

H. MESINGER.
AIR SHIP.

APPLICATION FILED JUNE 28, 1909.

940,701.

Patented Nov. 23, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

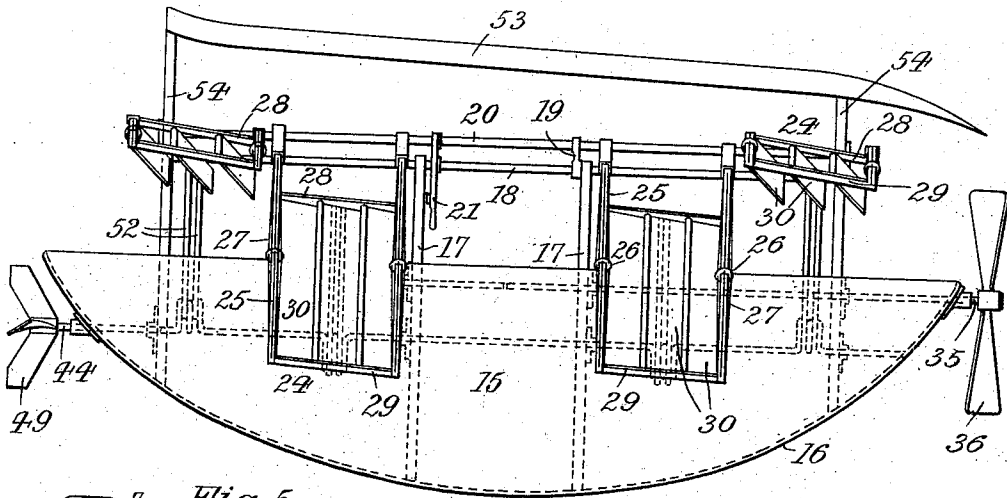


Fig. 5.

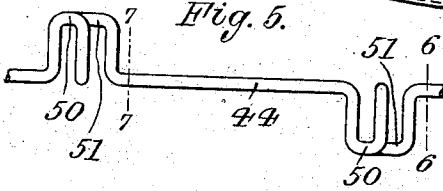


Fig. 6.

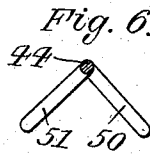


Fig. 7.

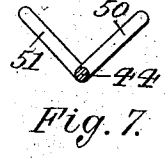
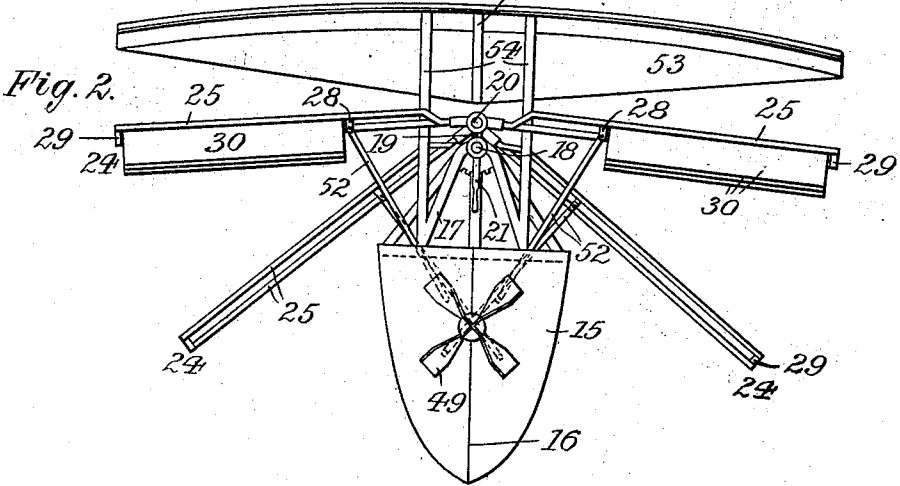


Fig. 2.



Witnesses:
Arthur E. Zupp.
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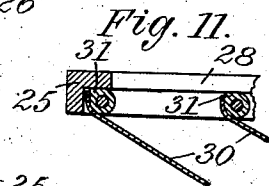
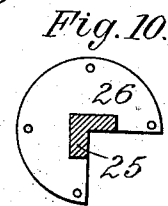
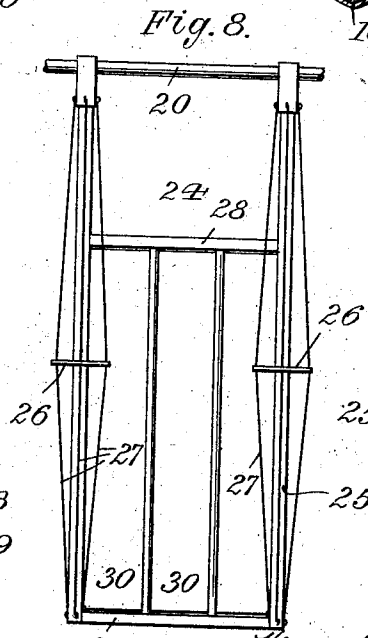
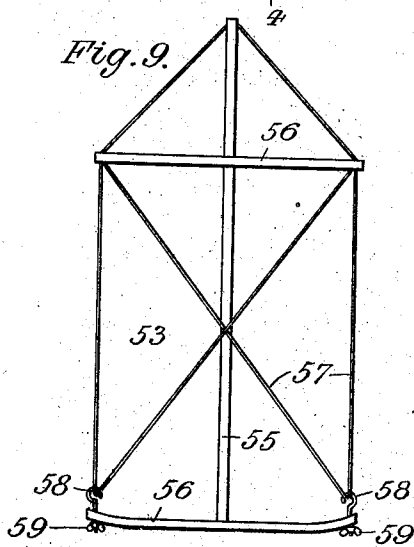
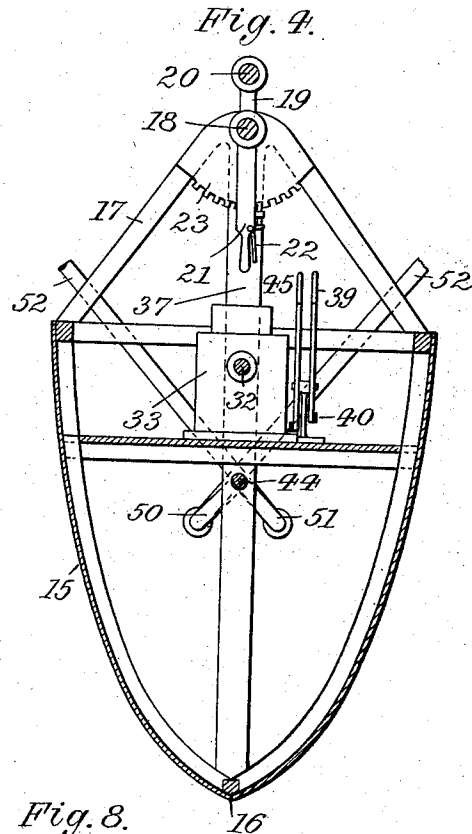
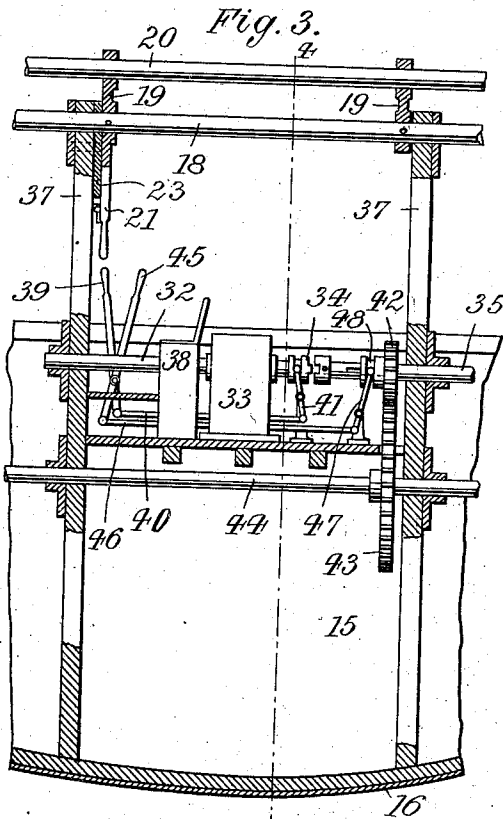
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H. MESINGER.
AIR SHIP.

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940,701.

Patented Nov. 23, 1909.
2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

HENRY MESINGER, OF NEW YORK, N. Y.

AIR-SHIP.

940,701.

Specification of Letters Patent.

Patented Nov. 23, 1909.

Application filed June 26, 1909. Serial No. 504,415.

To all whom it may concern:

Be it known that I, HENRY MESINGER, a citizen of the United States, residing at New York city, Bronx, county and State of New York, have invented new and useful Improvements in Air-Ships, of which the following is a specification.

This invention relates to various improvements in air ships and more particularly to novel means for hanging the wings and for operating the same.

In the accompanying drawings: Figure 1 is a side elevation of my improved air ship; Fig. 2 a front view thereof; Fig. 3 a longitudinal section through the central portion of the ship, with some of the parts omitted; Fig. 4 a cross section on line 4—4, Fig. 3; Fig. 5 a detail of part of the wing-operating shaft; Fig. 6 a cross section on line 6—6, Fig. 5; Fig. 7 a similar section on line 7—7, Fig. 5; Fig. 8 a top view of one of the wings; Fig. 9 a plan of the aeroplane, and Figs. 10 and 11 are details of the wing.

The body 15 of the air ship is preferably of semi-elliptic form in longitudinal section, having the curved keel 16. Within body 15 are fitted a number of brackets 17 in which is journaled a longitudinal shaft 18. From the latter extend upwardly arms 19 carrying a shaft 20 arranged parallel to shaft 18. The latter may be turned on its axis so as to set shaft 20 at a suitable angle to either side of the ship. The means for turning shaft 18 consist of a hand lever 21 integral with one of the arms 19 and carrying a spring latch 22 adapted to engage a toothed sector 23 secured to one of the brackets 17. By manipulating this lever, shaft 20 may be swung about shaft 18 to assume the position desired, and may then be locked in place by latch 22, as will be readily understood. Upon shaft 20 are hung wings 24 arranged in pairs, the members of which extend from opposite sides of the shaft and are adapted to be simultaneously oscillated in the manner hereinafter described. Each wing consists of a U-shaped frame 25 having a slight rearward dip and perforated for accommodating shaft 20. Upon the longitudinal arms of frame 25 are mounted notched disks 26 apertured near their periphery for the passage of braces 27 attached to the ends of frame 25. Within a pair of cross bars 28, 29 of frame 25 are hung a number of parallel slats

30 having a limited play upon their pivots, so that they will open when the wing rises and close when the wing descends. To accomplish this result, the knuckles 31 of slats 30 are squared, and by engaging the lower sides of bars 28, 29, they will limit the downward movement of the slats, (Fig. 11).

The means for operating the wings are as follows: The shaft 32 of a suitable motor 33 is, by clutch 34, adapted to be coupled to the shaft 35 of the rear propeller 36, said shaft being journaled in posts 37. Clutch 34 is manipulated from the navigator's seat 38, by lever 39, link 40 and shipping lever 41. Upon shaft 35 is slidably mounted a toothed wheel 42 adapted to be intergeared with a second toothed wheel 43 fast on a crank shaft 44 which is also journaled in posts 37. Wheel 42 may be thrown into or out of engagement with wheel 43 by lever 45, link 46 and shipping lever 47 which engages a grooved collar 48 of wheel 42. Shaft 44 carries the front propeller 49 and is provided with sets of cranks arranged in pairs, the two cranks 50, 51, of each pair being adapted to operate two opposed wings. Cranks 50, 51 are set at right angles to each other and are connected to the cross bars 28 of wings 24 by rods 52.

It will be seen that by manipulating levers 39, 45, the navigator may either operate rear propeller 36 alone, or he may operate such rear propeller in conjunction with the front propeller and with wings 24. These wings, it will be observed, are oscillated directly from crank shaft 44, so that complex transmission is avoided. By setting lever 21, the wings may be tilted to either side of the ship, so as to adjust the wings to the direction of side winds.

The air ship is surmounted by a plane 53 carried by posts 54. The frame of this plane is composed of a longitudinal bar 55, a pair of cross bars 56, and intersecting wires 57 engaging hooks 58 and adapted to be tightened up by nuts 59. Plane 53 is preferably curved downward near its rear end, (Fig. 1), to assist in the ascent of the ship and to direct the air toward the rear propeller.

I claim:

1. An air ship provided with a longitudinal shaft, means for laterally moving said shaft relatively to the axis of the ship, two sets of wings journaled on said shaft and

extending at opposite directions therefrom, and means for simultaneously oscillating opposed wings.

2. An air ship provided with a first longitudinal shaft, means for turning and locking said shaft, arms projecting from the shaft, a second longitudinal shaft carried by said arms, two sets of wings journaled on said second shaft and extending at opposite directions therefrom, and means for simultaneously oscillating opposed wings.

3. An air ship provided with a longitudinal shaft, means for laterally moving said shaft relatively to the axis of the ship, two sets of frames journaled on said shaft and extending at opposite directions therefrom, downwardly opening slats journaled in said frames, means for limiting the downward movement of said slats, and means for simultaneously oscillating opposed frames.

4. An air ship provided with wings com-

posed of a frame, a series of slats, and squared knuckles for pivotally connecting the slats to the frame.

5. An air ship provided with a shaft having a series of cranks arranged in pairs, the members of which are set at right angles to each other, and with a series of wings also arranged in pairs, and means for connecting adjoining cranks to opposed wings.

6. An air ship provided with a shaft having a series of cranks arranged in pairs, the members of which are set at right angles to each other, and with a series of wings also arranged in pairs, and with rods connecting adjoining cranks to opposed wings.

Signed by me at New York city, (Manhattan,) N. Y., this 25th day of June, 1909.
HENRY MESINGER.

Witnesses:

FRANK V. BRIESEN,
EDWARD SCHORR.