body and supporting the forward end of the said head.

7. An aeroplane provided with a trough-like body terminating in a head and having 70 the rear portions of its sides extended upwardly and outwardly to form a tail, and wings secured to the said body and extending outwardly and upwardly from the upper edges of the front portions of the sides of the 75 said body.

8. An aeroplane provided with a trough-like body terminating in a head and having the rear portions of its sides extended upwardly and outwardly, to form a tail, and 80 wings secured to the said body and extending outwardly and upwardly from the upper edges of the forward portions of the sides of the said body and between the said head and the said tail. 85

9. An aeroplane provided with a trough-like body terminating in a head and having the rear portions of its sides extended upwardly and outwardly, to form a tail, wings 90 secured to the said body and extending outwardly and upwardly from the upper edges of the forward portions of the sides of the said body and between the said head and the said tail, a mast rising in the said body, and 95 braces extending from the said mast to the said wings at points between the outer and inner ends thereof.

10. An aeroplane provided with a trough-like body terminating in a head and having 100 the rear portions of its sides extended upwardly and outwardly, to form a tail, wings secured to the said body and extending outwardly and upwardly from the upper edges of the forward portions of the sides of the 105 said body, a mast rising from the said body at a point somewhat in the rear of the front end thereof, and braces extending from the said mast to the said wings.

11. An aeroplane provided with a trough-like body terminating in a head and having the 110 rear portions of its sides extended upwardly and outwardly, to form a tail, wings secured to the said body and extending outwardly and upwardly from the upper edges of the forward portions of the sides of the said body, 115 a mast rising in the said body, a bowsprit extending from the said body and supporting the front end of the said head, and a brace extending from the said mast to the said bowsprit. 120

12. An aeroplane provided with a trough-like body terminating in a head and having the rear portions of its sides extended upwardly and outwardly, to form a tail, wings 125 secured to the said body and extending outwardly and upwardly from the upper edges of the forward portions of the sides of the said body, a mast rising from the said body

at a point somewhat in the rear of the front end thereof, braces extending from the said mast to the said wings, a bowsprit extending from the said body and engaged by the front end of the said head, and braces extending from the said bowsprit to the front edges of the said wings.

13. An aeroplane provided with a body approximately V-shaped in cross section and terminating at its front end in a head, the bottom of which is inclined upwardly and forwardly, and the sides of the head forming extensions of the sides of the body, the sides of the head being inclined toward each other and terminating in a point coinciding with the forward end of the bottom of the head, a bowsprit attached to the said body and supporting the forward end of the said head, and a suspension means depending from the said body near the front thereof.

14. An aeroplane provided with a trough-like body terminating in a head and having the rear portions of its sides extended upwardly and outwardly, to form a tail, and wings secured to the said body and extending outwardly and upwardly from the upper edges of the forward portions of the sides of the said body, each of the wings consisting of fabric material and ribs radiating from the front end of the body.

15. An aeroplane provided with a trough-like body terminating in a head and having the rear portions of its sides extended upwardly and outwardly, to form a tail, and wings secured to the said body and extending outwardly and upwardly from the upper edges of the front portions of the sides of the said body, each of the wings consisting of fabric material and ribs radiating from the front end of the body, the forward ribs of the wings extending approximately at right angles to the said body.

16. An aeroplane provided with a trough-like body terminating in a head and having the rear portions of its sides extended upwardly and outwardly, to form a tail, and wings secured to the said body and extending outwardly and upwardly from the upper edges of the forward portion of the sides of the said body, each of the wings consisting of a fabric material and ribs radiating from the front end of the body and curved upward at their outer ends.

17. An aeroplane provided with a body approximately V-shaped in cross section and terminating at its front end in a head, the bottom of which is inclined upwardly and forwardly, and the sides of the head forming extensions of the sides of the body, the sides of the head being inclined toward each other and terminating in a point coinciding with the forward end of the bottom of the head, a bowsprit attached to the said body and supporting the forward end of the said head, a

65 mast rising from the front portion of the said body, a suspension means depending from the said body near the front thereof, braces connecting the said mast with the said wings, and braces connecting the suspension means with the said wings.

18. An aeroplane provided with a trough-like body terminating in a head and having the rear portions of its sides extended upwardly and outwardly, to form a tail, wings secured to the said body and extending outwardly and upwardly from the upper edges of the forward portions of the sides of the said body, each of the wings being formed of fabric material and ribs radiating from the front end of the body, a mast rising from the front end of the said body, a bowsprit extending forwardly from the front portion of the said body and supporting the front end of the said head, a suspension means depending from the front portion of the said body, braces connecting the said mast with the ribs of the said wings, and braces connecting the said suspension means with the said ribs.

19. An aeroplane provided with a trough-like body terminating in a head and having the rear portions of its sides extended upwardly and outwardly, to form a tail, wings secured to the said body and extending outwardly and upwardly from the upper edges of the forward portions of the sides of the said body, each of the wings being formed of fabric material and ribs radiating from the front end of the body, a mast rising from the front end of the said body, a bowsprit extending forwardly from the front portion of the said body and supporting the front end of the said head, a suspension means depending from the front portion of the said body, braces connecting the said mast with the ribs of the said wings, braces connecting the said suspension means with the said ribs, and braces connecting the foremost ribs with the said bowsprit.

20. An aeroplane provided with a trough-like body terminating in a head and having the rear portions of its sides extended upwardly and outwardly, to form a tail, wings secured to the said body and extending outwardly and upwardly from the upper edges of the forward portions of the sides of the said body, each of the wings being formed of fabric material and ribs radiating from the front end of the body, a mast rising from the front end of the said body, a bowsprit extending forwardly from the front portion of the said body and supporting the front end of the said head, a suspension means depending from the front portion of the said body, braces connecting the said mast with the ribs of the said wings, braces connecting the said suspension means with the said ribs, and a brace connecting the said mast with the said bowsprit.

21. An aeroplane provided with a trough-like body terminating at its front end in a head and having its rear portion provided with a tail.
- 5 22. An aeroplane provided with a trough-like body having a head and a tail, and wings secured to the said body and extending outwardly and upwardly from the sides of the said body.
- 10 23. An aeroplane provided with a trough-like body having a head and a tail, and wings

secured to the said body and extending outwardly and upwardly from the sides of the said body at points intermediate the said head and the said tail.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GUSTAVE WHITEHEAD.

Witnesses:

S. Y. BEACH,  
J. W. THOMPSON.