

N^o 5312



A.D. 1908

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PROVISIONAL SPECIFICATION.

“Improvements in Aeroplanes”.

We, STANLEY YALE BEACH (Editor) of Stratford, and GUSTAVE WHITEHEAD (Mechanic) of Bridgeport, both in the County of Fairfield and State of Connecticut, United States of America; do hereby declare the nature of this invention to be as follows.

5 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.

10 According to this invention the body of the aeroplane is trough-shaped that is to say, it is made approximately V-shape in cross-section. It is formed of a skeleton framework covered at the under side by a covering of canvas or other suitable fabric. In the front portion of the body there is a reinforcing framework from which depends an open framework for supporting the aeronaut (preferably by means of a seat) and a bowsprit extends forwardly from the framework to which a head made of canvas or like fabric material is secured by means of a ring, the ring being fastened in place on the bowsprit by suitable fastening means in the shape of ropes or the like tied to the bowsprit. The head has sides forming continuations of the sides of the body, and the bottom of this head is inclined upwardly and forwardly, to terminate in the ring in which also terminate the forward portions of the sides of the head. Thus the sides of the head are both inclined towards each other, and also upwardly and forwardly from the forward ends of the body.

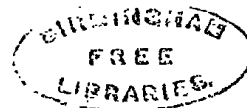
20 The rear portions of the sides of the body are extended upwardly and outwardly in the same planes containing the sides of the body, so that the extensions form a tail which, with the head, maintains the aeroplane in proper equilibrium, at the same time preventing the aeroplane from shooting down head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

25 The body is provided with suitable means for suspending and carrying the aeroplane in the air, the said means being in the form of wings or planes (single or multiple).

30 The wings extend from the upper edges of the sides of the body, and are slightly curved upwardly and outwardly, each of the wings terminating at its rear end at the beginning of the corresponding side of the tail. Each of the wings is formed of canvas or other suitable fabric material attached to ribs radiating from the front end of the body at the top of the sides, the outer ends of the ribs being curved upwardly to hold the outer edge of the canvas likewise curved upwardly.

35 A mast is erected in the reinforcing framework and that of the body and the several ribs of the wings at points between the outer and inner ends thereof, are connected by upwardly and inwardly-extending braces with a single brace attached to the top of the mast. Similar braces extend from the ribs downwardly and inwardly to connect with the single brace attached to the suspension means.

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Thus the wings are properly braced both at the top and bottom to maintain their position relative to the body of the aeroplane. The foremost ribs of the wings extend approximately at right angles to the body at the front end thereof, and the said foremost ribs are connected by braces with the bowsprit. A brace also connects the bowsprit with the mast 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. 5

By construction of the body in the manner described and providing the same with the head, tail and wings, a complete equilibrium of the aeroplane is maintained 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 offer such resistance to the air in the descent of the aeroplane that the body thereof is righted or pushed upward so as to maintain the body practically at all times in a horizontal position. 10

Dated this 9th day of March 1908. 15

A. M. & WM. CLARK,
Chartered Patent Agents,
53, Chancery Lane, London.

COMPLETE SPECIFICATION.

"Improvements in Aeroplanes". 20

We, STANLEY YALE BEACH (Editor) of Stratford, and GUSTAVE WHITEHEAD (Mechanic) of Bridgeport, both in the County of Fairfield and State of Connecticut, United States of America; do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement. 25

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. 30

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. 35

Figure 1 is a perspective view of the improvement as it appears in flight;

Figure 2 is a plan view of the same; and

Figure 3 is a transverse section of the same, on the line 3—3 of Figure 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 A¹, covered, at the under side, by a covering A² 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 Figures 1 and 3. From the framework B extends forwardly a bowsprit E, to which is secured the ring F¹ of a head F, made of canvas or like fabric material, the 40 45

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ring F¹ being fastened in place on the bowsprit E by suitable fastening means F² in the shape of ropes or the like tied to the bowsprit E.

5 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 F¹, 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.

10 The body A is provided with suitable means for suspending and carrying the aeroplane in the air, the said means being in the form of wings or planes (single or multiple).

15 As shown, wings H extend from the upper edges of the sides of the body A and are 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 Figure 2. Each of the wings H is formed of canvas or other suitable fabric material attached to ribs H² radiating from the front end of the body A at the top of the sides, as plainly shown in Figure 2, the outer ends of the ribs H² being curved upwardly, as at H³ (see Figures 1 and 3), to hold the outer edge of the canvas H¹ likewise curved upwardly.

20 In the framework B and that of the body A is secured and erected a mast I, and the several ribs H² of the wings H, at points between the outer and inner ends thereof, are connected by upwardly and inwardly-extending braces J, with a single brace J¹ attached to the top of the mast I. Similar braces J² extend from the ribs H² downwardly and inwardly, to connect with the single brace J³ 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 H² of the wings H, H extend approximately at right angles to the body A, at the front end thereof, and the said foremost ribs H² are connected by braces K, K¹ 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.

25 By construction of 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 maintained 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 such 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.

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

35 Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, we declare that what we claim is.

40 1. An aeroplane having a trough-like body terminating at its front in a head and having its rear portion provided with a tail formed by extending the rear portions of the sides of the trough-like body upwardly and outwardly in the same plane containing the sides.

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2. In an aeroplane as specified in Claim 1, the provision of single or multiple wings or planes for sustaining the aeroplane in the air.

3. In an aeroplane as specified in Claim 1, the provision of wings secured to the body and extending outwardly and upwardly from the sides of the body at points intermediate between the head and the tail. 5

4. In an aeroplane as specified in Claim 3, the arrangement of the mast rising in the body and braces from the mast to the wings.

5. In an aeroplane as specified in Claim 4, the arrangement of the bowsprit and the braces from the bowsprit to the mast substantially as and for the purpose described. 10

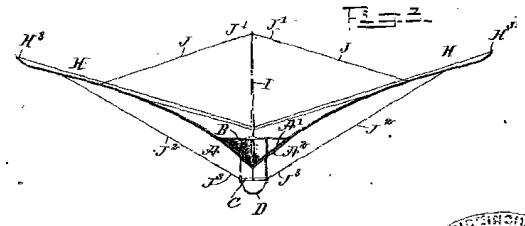
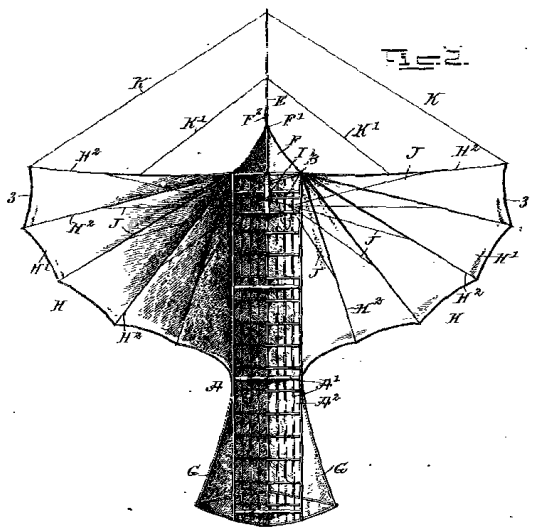
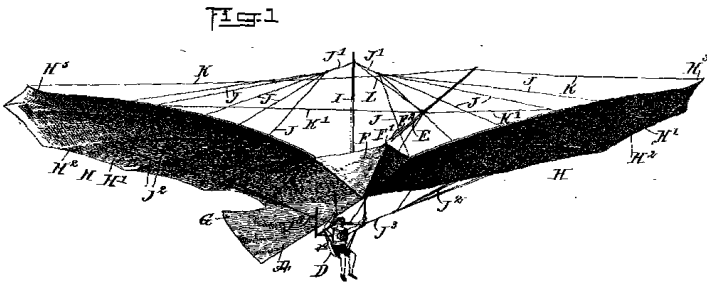
Dated this 8th day of September 1908.

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SHEET 1

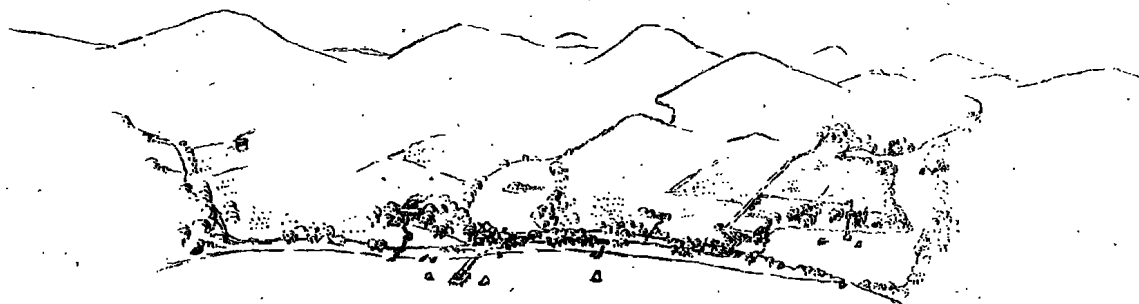
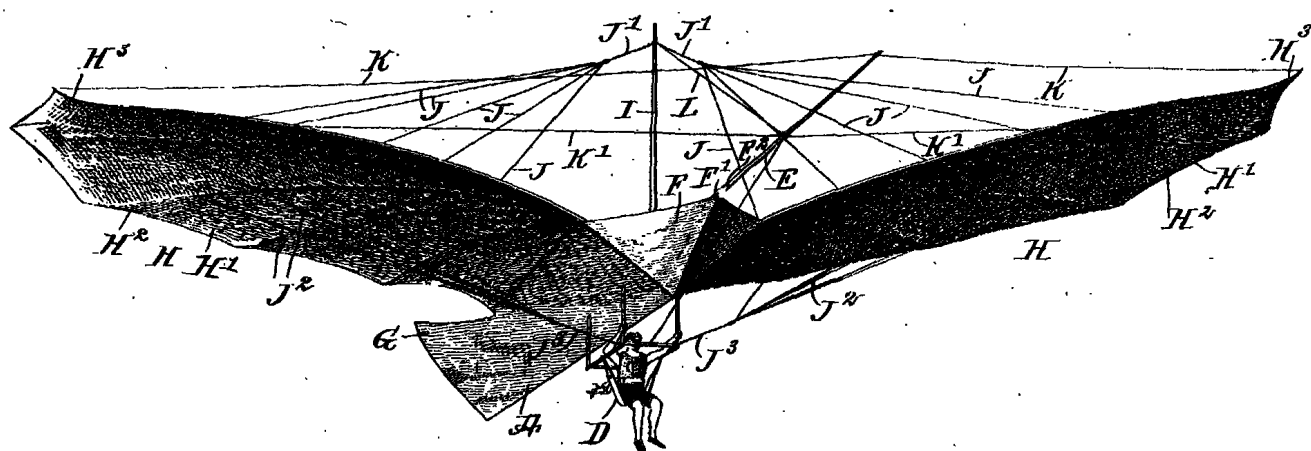
SHEET 2

[This Drawing is a reproduction of the Original on a reduced scale.]

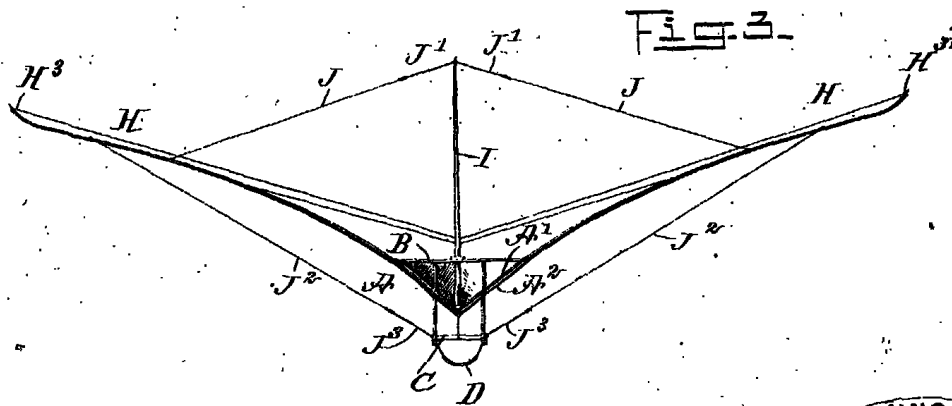
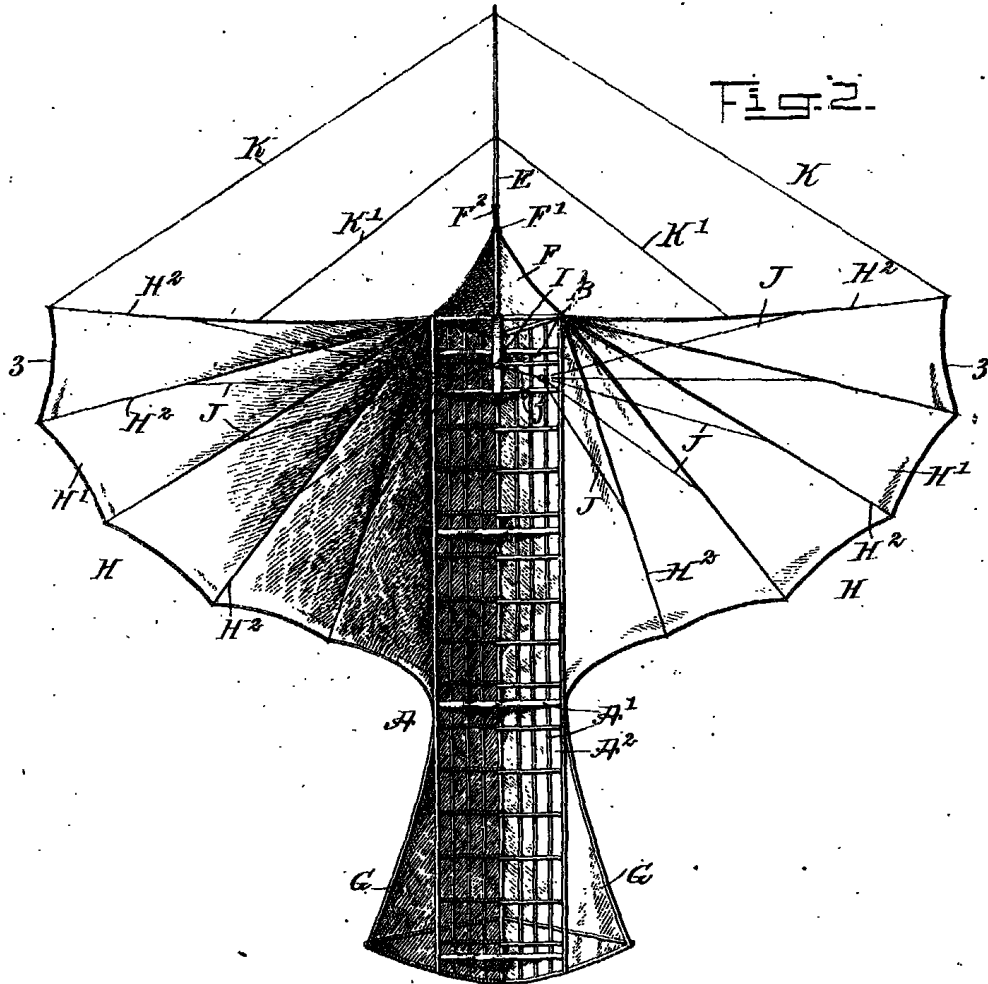


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Fig 1



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