Aug. 18, 1925. 1,550,149

E. CONDOYANNI

AEROPLANE

Filed April 2, 1924

Fig. 1.

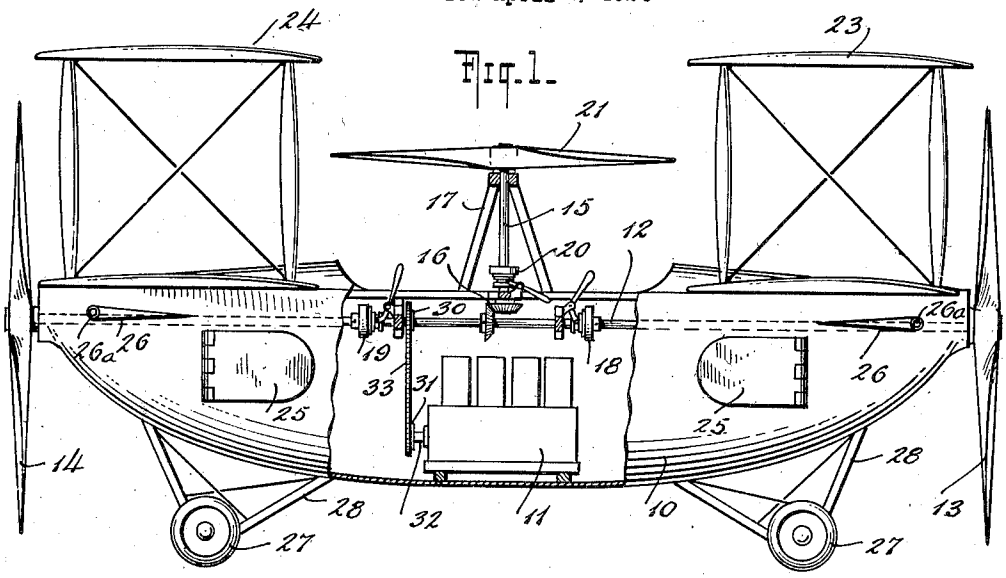
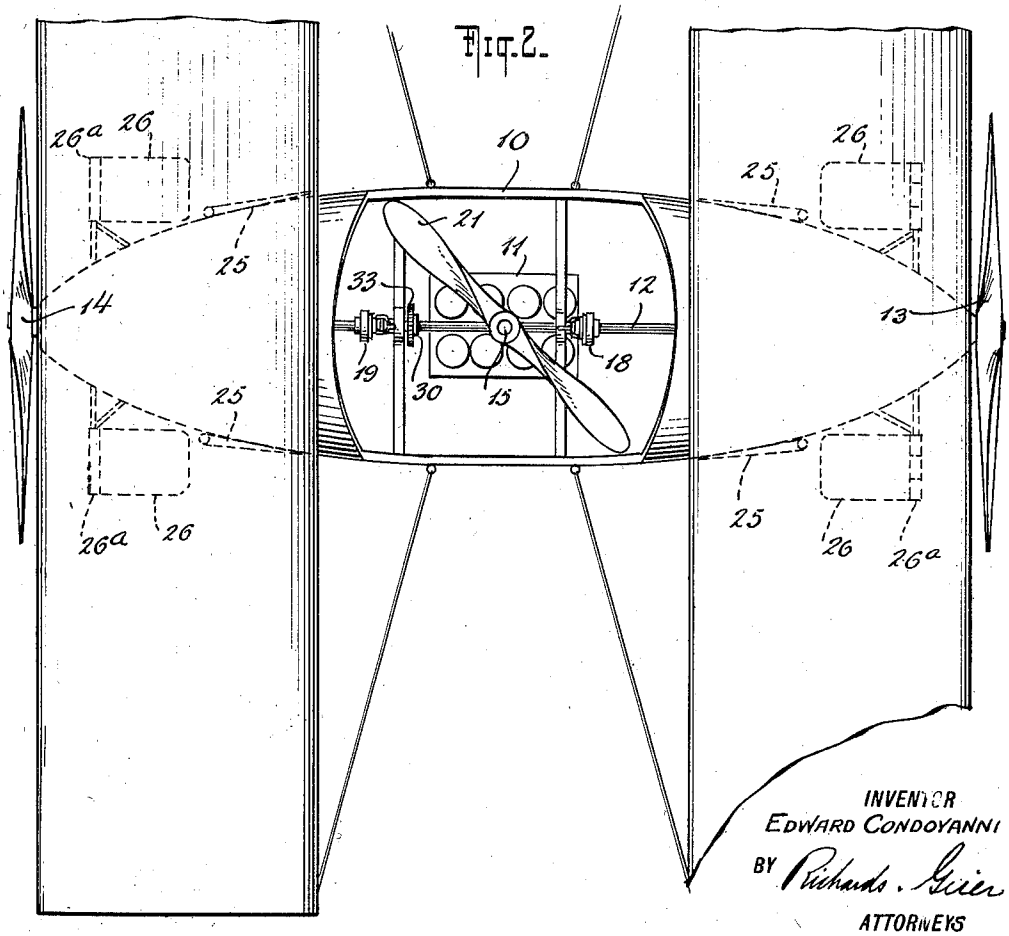


Fig. 2.



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EDWARD CONDOYANNI, OF NEW YORK, N. Y.

AEROPLANE.

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To all whom it may concern:

Be it known that I, EDWARD CONDOYANNI, a citizen of the United States, residing at New York, county of New York, and State of New York, have invented certain new and useful Improvements in Aeroplanes, of which the following is a specification.

The object of this invention is to provide a new and improved construction of an aeroplane which is capable of being operated to ascend in a vertical direction similar to a helicopter, which may be held stationary in the air or which may be operated forward or backward along horizontally extending planes or planes inclined to the horizontal.

Another object is to provide such an aeroplane with a single motor and a plurality of propellers operated thereby and by means of which the manipulation of the aeroplane may be largely controlled.

For the accomplishment of these and such further objects as will be apparent to those skilled in the art to which this appertains, my invention consists in the construction, combination and arrangement of parts a preferred embodiment of which is hereinafter more specifically described and illustrated in the accompanying drawings forming a part thereof but it will be understood that changes, variations and modifications may be resorted to without departing from the spirit of my invention.

Referring to the drawings:

Fig. 1 is a side elevation of an aeroplane, part of the hull being broken away to show the propeller clutches, and

Fig. 2 is a plan view partly broken away.

As shown in the drawings the numeral 10 indicates the fuselage, in which the engine 11 is secured. A main driving shaft 12 extends longitudinally of the fuselage 10, and is provided with a pulley 30 about which, and a pulley 31 secured to the engine shaft 32, a belt 33 is trained. The ends of said shaft project outwardly beyond the fuselage and have secured thereto the propellers 13 and 14. A secondary vertically extending power shaft 15 is driven from the main shaft 12 by means of the bevel gearing 16 and is rotatably supported in the bracket 17.

Clutches 18 and 19 provided with suitable actuating handles are interposed between the engine and the propellers 13 and 14 respectively while a third clutch 20 is interposed between a propeller 21 secured to the end of the secondary shaft 15.

Suitably secured to the fuselage 10 and extending laterally therefrom are two sets of wings or planes 23 and 24 each set consisting of a pair of parallel horizontally extending planes. A plurality of deflecting wings 25 are pivotally secured to the sides of the fuselage and are provided with suitable controls to enable them to be readily actuated from the cock-pit of the machine. A plurality of ascensional blades 26 are pivotally secured upon the horizontal axes 26^a to control the ascent or descent of the machine.

Ground wheels 27 are mounted as by means of the framework 28 to the bottom of the fuselage in the usual and well known manner.

The operation of the aeroplane is as follows: If it is desired to cause the machine to rise vertically, the engine 11 being started, clutch 20 is thrown into space to put the propeller 21 in operation and if the lifting power of this propeller is insufficient to cause the machine to rise, both of the clutches 18 and 19 are thrown in to start propellers 13 and 14. As these propellers are constructed and arranged to produce a driving thrust in opposite directions, the air currents produced thereby will impinge upon the planes 25 and sufficient additional lifting force will thus be brought into operation to insure the rapid ascent of the machine.

If it is desired to make an angular ascent either of the propellers 13 or 14 may be rotated, and the additional lifting power of the propeller 21 may also be used if desired.

By manipulating the deflecting wings 25 the direction of the machine to the right or left may be changed as desired.

If it is desired to maintain the plane stationary in the air the both propellers 13 and 14 are rotated or all three propellers 13, 14 and 21 are rotated, the engine being throttled down to the proper speed to keep the plane from ascending.

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

1. An aeroplane having a fuselage, an engine mounted within said fuselage, a main driving shaft, a pair of oppositely acting propellers secured to said shaft adapted to exert horizontal oppositely directed driving thrusts to said fuselage, a pair of planes secured to said hull adjacent each of said

propellers, a third propeller mounted upon a vertically extending shaft, means to operate said vertical shaft from said main shaft, means to selectively operate said propellers from said engine, a plurality of deflecting blades pivotally secured upon a vertical axis to the sides of said fuselage and means to move said deflecting blades to extend in parallelism with or laterally from said hull.

2. An aeroplane having a fuselage, an engine mounted within said fuselage, a main driving shaft, means operatively connecting said engine and main shaft, said main shaft extending in alignment with the longitudinal center of, and projecting beyond the ends of said fuselage, a propeller secured to the each of the projecting ends of said shaft, the propeller on one end of said shaft constructed and arranged to exert a horizontal driving thrust opposite in direction to the propeller on the opposite end thereof when said shaft is rotated, a pair of horizontally extending planes secured to said hull adjacent each propeller to receive the air currents caused by the rotation thereof, a secondary shaft located substantially centrally of the ends of said main shaft and extending perpendicularly thereto, a third propeller secured to the end of said secondary shaft and a clutch interposed between each of said propellers and said engine to enable said propellers to be selectively placed in operation.

3. An aeroplane having a fuselage, an engine mounted within said fuselage, a main driving shaft, a pair of oppositely acting propellers secured to said shaft adapted to exert horizontal oppositely directed driving thrusts to said fuselage, a pair of planes secured to said hull adjacent each of said propellers, a third propeller, a vertically extending shaft upon which said third propeller is mounted, means to operate said vertical shaft from said main shaft, means to selectively operate said propellers from said engine and a plurality of ascensional blades pivotally secured upon horizontal axes to the sides of said fuselage.

4. An aeroplane having a fuselage, an engine mounted within said fuselage, a main driving shaft, a pair of oppositely acting propellers secured to said shaft adapted to exert horizontal oppositely directed driving thrusts to said fuselage, a pair of planes secured to said hull adjacent each of said propellers, a third propeller, a vertically extending shaft upon which said third propeller is mounted, means to operate said vertical shaft from said main shaft, means to selectively operate said propellers from said engine, a plurality of deflecting blades pivotally secured upon vertical axes to the sides of said fuselage, means to move said deflectors to extend in parallelism with or laterally from said hull and a plurality of ascensional blades pivotally secured upon horizontal axes to the sides of said fuselage.

5. An aeroplane including a fuselage, planes adjacent each end thereof, propellers mounted outwardly of said planes at the ends of the fuselage and movable about a horizontal axis, another propeller interposed between said planes and movable about a vertical axis, and a plurality of deflecting blades pivoted to the sides of said fuselage and movable outwardly therefrom.

6. An aeroplane including a fuselage, planes adjacent each end thereof, propellers mounted outwardly of said planes at the ends of the fuselage and movable about a horizontal axis, another propeller interposed between said planes and movable about a vertical axis, and a plurality of ascensional blades pivoted to the sides of said fuselage and movable about horizontal axes.

7. An aeroplane including a fuselage, planes adjacent each end thereof, propellers mounted outwardly of said planes at the ends of the fuselage and movable about a horizontal axis, another propeller interposed between said planes and movable about a vertical axis, a plurality of deflecting blades pivoted to the sides of said fuselage and movable outwardly therefrom, and a plurality of ascensional blades pivoted to the sides of said fuselage and movable about horizontal axes.

In testimony whereof I have affixed my signature.

EDWARD CONDOYANNI.