G. MATTA.

AEROPLANE.

APPLICATION FILED MAR. 11, 1910. RENEWED MAR. 22, 1913.

1,200,512.

Patented Oct. 10, 1916.

2 SHEETS—SHEET 1.

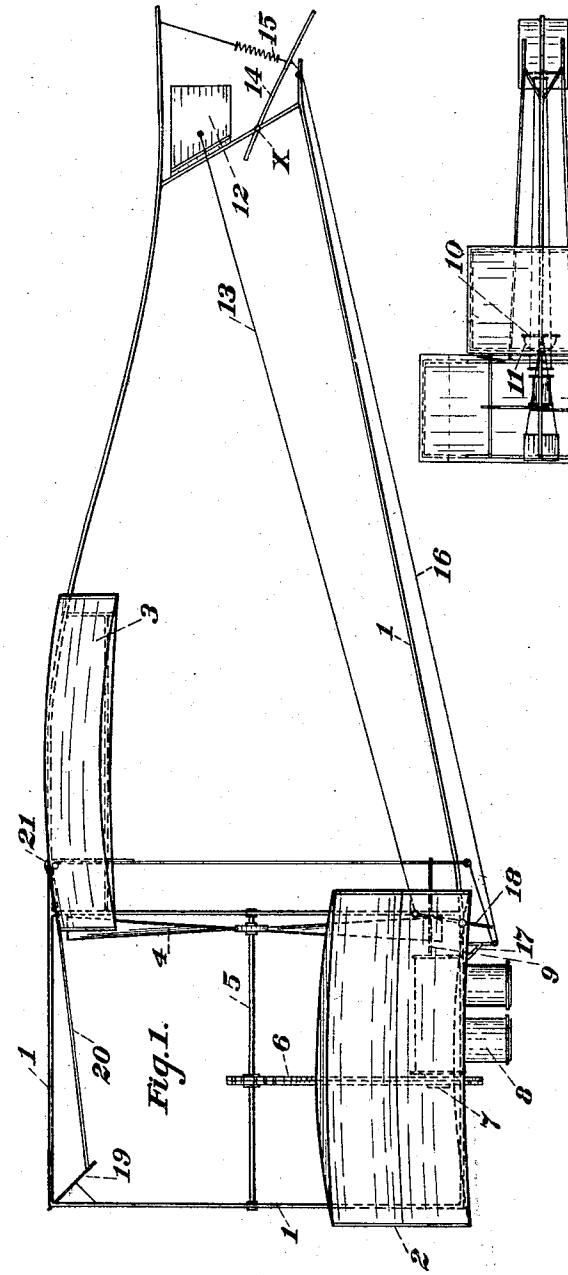


Fig. 1.

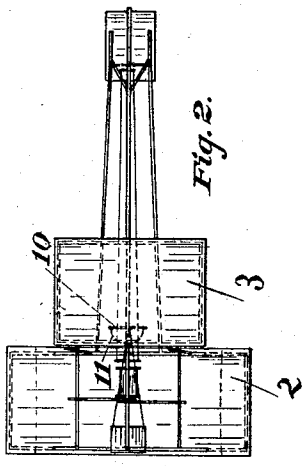


Fig. 2.

Witnesses.
John M. Roney.
C. A. Williams

Inventor
George Matta
by John M. Roney
his Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

G. MATTA.

AEROPLANE.

APPLICATION FILED MAR. 11, 1910. RENEWED MAR. 22, 1913.

1,200,512.

Patented Oct. 10, 1916.

2 SHEETS—SHEET 2.

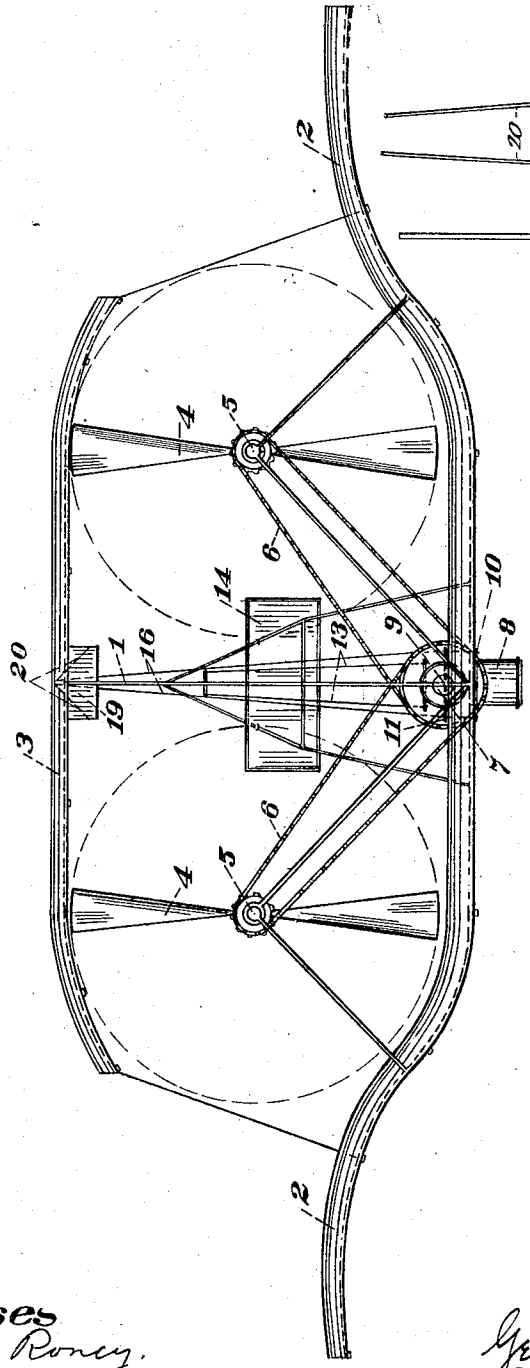


Fig. 3.

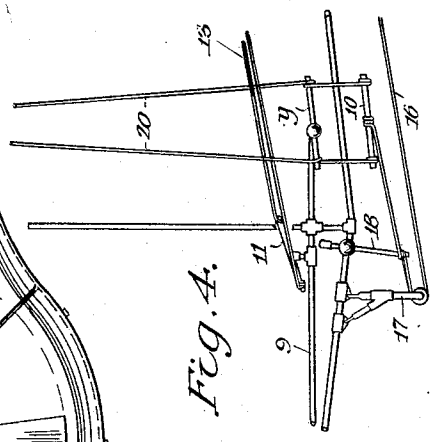


Fig. 4.

Witnesses
John M. Roney.
C. A. Williams

Inventor
George Matta
by John M. Roney
his Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE MATTA, OF BRADDOCK, PENNSYLVANIA.

AEROPLANE.

1,200,512. Specification of Letters Patent. Patented Oct. 10, 1916.

Application filed March 11, 1910, Serial No. 548,522. Renewed March 22, 1913. Serial No. 756,231.

To all whom it may concern:

Be it known that I, GEORGE MATTA, a subject of the Emperor of Austria and King of Hungary, residing at Braddock, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Aeroplanes, of which improvement the following is a specification.

My invention relates to improvements in aeroplanes.

The object of my invention is to produce a device of this character in which the utmost simplicity in construction is attained commensurate with maximum efficiency.

My invention consists in the novel construction and arrangement of parts hereinafter specifically described, reference being had to the accompanying drawings forming part hereof, in which—

Figure 1 is a side elevation of my improved aeroplane. Fig. 2 is a plan view thereof. Fig. 3 is a front elevation of the same. Fig. 4 is a side elevation of my improved aeroplane, showing more clearly the various lines from the rudder and end wings or planes.

Referring to said drawings, 1 represents the frame or superstructure of the device.

2 is a plane extending laterally at the forward end of the device and is supported upon the frame 1, its frame or superstructure constituting a part of the framework of the device.

3 is a plane supported in the frame at the structure in a manner so that the forward end thereof extends over the rear end of plane 2, plane 3 being immediately above and to the rear of plane 2, as shown in the drawings.

4, 4, are propellers or fans supported upon the extreme rear ends of the shafts 5, which are suitably supported in the frame. The said fans are so disposed with reference to the two planes 2 and 3 that the blades thereof extend across the line vertically drawn between the two planes, as shown in Fig. 1, this disposition of the fans being for the purpose of exhausting or drawing air rapidly from plane No. 2 and produce at the same time an upward pressure of air upon plane No. 3. Said fans are driven by sprocket chains 6 or other suitable mechanism connected with the power shaft 7 of the motor 8. The said motor is supported in the frame of the structure in any suitable manner and does not differ in construction or mode of operation from any ordinary gas motor, excepting that the crank case of the engine or motor is reversed from the usual arrangement of such motors; that is, the cylinders project downwardly from the crank case quite a distance from the edge of the plane 2, so that relatively the entire area of the cylinders is exposed to air drafts the pressure of which when the device is in movement to a large extent automatically cools the cylinders.

9 is a shaft or bar secured to the crank case in any suitable manner, the outer end thereof being provided with a cross piece or bar *y* which is connected thereto by a joint that admits of an upward and downward movement of the bar, the ends of the bar having the cords 20 secured thereto and the seat 10 being arranged below the bar and suspended by the said cords.

11 is a yoke or handle bar supported on said rod 9 and capable of being moved horizontally in the arc of a circle for the purpose of actuating the plane 12 which is connected thereto by means of the lines 13. The rudder 14 which is pivotally secured to the frame at *x* immediately below the plane 12 is connected at its rear end to the extreme end of the frame by means of the tension spring 15. This rudder is actuated by means of the cord or line 16 which is connected thereto near the rear end thereof and passes around a pully journaled upon a bracket 17, said bracket projecting downwardly from the frame and being hinged thereto. After passing around the pulley the cord 16 is secured to the lower end of an arm 18, the extremity of the cord being secured to the seat 10. This seat 10 is connected to the forward plane 19 by means of the cords 20 which pass upwardly over pulleys 21 in the upper portion of the frame. The seat being flexibly suspended enables the occupant to move in any desired direction to operate the different planes and rudder connected with the seat.

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

1. In an aeroplane, the combination of a main frame, a pair of transversely disposed superposed planes mounted thereon, the upper plane being arranged to the rear of the lower plane, a propeller mounted to rotate in a transverse vertical plane between the

rear end of the lower plane and the forward end of the upper plane, means for driving the propeller, a forward plane pivotally mounted upon the main frame over the lower plane and opposite the forward end of the upper plane, and means for manipulating the said forward plane.

2. In an aeroplane, the combination of a main frame, a pair of transversely disposed superposed planes mounted thereon, the upper plane being arranged to the rear of the lower plane, a propeller mounted to rotate in a transverse vertical plane between the forward end of the upper plane and the rear end of the lower plane, a vertically disposed rudder pivotally mounted upon the main frame, a horizontally disposed plane pivotally mounted upon the main frame adjacent the rudder, a lever, and an operative connection between the lever and both the rudder and pivotally mounted horizontal plane.

3. In an aeroplane, the combination of a main frame, a pair of transversely disposed superposed planes mounted thereon, the upper plane being arranged to the rear of the lower plane, a propeller mounted to rotate in a transverse vertical plane between the rear end of the lower plane and the forward end of the upper plane, means for driving the propeller, a forward plane pivotally mounted upon the main frame at a point over the lower plane and opposite the forward end of the upper plane, a vertically disposed rudder pivotally mounted upon the main frame at the rear of the planes, a horizontal plane pivotally mounted upon the main frame at a point adjacent the rudder, and means for manipulating the forward plane, rudder, and horizontal plane.

4. An aeroplane including a main frame, a pair of transversely disposed superposed planes mounted thereon, one of the planes being arranged to the rear of the other plane, a propeller mounted to rotate in a transverse vertical plane between the rear end of one of the planes and the forward end of the other plane, a forward plane adjustably mounted upon the main frame at the forward end thereof, and a rudder mounted upon the main frame at the rear of the planes.

5. An aeroplane including a main frame, a pair of transversely disposed superposed planes mounted thereon, the upper plane being arranged to the rear of the lower plane, a propeller mounted to rotate in a transverse vertical plane between the rear end of the lower plane and the forward end of the upper plane, a forward plane mounted upon the main frame over the lower plane, and a rudder mounted upon the main frame at the rear of the planes.

6. In an aeroplane, the combination of a main frame, a supporting plane mounted thereon, an engine mounted upon the main frame, a propeller driven by the engine, a seat supporting bar projecting from the engine, a cross-piece loose upon the seat supporting bar, a seat flexibly suspended from the cross piece, a handle bar pivotally mounted upon the bar adjacent to the seat, a rudder member, flexible cords operatively connecting the rudder member to the handle bar, a second rudder member, and a flexible cord operatively connecting the second rudder member to the flexibly suspended seat.

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

GEORGE MATTA.

In the presence of—
CLARENCE A. WILLIAMS,
JOHN M. RONEY.

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