

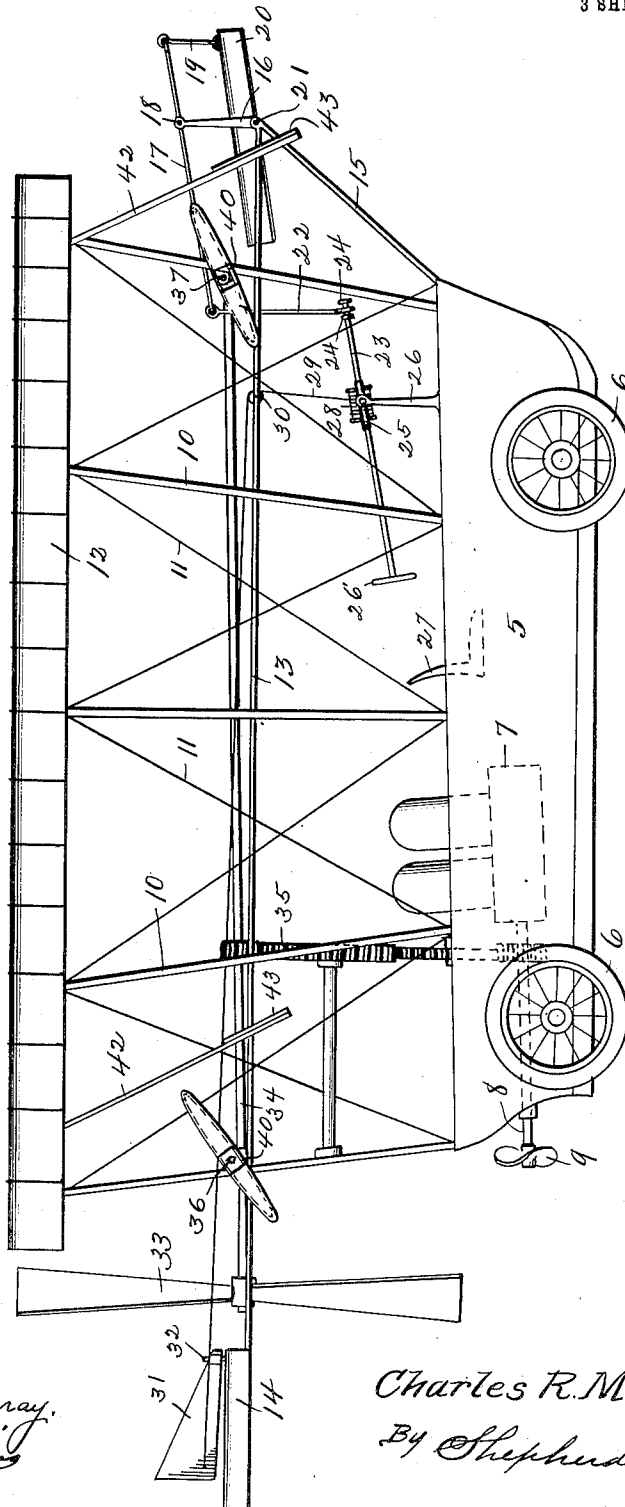
C. R. MITCHELL.
FLYING BOAT.
APPLICATION FILED FEB. 23, 1911.

1,005,272.

Patented Oct. 10, 1911.

3 SHEETS-SHEET 1.

Fig. 1.



Witnesses
Anna Murray.
[Signature]

Inventor
Charles R. Mitchell
By *Shepherd & Campbell*
Attorneys

APPLICATION FILED FEB. 23, 1911.

Patented Oct. 10, 1911.

3 SHEETS—SHEET 2.

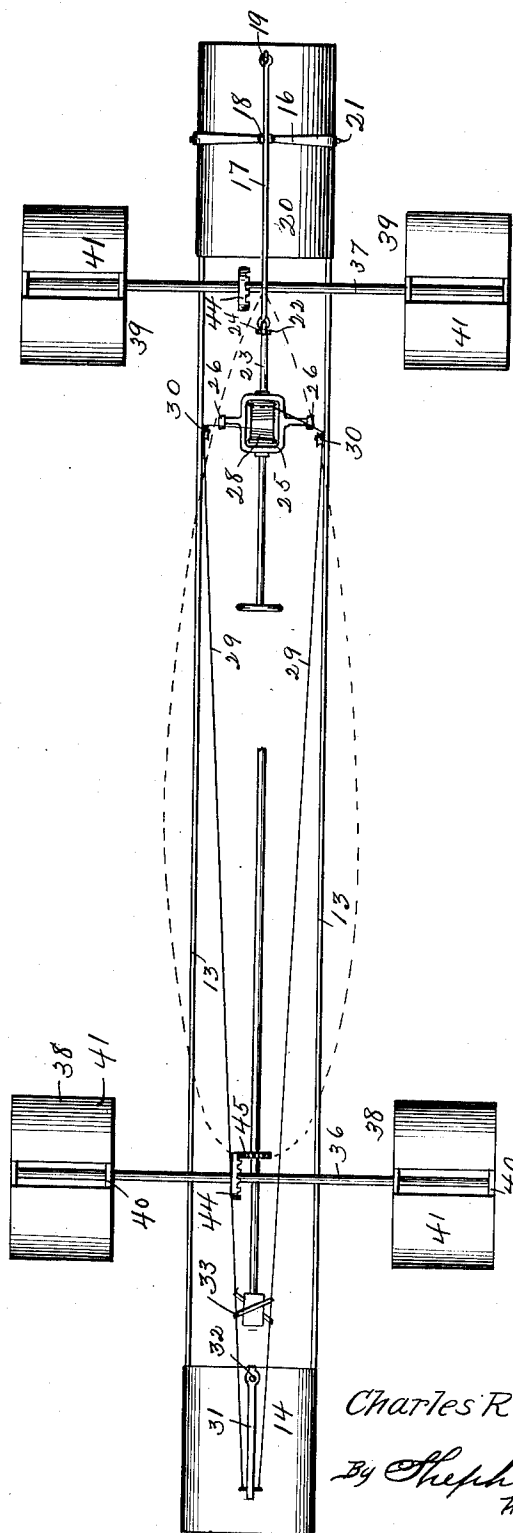


Fig. 2

Witnesses
Anna Murray.
W. J. Hopkins

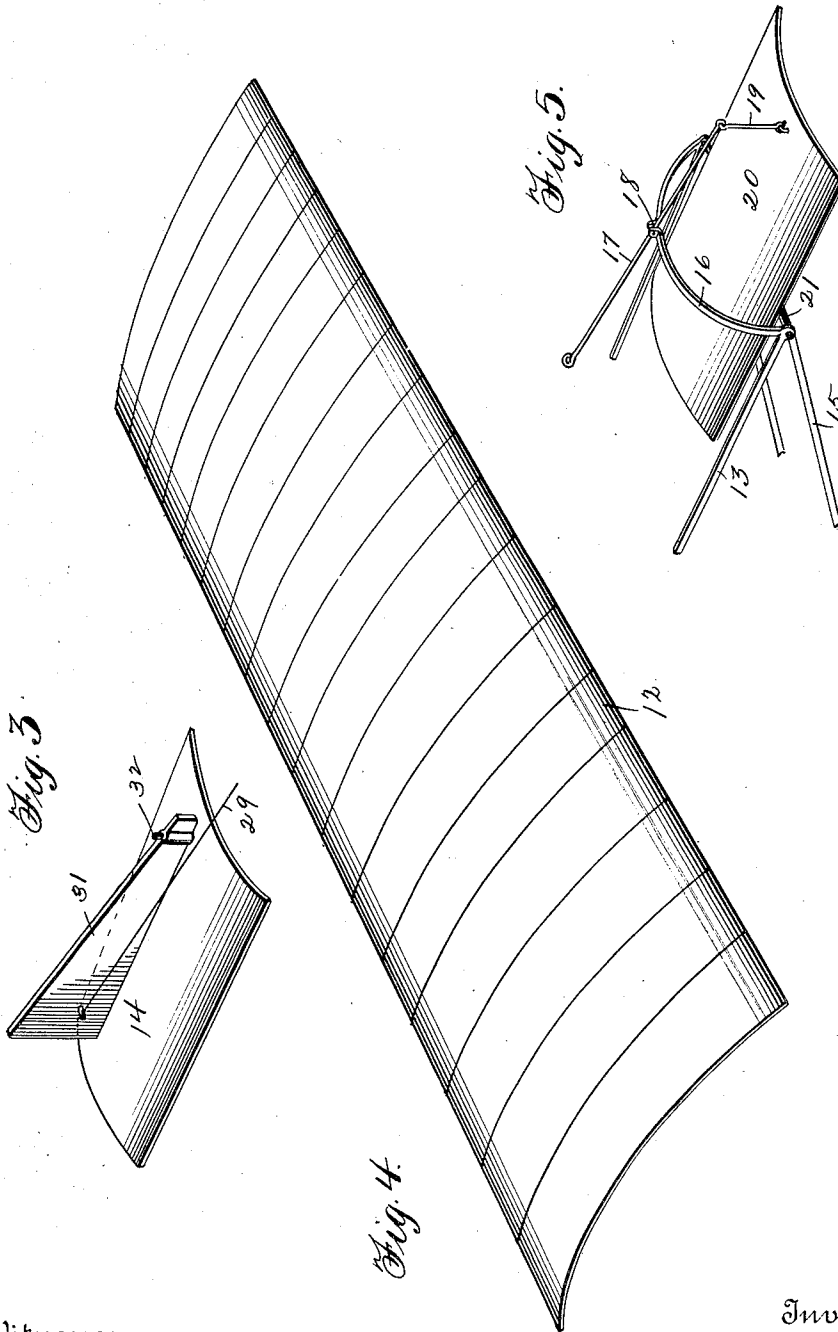
Inventor
Charles R Mitchell
By Shepherd & Campbell
His Attorneys

C. R. MITCHELL.
FLYING BOAT.
APPLICATION FILED FEB. 23, 1911.

1,005,272.

Patented Oct. 10, 1911.

3 SHEETS-SHEET 3.



Witnesses
Anna Murray.
W. J. Hopson

Inventor
Charles R. Mitchell
By Shepherd & Campbell
Attorneys

UNITED STATES PATENT OFFICE.

CHARLES R. MITCHELL, OF SAN DIEGO, CALIFORNIA.

FLYING BOAT.

1,005,272.

Specification of Letters Patent. Patented Oct. 10, 1911.

Application filed February 23, 1911. Serial No. 610,162.

To all whom it may concern:

Be it known that I, CHARLES R. MITCHELL, a citizen of the United States of America, residing at San Diego, in the county of San Diego and State of California, have invented certain new and useful Improvements in Flying Boats, of which the following is a specification.

This invention relates to air and water craft and may be properly termed a flying boat.

The object of the invention is the provision of a device of the above character provided with supporting wheels by which it may be caused to travel upon the land, with a propeller by which it may be forced through the water and with novel propulsion means by which it may be driven through the air.

Further objects and advantages of the invention will be set forth in the detailed description which now follows:

In the accompanying drawing, Figure 1 is a side elevation of a vehicle constructed in accordance with the invention, Fig. 2 is a view of the propelling and steering mechanisms, Fig. 3 is a detail perspective view of the rear fixed plane and the rear vertical rudder, Fig. 4 is a detail perspective view of the main plane, and Fig. 5 is a detail perspective view of the pivoted vertical plane.

Like numerals designate corresponding parts in all of the figures of the drawing.

Referring to the drawing, the numeral 5 designates the hull of the boat preferably formed mainly of canvas or other light material. This boat is mounted upon wheels 6 and carries a gasoline engine or other motor 7, the shaft of which engine indicated at 8 has mounted thereon a propeller 9 for the propulsion of the boat through the water. Standards 10 and guy wires 11 support a main curved plane 12 which extends longitudinally of the boat and overhangs the opposite ends thereof. Extending longitudinally of the vehicle are bars 13 which at their rear ends carry a fixed plane 14 and at their forward ends are connected to struts 15.

At the juncture of the bars 13 and struts 15, a yoke 16 is fixed and in this yoke a rod 17 is pivoted at 18. The forward end of rod 17 is connected by a link 19 to the forward end of a tilting plane 20, said plane being pivoted upon a transverse shaft 21.

The rear end of rod 17 is connected by a link 22 with the front end of a rotative shaft 23, the link 22 loosely encircling this shaft so as not to interfere with its rotation and said link being kept from undue endwise movement with relation to shaft 23 by collars 24. The shaft 23 passes through a yoke 25 and has a hand wheel 26 upon its rear end, this hand wheel being located adjacent the driver's seat 27.

As is best illustrated in Figs. 1 and 2, the yoke 25 is pivoted in bearings 26 and the shaft 23 carries within said yoke a drum 28. Steering cords 29 pass from this drum over pulleys 30, rearwardly to a vertically disposed and horizontally swinging rudder 31 which is pivoted at 32 upon the top of the fixed plane 14. A propeller 33 is mounted upon a longitudinally extending shaft 34, this shaft 34 being driven by a train of gearing 35 from the shaft of the motor 7. Mounted upon transverse shafts 36 and 37 are paddles 38 and 39 which comprise bowed ribs 40 and canvas covering members 41.

Diagonally disposed rods 42 carry baffle plates 43, these baffle plates lying below the shafts 36 and 37 so that there is in effect a partial vacuum completed immediately in the rear of the deflector plates during the forward rapid movement of the ship whereby only those portions of the paddles 38 and 39 that lie above said baffle plates will act against the air. It is of course understood that there will be some air in the rear of the baffle plates but since there will be a partial vacuum created there, those portions of the paddles above said baffle plates will have more resistance to act against than will the lower portions of the paddles and consequently said paddles will aid in driving the ship forward.

The shafts 36 and 37 are driven from the shaft 34 by means of crown and spur gears 44 and 45. It will be apparent that the wheels 6 provide means for supporting the vehicle upon the land and that at this time the propeller 33 may be utilized to move the device forward.

When in the water, the propeller 9 will serve to drive the vessel forward and when in the air, the propeller 33, together with the paddles 38 and 39, serves to impart forward movement to the vessel. It is apparent that by imparting rotation to shaft 23 to thereby turn the drum 28, the rudder 31 may be controlled and that by imparting

bodily tilting to the shaft 23, upon the pivotal mounting of yoke 25, the forward plane 20 may be tilted in either direction upon its pivot 21.

5 The plane 12 being rigidly connected to the boat or car 5 will serve as a parachute to prevent a too rapid fall of the vehicle if the motor should accidentally stop.

10 From the foregoing description, it will be seen that simple and efficient means are herein provided for accomplishing the objects of the invention, but while the elements shown and described are well adapted to serve the purpose for which they are intended, it is to be understood that the invention is not limited to the precise construction which now follows but includes within its purview such changes as may be made within the scope of the appended claims.

20 Having described my invention, what I claim is:

1. In a device of the character described, the combination with a passenger carrying body portion, of a fixed transversely curved main plane rigidly secured to the body portion, and of such size as to overlie all of said body portion, means for rigidly securing said main plane to said body portion, a longitudinally extending shaft located between the body portion and the main plane, a motor located in the body portion, means for driving said longitudinally extending shaft from said motor, a propeller mounted upon

said shaft, a pair of transversely extending shafts located one above each end, of the body portion, paddle members mounted upon said transversely extending shafts outside of the means for rigidly securing the main plane to the body portion, and forwardly inclined deflectors supported from said plane and lying beneath and in front of said transverse shafts, said transverse shafts being driven from the longitudinally extending shaft.

2. In an airship construction, the combination with a tilting plane, of a yoke spanning said plane, a rod pivoted in said yoke, a link connection between one end of said rod and one end of said plane, a second yoke, means for pivotally mounting said yoke, a shaft journaled in said second yoke, a drum upon said shaft, a link connection between one end of said shaft and one end of said rod, a horizontally swinging rudder, a cable mounted upon said drum and connected with said horizontally swinging rudder, and a hand wheel mounted upon said shaft, the connection between the last named link and the end of said shaft being such as to permit rotation of said shaft without actuating said link.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES R. MITCHELL.

Witnesses:

H. M. VOLLMER,
G. U. FRY.