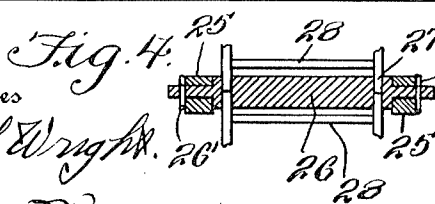
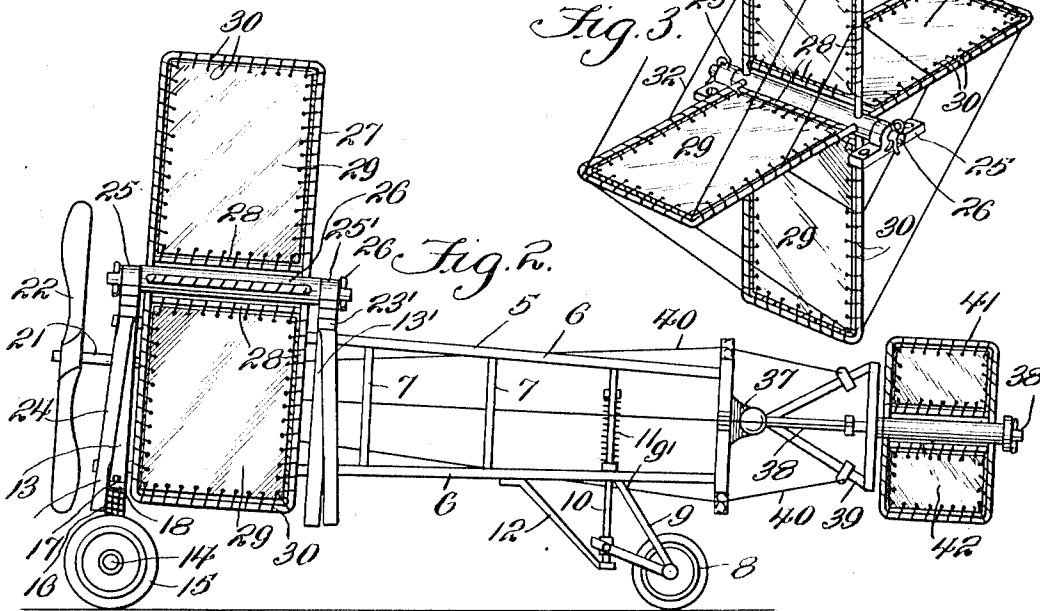
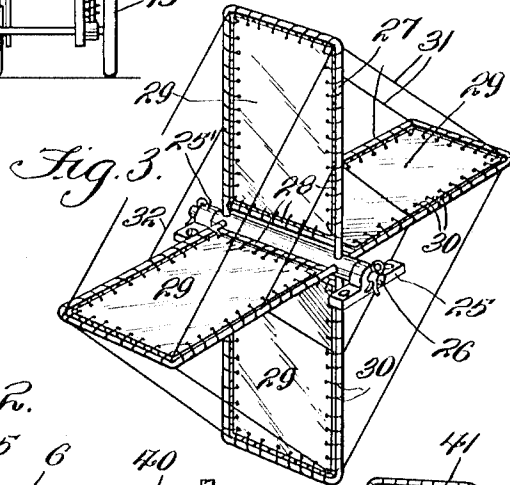
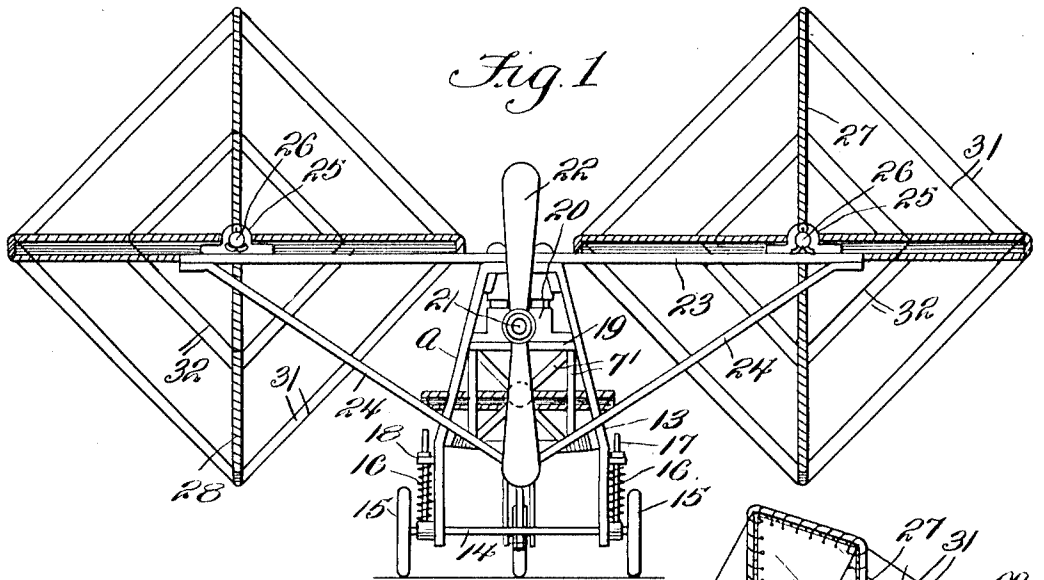


C. D. BROWNE.
AIRSHIP.
APPLICATION FILED JAN. 7, 1911.

1,061,445.

Patented May 13, 1913.



Witnesses

J. L. Wright.
J. C. Owen

Inventor

Carl D. Browne

By Victor J. Evans,

Attorney

UNITED STATES PATENT OFFICE.

CARL DRYDEN BROWNE, OF HOT SPRINGS TOWNSHIP, NAPA COUNTY, CALIFORNIA.

AIRSHIP.

1,061,445.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed January 7, 1911. Serial No. 601,484.

To all whom it may concern:

Be it known that I, CARL DRYDEN BROWNE, a citizen of the United States, residing in Hot Springs township, in the county of Napa and State of California, have invented a new and useful Improvement in Airships, of which the following is a specification.

This invention relates to improvements in aeroplanes and the object is to provide an aeroplane having its planes so constructed as to minimize and normally prevent upsetting of the aeroplane during its travel.

Another object of the invention is to provide an aeroplane with radiating planes adapted to stabilize the aeroplane so as to provide for its steady flight.

With the above and other objects in view, the invention relates to certain combinations, construction, and arrangement of parts, clearly illustrated in the accompanying drawing, and clearly described in the following specification, in which:

Figure 1 is a front elevation of the aeroplane; Fig. 2 is a side elevation; Fig. 3 is a perspective view of the front set of planes; and, Fig. 4 is a detail sectional view illustrating the connection between two of the radiating planes and their supports.

Referring to the accompanying drawing, 5 denotes a frame, which is of the type usually employed in monoplane constructions and comprises upper and lower longitudinal frame bars 6 and connecting bars 7, a part of which constitute braces; the details of the frame may be varied in accordance with the accepted designs of art. The rear end of the frame 5 is supported by means of a wheel 8 which is journaled on the hanger 9, which comprises a pair of diverging bifurcated arms, the upper arm 9' sliding on a shaft or rod 10 and engaging a spring 11, and a lower arm being pivotally mounted upon said shaft or rod 10. The lower end of the shaft or rod 10 engages a support 12, which depends from the lower longitudinal bar 6.

An inverted U-shaped support 13 is mounted on the frame 5, the lower ends of said support depending below the frame 5 and supporting a shaft 14, upon the ends of which the forward wheels 15 are journaled. The wheels 15 are cushioned by means of springs 16, which are held in place by rods 17, which extend through lugs 18 secured to the support 13. Rearwardly of the support

13 a platform 19 is secured upon suitable supports 7', and on said platform a suitable engine or motor 20 is mounted, the engine shaft 21 of which carries a propeller 22.

A beam 23 is mounted upon the support 13 and is supported in place by means of diagonal braces 24. Rearwardly of the support 13 a second support 13' is secured and on the upper end of said second support a beam 23' is mounted. Upon the outer ends of the beams 23 and 23' bearings 25 and 25' are removably secured; shafts 26 extend through said bearings 25 and 25' and support the radially disposed planes 27. The planes 27 are provided with terminals 27' which are embedded in openings formed in the shafts 26 and which are formed on the frames 28 of said planes.

The frames 28 may be formed of tubing or other suitable material and support the flexible planes 29, which have their edge portions secured around said frames by means of threads or cords 30. The frames 28 are disposed at right angles to each other so that two of the planes on each shaft will occupy normal vertical positions and two of the planes will occupy normal horizontal positions. The different frames on each shaft are braced to each other by means of brace cords 31 and 32 which extend around said frames, as shown in Fig. 3. The shafts 26 are held in place by means of cotter pins 26'. The planes of the shafts 26 are somewhat higher than the horizontal plane of the motor shaft shown so that the center of the orbit of the propeller will be below the horizontally disposed planes. The horizontally disposed planes are preferably double as shown in Fig. 1 so as to increase their supporting power.

On the rear end of the frame 5 a bearing member 37 is secured and the shaft 38 has universal connection with said bearing 37. A frame 39 is mounted upon the shaft 38 and is connected by means of operating cords 40 with suitable forwardly located levers, whereby said shaft may be moved into various angular positions with respect to the frame. On the shaft 38 plane frames 41 are secured, in like manner to the forward frames, as illustrated in Fig. 4. Each of the plane frames 41 carries planes 42, which are arranged in radial relation like the forward planes.

By reason of the radial disposition of the planes, air opposing arms are provided

which tend to stabilize the aeroplane during its flight and to prevent the upsetting of the aeroplane due to certain gusts of wind.

5 Having described my invention, what I claim is:

10 1. A flying machine comprising a main frame, a pair of transverse beams supported upon the main frame at right angles thereto and extending laterally beyond the same, bearings upon the extended ends of the beams, longitudinally extending shafts journaled in said bearings in parallel relation to each other and equidistantly from the longitudinal center of the main frame, and a supporting surface carried by each shaft and fixed thereto to freely revolve therewith, each surface embodying pairs of diametrically opposed planes arranged at right angles to each other.

2. A flying machine comprising a main frame, a longitudinally extending motor

driven shaft mounted upon said frame, a tractor propeller carried by said shaft, a pair of transverse horizontal beams mounted in parallel relation upon the main frame above the level of the propeller shaft and extending beyond the sides of the main frame, bearings upon the extended ends of the beams, longitudinally extending shafts journaled in said bearings in substantially parallel relation to each other and above the horizontal plane, of and on opposite sides of the vertical line of the motor shaft, and supporting surfaces carried by said longitudinally extending shafts, each of said surfaces consisting of diametrically opposed pairs of planes fixed to and revoluble freely with the shaft and arranged at right angles to each other.

CARL DRYDEN BROWNE.

Witnesses:

WILLIS E. MANN,
LORENZO L. HARRIS.

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