I. COVINO.

AEROPLANE.

APPLICATION FILED OCT. 8, 1917. RENEWED JUNE 22, 1920.

1,348,983. Patented Aug. 10, 1920.

3 SHEETS—SHEET 1.

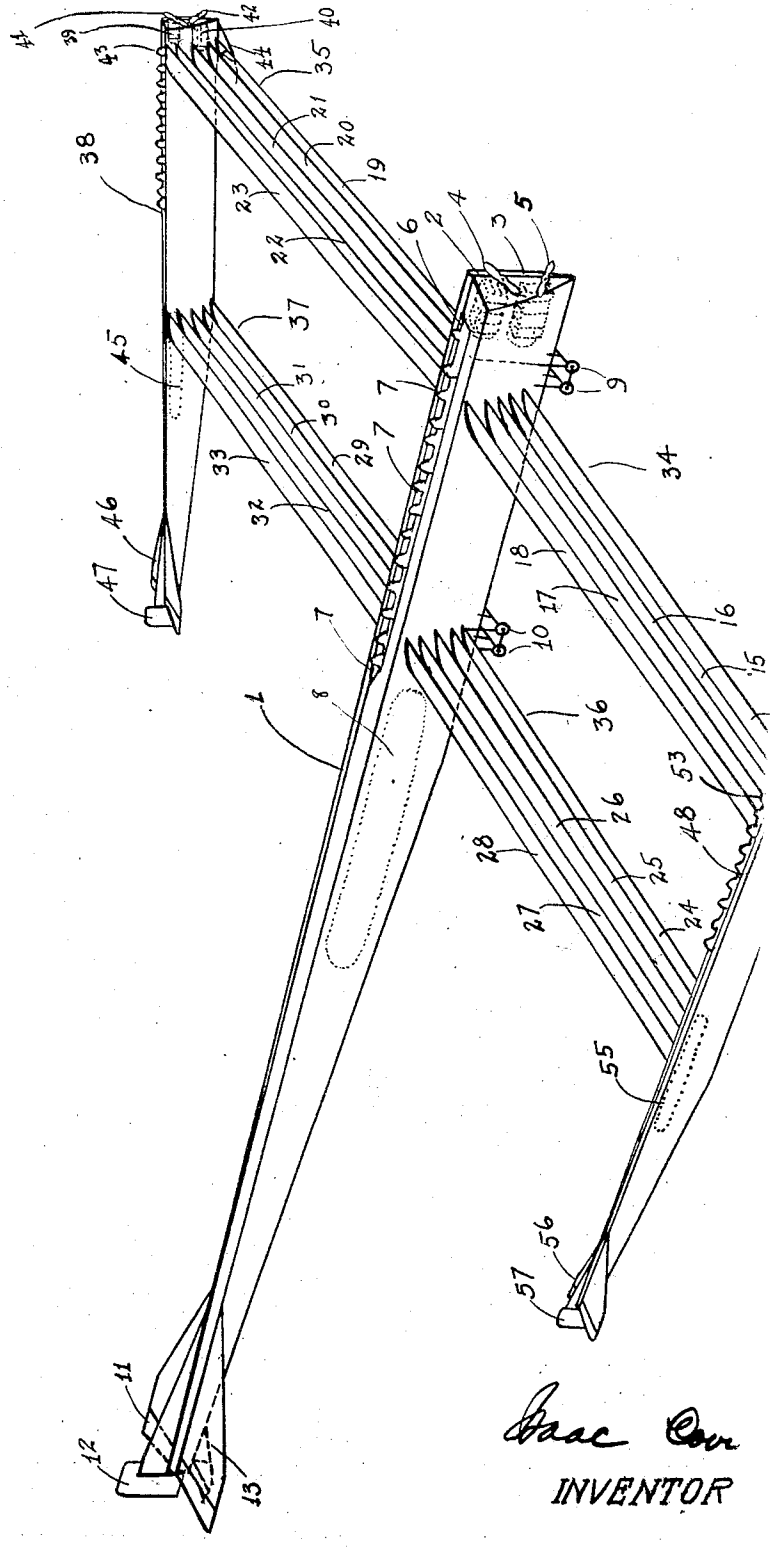

Fig. 1

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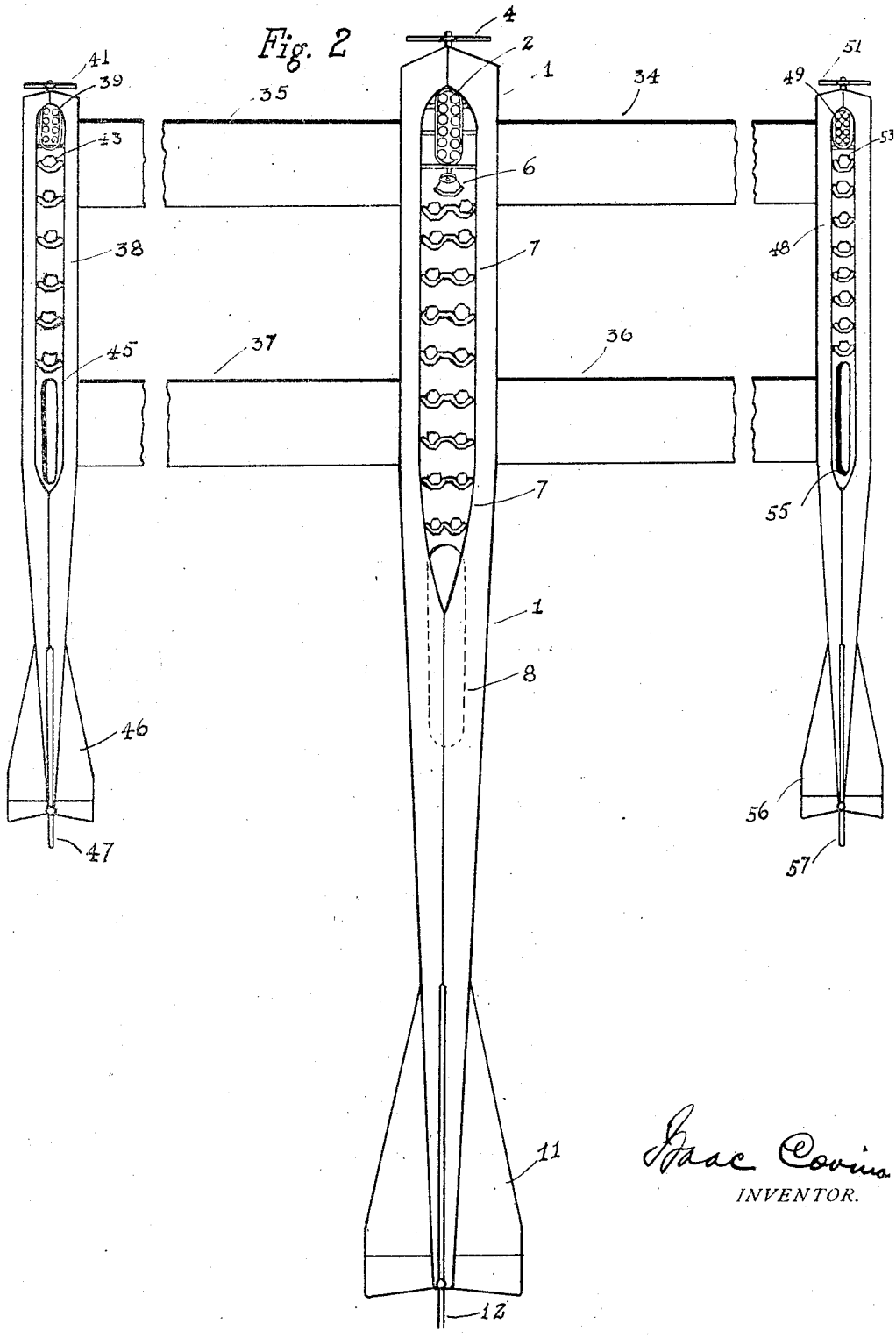
3 SHEETS—SHEET 2.

Fig. 2



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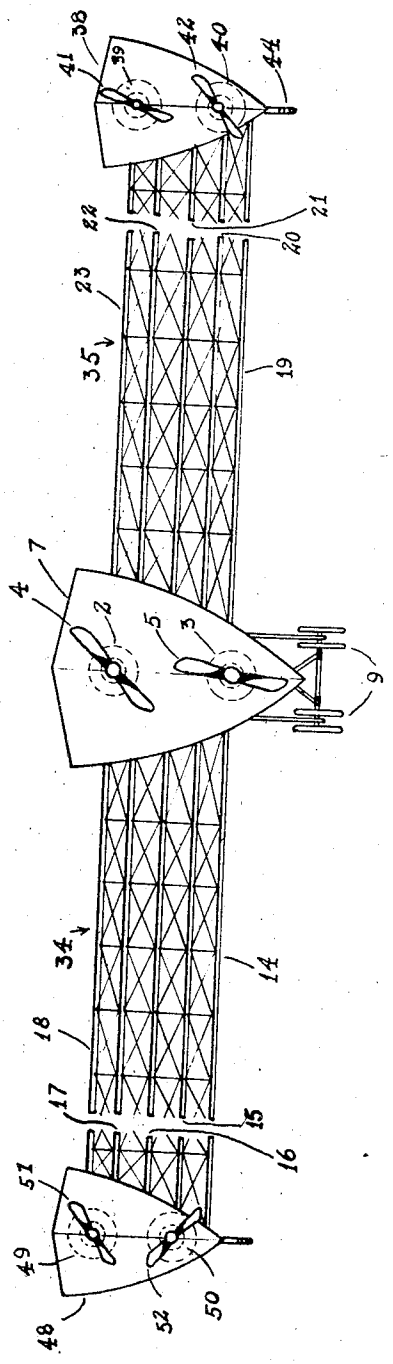

Fig. 3.

Isaac Covino
INVENTOR

UNITED STATES PATENT OFFICE.

ISAAC COVINO, OF WEST NEW YORK, NEW JERSEY.

AEROPLANE.

1,348,983. Specification of Letters Patent. Patented Aug. 10, 1920.

Application filed October 8, 1917, Serial No. 195,307. Renewed June 22, 1920. Serial No. 390,309.

To all whom it may concern:

Be it known that I, ISAAC COVINO, a citizen of the United States, and resident of 474 Park avenue, West New York, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Aeroplanes, of which the following is a specification.

The objects I have in view are the following:

To produce an aeroplane which will have features of advantage in general design, shape, lifting capacity and stability.

To produce an aeroplane which will have ten planes for its lifting power, five planes one over the other being located at the front part of the aeroplane and five other planes located in the center of the main body of the aeroplane.

To produce an aeroplane which will have six modes of propulsion actuated by six different engines or other motive power.

To produce an aeroplane of large capacity and displacement which is capable to make long distance flights and carry a large quantity of fuel or other material.

To produce an aeroplane which may be easily equilibrated and steered by having three systems of steerings, one located at the back or tail end of the main body, and one located at each tail end of each equilibrating body which are located at the tip end of the planes of the aeroplane.

These and further objects will appear more clearly from the following specification and accompanying drawings, considered together or separately.

In the drawings, Figure 1 is a top perspective view of the aeroplane as seen from the front, Fig. 2 is a plan view of the aeroplane having a portion of the planes cut off, and Fig. 3 is a front view of the aeroplane, showing only the front part of the aeroplane.

General construction and design.

In general design my aeroplane consists of:

The main center body 1 having in the front two engines 2 and 3 one above the other and each connected to the propellers 4 and 5 with proper distance between them so as to allow said propellers 4 and 5 free movement of rotation, said engines 1 and 2, and propellers 4 and 5 are so placed as to move independently or simultaneously, having at its upper level 6 the usual steering devices and accommodation for the chief operator and also other seating accommodations at 7 for other passengers, etc., or accommodation for holding other material. At about the center as 8 a large fuel tank is located so as to counter balance the weight of the engine in the front and which stores fuel for engines 2 and 3, also having at its bottom sustaining wheels 9 and 10 which enable the aeroplane to move freely on said wheels when propelled, also having at the back or tail end the usual horizontal rudder 11 and vertical rudder 12 and skid 13.

The sustaining planes 14, 15, 16, 17 and 18 are located one above the other, which will be referred to hereafter as pentaplane set 34, and having the usual angle of incidence as shown; 19, 20, 21, 22 and 23 are similarly placed and form pentaplane set 35; 24, 25, 26, 27 and 28 are also similarly placed and form pentaplane set 36; and 29, 30, 31, 32 and 33 form pentaplane set 37; 35 and 37 are horizontally far apart so that the air currents distorted by 35, when flying, do not interfere with the usual vacuum produced above each plane of 37; 35 and 37 extend to the left of the main body 1; similarly 34 and 36 are to the right of the main body 1 and far apart horizontally so that the air currents distorted by 34, when flying, do not interfere with the usual vacuum produced above each plane of 36. The planes in each pentaplane set of 34, 35, 36 and 37 are of the usual construction and held together with the usual vertical ribs and cross wires now in use for the construction of biplanes.

Lateral equilibrating bodies, the tips of the pentaplanes 35 and 37, at the left side of the main body 1, are connected and embodied in the lateral equilibrating body 38, so as to give each pentaplane 35 and 37 a rigid construction. Body 38 is of the same shape as central body 1, having similarly two motors 39 and 40 and two propellers 41 and 42 which are taken care of by a mechanic located at 43. At the lower front bottom of 38 the skid 44 is located so that no part of 38 will touch the grounds. Should the machine be out of balance when moving, at about the center of 38 the fuel tank 45 is located which stores fuel for the two motors 39 and 40; said body 38 having at its back or tail end the usual horizontal and vertical steering rudders 46 and 47; the tips of the

pentaplanes 34 and 36 at the right side of the main body 1 are connected and embodied in the lateral equilibrating body 48 so as to give each pentaplane 34 and 36 a rigid construction. Body 48 is of same size and shape as body 38, having similarly two motors 49 and 50, and two propellers 51 and 52, which are operated by a mechanic located at 53. Skid 54 serves the same purpose as 44. At about the center of 48 the fuel tank 55 is located which stores fuel for the two motors 49 and 50; said body 48 having at its back or tail end the usual steering horizontal rudder 56 and vertical rudder 57, similar to those of 38.

To operate: the propellers 4, 5, 41, 42, 51 and 52 are set in motion by their respective motors either simultaneously or in the following combinations; of 42, 52 and 4; of 51, 41 and 5; of 4 and 5; of 51, 52, 41 and 42, so that equilibrium is constantly maintained while the aeroplane is flying, after the propellers are set in motion the aeroplane skids along the ground until sufficient speed is obtained so as to allow the air currents encountered by the planes enough resistance under each plane and therefore enough lifting power for the aeroplane to ascend from the ground. The different engines and propellers are to be set in motion by each operator when signaled so to do by the chief operator 6, who has complete control of the motion of the aeroplane. The aeroplane may be made to ascend or descend by moving the horizontal rudders 46, 11 and 56 simultaneously up or down, it may be made to move to the right or left by moving the vertical rudders 57, 12 and 47 simultaneously. All of the said rudders are steered by the usual mode of steering by the chief operator located at 6. The rudders 46, 11 and 56 are controlled and moved all or independently by the operator 6. In order to maintain equilibrium and prevent the aeroplane from tilting the operator 6 moves 46 up and 56 down or 56 up and 46 down in accordance to which side the aeroplane is above or below the imaginary plane passing through the main body 1 in a horizontal position. To descend the operator shuts off the power and stops the propellers and by lowering the horizontal rudders gradually the machine glides to the ground, rolling along over the wheels located at the front of the main body until it stops.

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

1. An aeroplane comprising a main body having a horizontal and vertical steering means at its back or tail end and supporting wheels underneath said body, having on each side ten sustaining planes in sets of five each, vertically one over the other and forming two sets horizontally situated, each set being at a suitable distance apart, each plane having the usual angle of incidence; two equilibrating bodies of the same shape as that of central body and each located at the tip of the two series of planes on each side. All substantially as described.

2. An aeroplane having a main body, ten sustaining planes on each side of said main body, an equilibrating body at the tips of the ten planes on each side so as to give the planes a rigid construction. All substantially as described.

In testimony whereof I have affixed my signature in the presence of two witnesses.

ISAAC COVINO.

Witnesses:
ROBERT JAMES,
PAUL MOSKOWITZ.