

E. F. FISHER.
AIRSHIP.

APPLICATION FILED APR. 15, 1912.

Patented Sept. 10, 1912.

2 SHEETS—SHEET 1.

1,038,106.

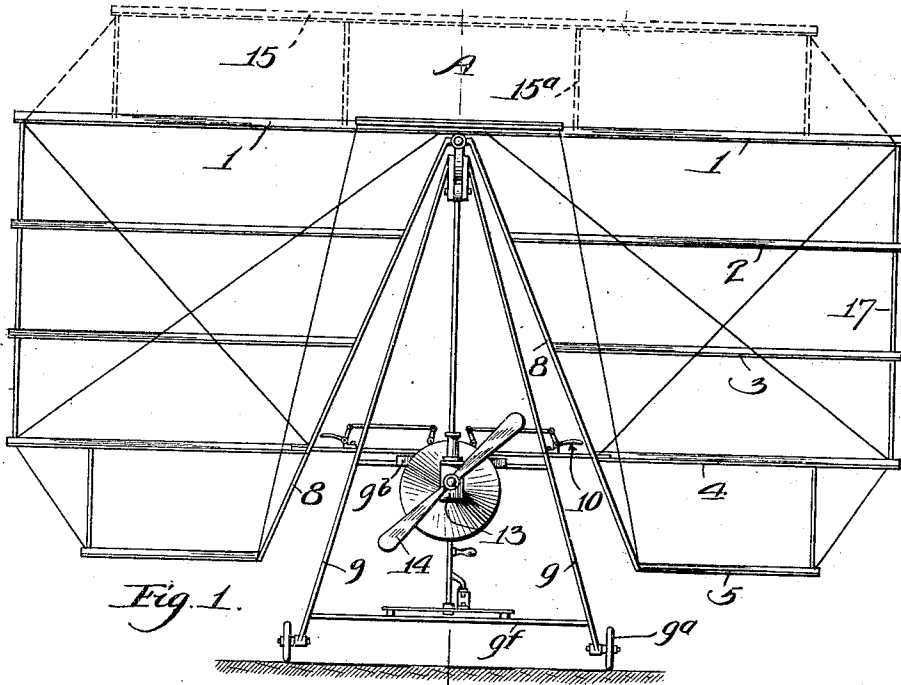


Fig. 1.

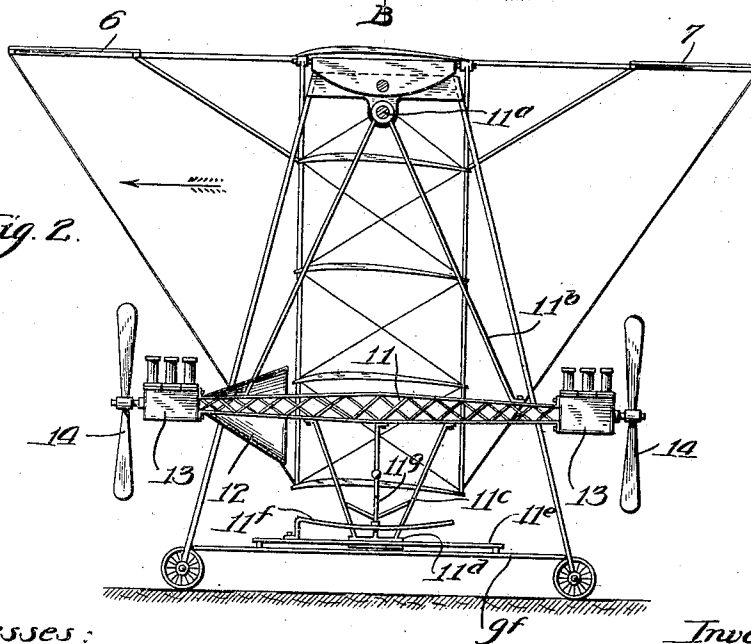


Fig. 2.

Witnesses:

Geo. J. Huting.

Mary A. Bowman.

Inventor:

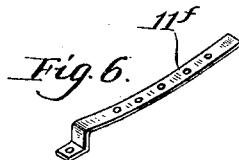
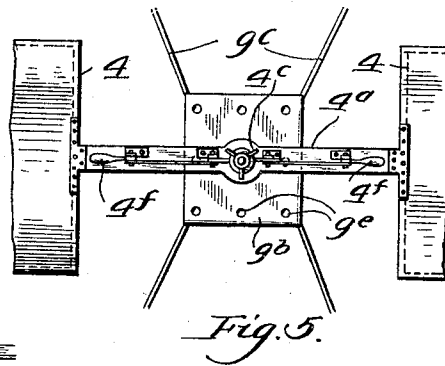
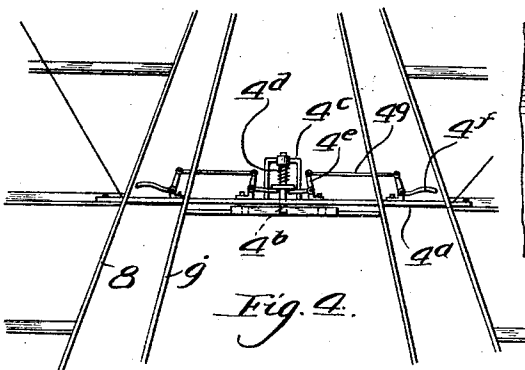
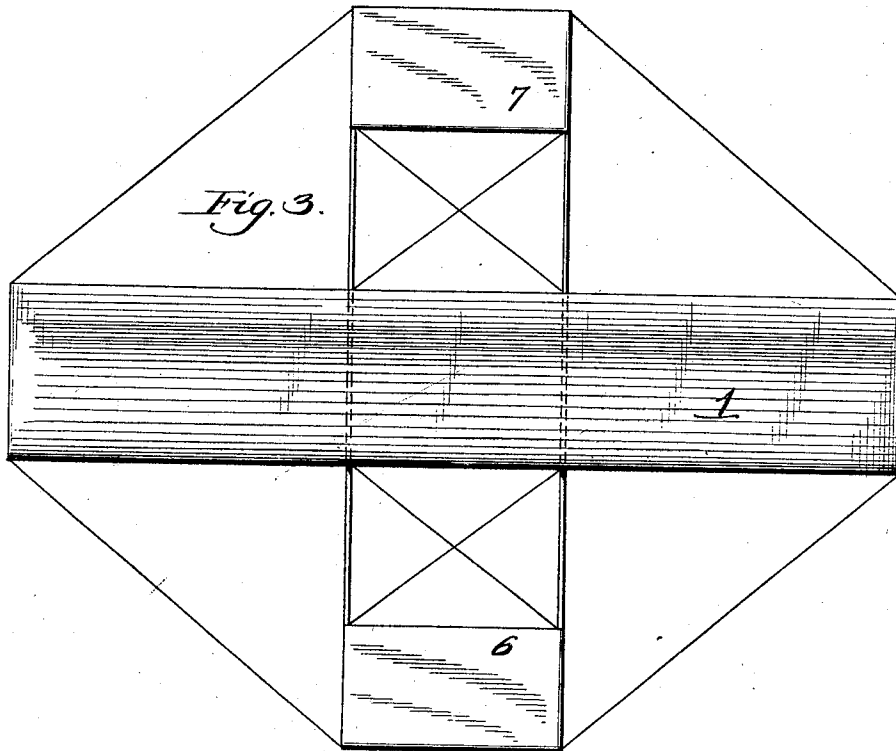
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

EDWARD F. FISHER, OF SAN DIEGO, CALIFORNIA, ASSIGNOR OF ONE-THIRD TO R. L. FISHER, OF RAYMOND, WASHINGTON.

AIRSHIP.

1,033,106.

Specification of Letters Patent.

Patented Sept. 10, 1912.

Application filed April 15, 1912. Serial No. 690,965.

To all whom it may concern:

Be it known that I, EDWARD F. FISHER, a citizen of the United States, and a resident of San Diego, in the county of San Diego and State of California, have invented certain new and useful Improvements in Airships, of which the following is a specification.

My invention relates to airships of the aeroplane type and more particularly to the multiplane type, and the objects of my invention are, first to provide an aeroplane in which the planes may be shifted to various positions relatively to the load, for maintaining the lateral balance, and for raising and lowering the machine, second, to provide a propeller means which is shifted automatically for the purpose of changing the position of the propellers in the air on a large radius, so that they are always working in an undisturbed area to their efficiency and which may also be manually shifted into various positions and held there for the same purposes, third, to provide an airship in which the load is suspended on a support near the top plane and located below the lower plane, fourth, to provide a means for shielding the operator, and fifth, to provide additional planes to be attached if desired. With these and other objects in view as will appear, my invention consists of certain novel features of construction, combination and arrangement of parts as will be hereinafter described in detail and particularly set forth in the appended claims, reference being had to the accompanying drawings and to the characters of reference thereon, which form a part of this specification, in which:—

Figure 1 is a front elevational view of my machine, complete, and showing by dotted lines the extra plane mounted thereon, Fig. 2 is a sectional view through A—B of Fig. 1, Fig. 3 is a plan view, Fig. 4 is a detail view showing the plane controlling mechanism, Fig. 5 is a plan view thereof, and Fig. 6 is a detail perspective view of the propeller lever controlling arm.

Similar characters of reference refer to similar parts throughout the several views. The main planes 1, 2, 3, 4, and 5, front plane 6, rear plane 7, supports 8, carriage frame 9, plane controlling mechanism 10, propeller and engine support 11, shield 12, engines 13, and propellers 14, constitute the principal parts of my airship.

The planes 1, 2, 3, 4, and 5 are spaced apart, one above the other a suitable distance, and are held in their positions by means of the bars 17, connecting their outer ends, and the supports 8 on their inner ends. The plane 1 is a one-piece plane and the remainder of the planes are made in two pieces, leaving a space in the middle which gradually widens from the upper plane toward the lower plane, as shown best in Fig. 1. In this space between the supports 8 and 8 is pivotally mounted the frame 9 which is mounted near the top plane in such a manner as to allow the planes to be shifted pivotally thereon. This frame 9 is mounted on wheels 9^a. Connecting with the inner ends of the plane 4 and extending across from one portion to the other is a bar 4^a, which is provided with a central plunger 4^b which is supported by means of U-bar 4^c and is provided with a spring 4^d adapted to thrust said plunger downwardly. Mounted on this bar 4^a are also bell-cranks 4^e and 4^f which are connected by means of the rods 4^g. The one member of each of the bell-cranks 4^e engages with the plunger 4^b and is adapted to raise said plunger when the loose member of the bell-crank 4^f is operated. Immediately below the bar 4^a, on the frame 9 is mounted a piece 9^b, by means of braces 9^c. This piece 9^b is provided with a plurality of holes 9^d adapted for the lower extended end of the plunger 4^b. These holes are for the purpose of holding the bar 4^a in a certain relative position to the piece 9^b by means of the plunger 4^b, thus providing a means for holding the planes in certain relative positions to the carriage 9. The propeller and engine support 11 is pivotally mounted in said frame near the top at point 11^a, and is suspended therefrom by means of bars 11^b which are rigidly attached to said support 11. Mounted on each end of said support is an engine 13 and directly connected thereto are the propellers 14. This support 11 is provided with downwardly extending members 11^c which are provided on their lower extended ends with a slide 11^d, which operates between the two guide bars 11^e, mounted on the lower horizontal frame piece 9^f. Also mounted on one of these pieces 11^e is a controlling arm 11^f which is provided with a plurality of holes adapted for a plunger 11^g. This controlling arm 11^f is adapted to hold said support 11 in various positions. Its upper sur-

face is concentric with the pivot point 11^a. Mounted on the propeller support 11 is a wind shield 12, adapted to shield the operator from the wind from the propeller when the airship is in motion.

In Fig. 1 there is provided an extra plane 15 which is mounted on the top of plane 1 and spaced apart therefrom, by means of braces 15^a. This plane is for the purpose of adding to the maintenance of the machine if desired.

Though I have shown and described a particular construction and arrangement of parts, I do not wish to be limited to this particular construction and arrangement, but desire to include in the purview of my invention the construction and arrangement substantially as set forth in the appended claims.

It will be readily seen that with this construction, there is provided an airship of the aeroplane type in which the planes may be readily tilted laterally in either direction for maintaining the lateral balance; but if desired they may be fastened in a certain relative position to the load; that they may be tilted forward and backward for raising and lowering the machine and may be fastened in their various tilted positions relative to said load; that the propellers may be manually shifted to various positions or angles and be fastened in those various positions; that in starting the machine, the propellers may be shifted forward on a radius with the pivot point 11^a, for the purpose of causing the machine to rise and when started the wind pressure will automatically move said propellers concentric with said pivot point until they reach the proper position, or this movement may be stopped by the operator by thrusting the plunger 11^b into one of the holes in the arm 11^c; that the shield provides a protection for the operator from the wind from the front propeller.

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

1. An airship, comprising a plurality of planes spaced apart one above the other, a carriage pivotally mounted thereon, near the upper plane and extending below the lower plane, a space being cut away in said planes for said carriage and propelling

means pivotally mounted on said carriage adapted to be radially shifted for propelling said machine.

2. An airship, comprising a plurality of planes spaced apart one above the other, provided with a wedge shaped space in the middle of said ship, a carriage pivotally mounted therein near the upper plane, and extending below the lower plane, engine and propelling means pivotally mounted on said carriage for propelling said machine and means for holding said propellers in certain positions around said pivoted mounting.

3. An airship, comprising a plurality of planes spaced apart one above the other, having a space provided in the middle of the lower three planes, a carriage pivotally mounted thereon in said space near the upper plane and extending below the lower plane, means adapted to facilitate the shifting of said planes and for holding them in shifted positions, and propelling means pivotally mounted on said carriage for propelling said machine.

4. An airship comprising a plurality of planes spaced apart one above the other, having the upper plane entire and the other divided into two sections near the middle to provide a wedge shaped space therein, a carriage pivotally mounted thereon in said space near the upper plane and extending below the lower plane, a propelling means pivotally mounted on said carriage for propelling said machine, and a wind shield adapted to protect the operator from the wind.

5. An airship, comprising a plurality of planes spaced apart one above the other, a carriage pivotally mounted thereon, near the upper plane and extending below the lower plane, a space being cut away in said planes for said carriage, double propelling means pivotally mounted on said carriage for propelling said machine, adapted to be shifted simultaneously and to automatically shift.

In testimony whereof, I have hereunto subscribed my name in the presence of two subscribing witnesses.

EDWARD F. FISHER.

Witnesses:

ABRAM B. BOWMAN,
GEORGE J. HUTING.