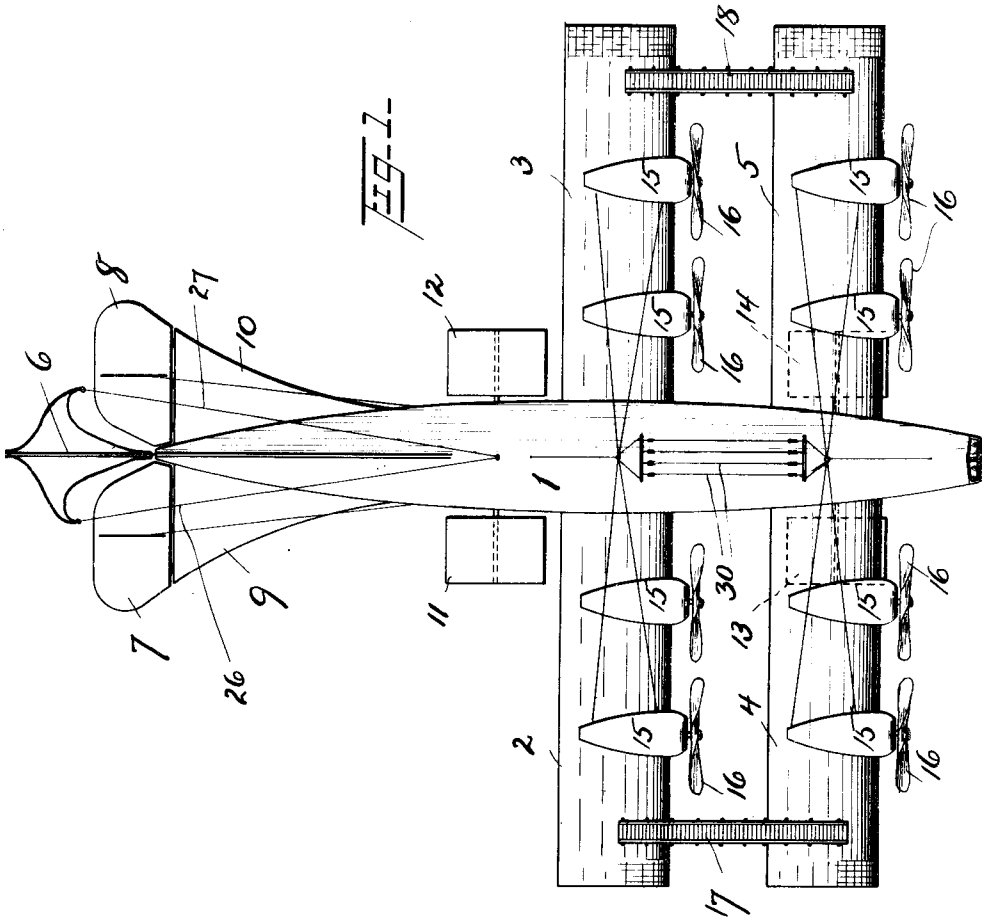
March 12, 1929. A. HERBERT 1,704,831

FLYING MACHINE

Filed Nov 25, 1926 3 Sheets-Sheet 1



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FLYING MACHINE

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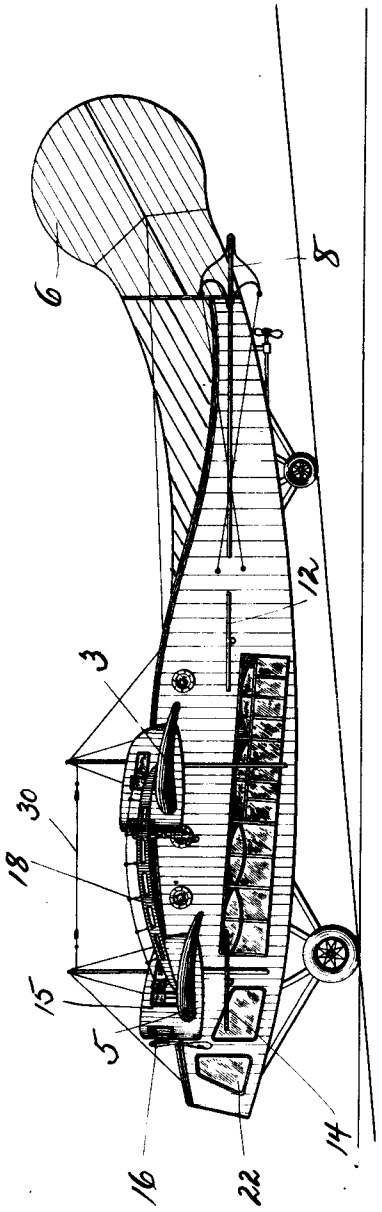


FIG. 2.

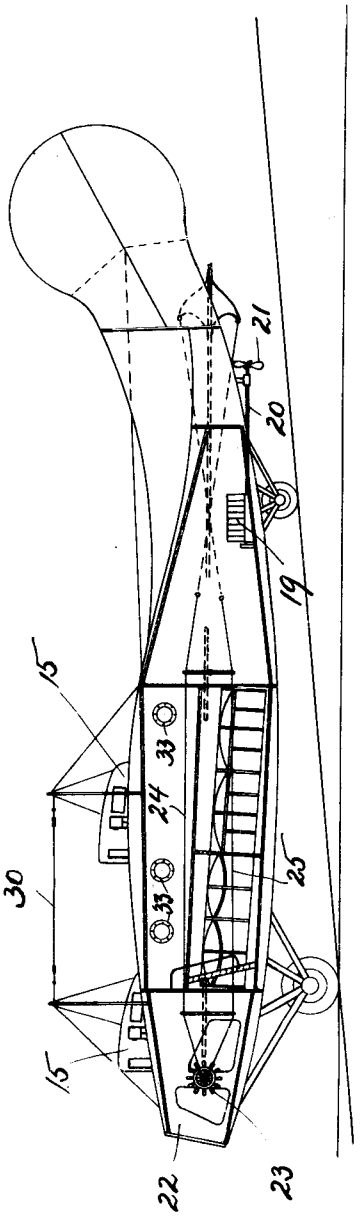


FIG. 3.

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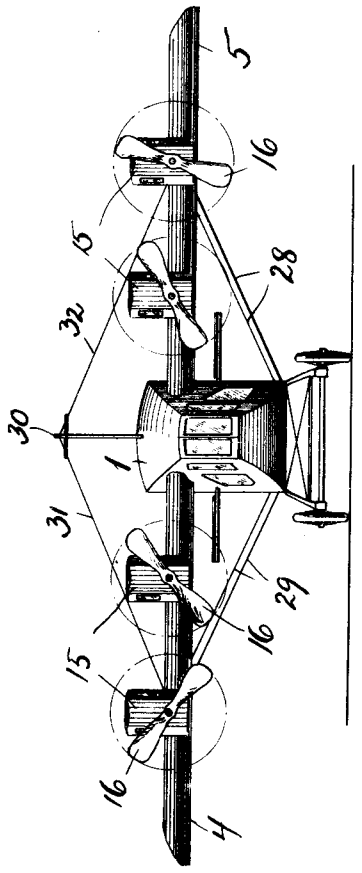


FIG. 4.

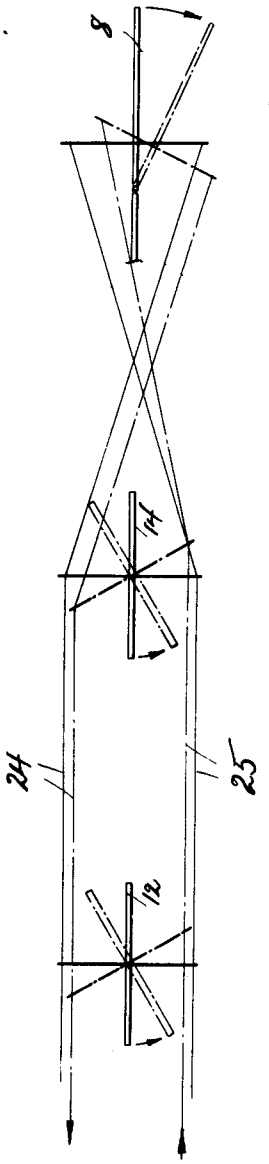


FIG. 5.

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UNITED STATES PATENT OFFICE.

ALFRED HERBERT, OF MONTCLAIR, NEW JERSEY.

FLYING MACHINE.

Application filed November 25, 1926. Serial No. 150,636.

My invention relates to motor-driven heavier than air flying machines and has for its object to produce a flying machine of considerable carrying capacity and driving power and having a considerable safety margin.

The flying machine, according to my invention is equipped with two pairs of rigid wings, one pair arranged on either side of the air-plane body, and the wings of each pair being disposed in substantially the same horizontal plane, one behind the other, which arrangement gives the air-plane great stability. Into the wings are built cabin-like structures for housing the engines which drive the propellers. Preferably, two engines, each equipped with a propeller, are placed in each wing so that eight engines and eight propellers are available. At the rear end, the air-plane is provided with the usual vertical rudder as well as two horizontal rudders, whereas along either side of the air-plane body are provided two additional steering planes, one being located practically below the forward wing and the other below the rear wing but back of the same. A single means is provided in the forwarded section of the air-plane body for simultaneously controlling the two horizontal rudders and the additional steering planes. Between the two pairs of wings on either side of the air-plane body, there is provided a gangway to establish communication between each two pairs of wings, while the machine is in flight. The lower-portion of the air-plane body is arranged to contain a dining-room, parlor and baggage-room as well as space for the fuel-tanks, whereas above the dining-room and parlor are provided sleeping quarters. Finally, on top of the air-plane body is provided an aerial for transmitting and receiving radio-messages.

For a fuller understanding of my invention, I refer to the annexed drawings in which I have shown, by way of illustration, an embodiment of my invention, and in which Fig. 1 is a top-plan view of the new air-plane, Fig. 2 a side elevation thereof, Fig. 3 a central longitudinal vertical section, Fig. 4 a front elevation and Fig. 5 a diagrammatic view showing the steering arrangement.

As shown in Fig. 1, the flying machine comprises the central body portion 1 of cigar-shape and the four rigid wings or supporting planes 2, 3, 4 and 5, which as clearly shown are arranged in pairs on either side of the body 1, one behind the other, the wings lying substantially in the same horizontal plane. At the tail end of the body 1 is provided the movable vertical rudder 6 and on both sides thereof the movable horizontal rudders 7 and 8 which are pivoted to the stationary steering planes 9 and 10 respectively. Additional movable steering planes are arranged in pairs on either side of the body 1, two being shown in Fig. 1 at 11 and 12 and the other two being indicated in Fig. 1 by the broken lines at 13 and 14. The forward steering planes 13 and 14 are located below the forward wings 4 and 5 practically in the same vertical plane, whereas the rear planes 11 and 12, which lie in about the same horizontal plane with the said forward steering planes, lie somewhat back of the rear wings 2 and 3.

Into each wing are built two cabin-like structures 15 equipped with windows as clearly shown in Figs. 2 and 4, in which structures are housed the engines (not shown) for driving the propellers indicated at 16. There being provided four wings, two on either side of body 1, eight engines and eight propellers are thus provided. The horse-power of each engine is such, that four engines are sufficient to drive the airplane at the desired speed, so that four engines are always in reserve to be used, should any of the other engines fail for some reason. The arrangement is such, that, when the inside engines of the rear wing are in operation, the outside engines on the forward wing are used, and vice versa, whereby the stresses and the vibrations are more uniformly distributed or balanced. In order to afford ready access to the various engine-cabins, each wing-pair is connected by gangways 17 and 18 respectively (Fig. 1).

An additional engine is shown at 19 in Fig. 3 the shaft 20 of which engine projects from the rear end of the body 1 and at its end carries a screw-propeller 21, adapted to drive the airplane, should the same have to descend on water.

In the extreme forward section of the body 1 is located the steering cabin 22 containing the steering wheel 23 to which are connected the wires 24 and 25 for operating the steering planes 11, 12, 13, and 14 and the movable horizontal rudders 7 and 8. As will be seen from the diagrammatic Fig. 5, the arrangement is such that, when the steering planes 11, 12, 13, 14 are turned downwards from the

full-line position to the broken-line position, the horizontal rudders 7 and 8 are by the same control tilted from the full-line position to the broken-line position, and vice-versa. Separate wires 26, 27 (Fig. 1) run from the steering cabin to the vertical rudder 6 which controls the lateral position of the machine.

In Fig. 4 are shown the stays 28, 29, for the wings, whereas on top of the body 1 is shown at 30 an aerial for the transmission and reception of wireless signals, the wires 31, 32 being provided to steady the aerial.

The inner arrangement of the body will appear from Fig. 3, according to which the lower space is designed to contain a dining room and parlor, whereas the upper space is designed for sleeping quarters, the port-holes therefor being indicated at 33 in Fig. 3. Back of the dining-room is provided space for baggage and fuel-tanks.

The flying machine is compact, of large carrying capacity and driving power and has great stability. It is easily steered and its control is perfect.

Of course, I do not limit myself to the actual construction as shown, which is merely for illustration purposes.

I claim:

1. In a flying machine of the heavier than air type, the combination with the body portions containing cabins, of two pairs of spaced stationary wings of substantial depth, the said pairs being provided on either side of said body portion in tandem relation and in substantially the same horizontal plane and each wing including cabins for housing a propeller-driving engine, movable steering planes disposed below said wings, a single means for simultaneously adjusting said steering planes, a movable vertical rudder at the tail end of said body portion, movable horizontal rudders on the sides of said vertical rudder, and means for operating said rudders.

2. The combination as specified in claim 1, including a gangway connecting the wings of each pair near their outer ends.

In testimony whereof I affix my signature.

ALFRED HERBERT.