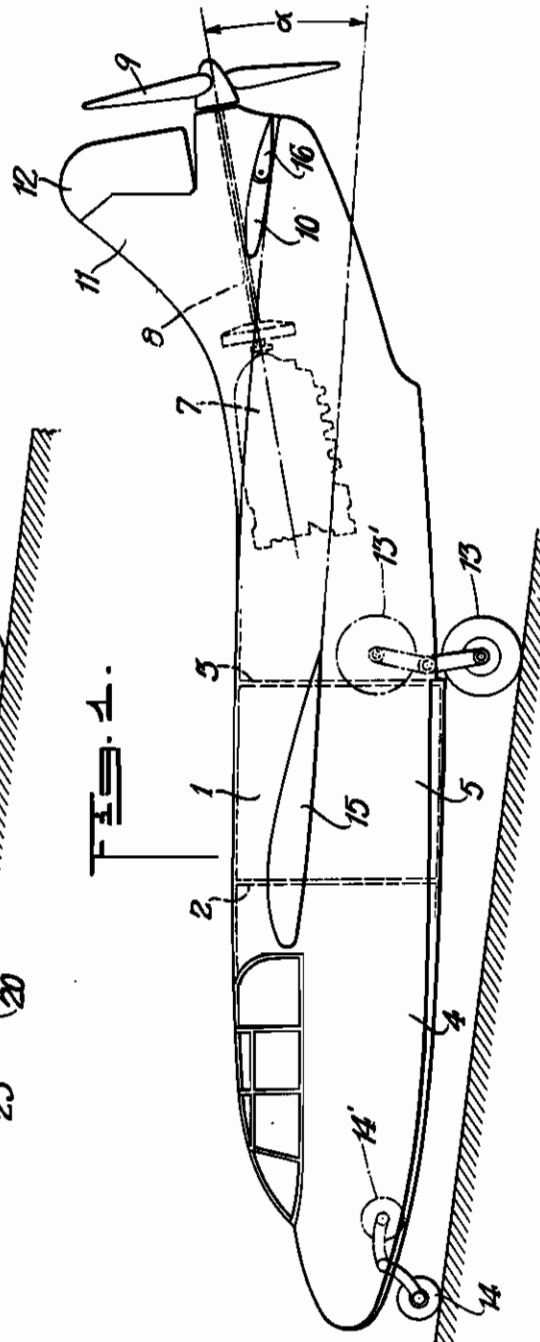
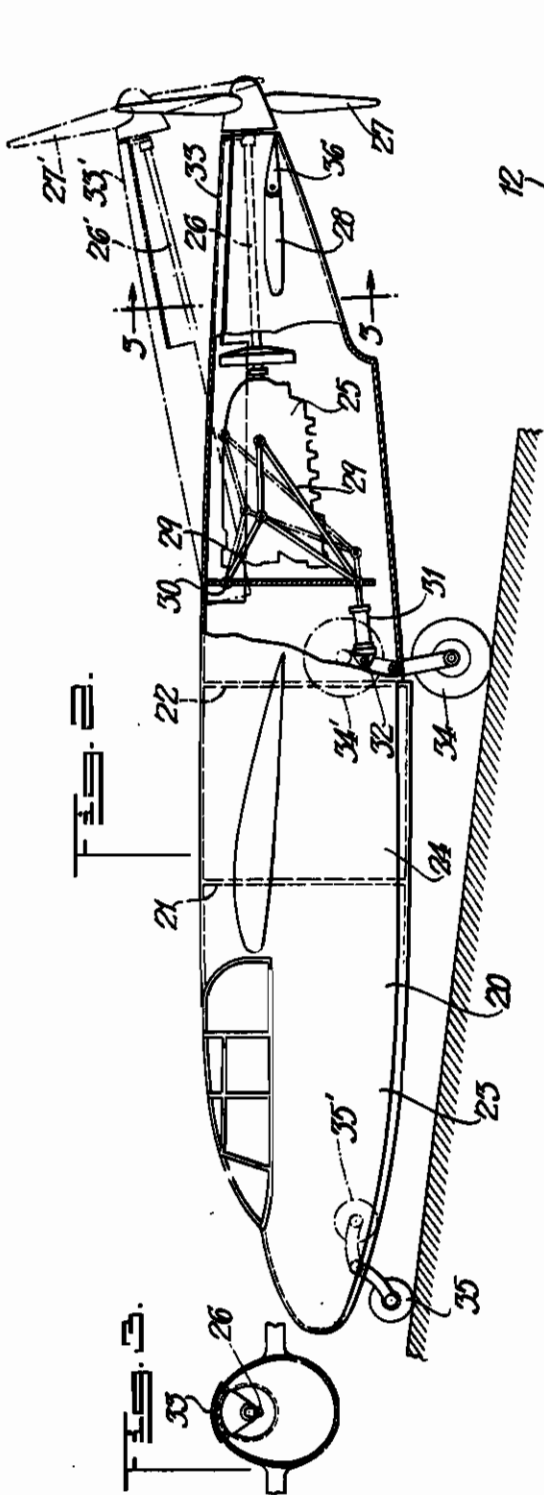


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C. DORNIER
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INVENTOR.
CLAUDE DORNIER.
BY *Karl R. Mayr.*
ATTORNEY.

ALIEN PROPERTY CUSTODIAN

AEROPLANE

Claude Dornier, Friedrichshafen A. B., Germany;
vested in the Alien Property Custodian

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The present invention relates to a new aeroplane construction.

The fuselage of the aeroplane according to the present invention is divided by suitable transverse walls into a plurality of chambers which are situated behind one another. The forward chamber may be used in known manner for receiving crew and/or passengers. The propelling plant is in the rear part of the fuselage. The compartment or compartments which is or are situated between the front compartment and the power plant may be used for luggage, operating material such as fuel, oil etc. The motor or motors drive a push propeller by means of shaft extensions or transmission shafts. The push propeller is located in the rear of the tail unit.

The center of gravity of the aeroplane according to the present invention is so far towards the rear that under normal flying conditions at least one tenth of the total weight is carried by the tail unit or parts thereof.

In order to protect the pushing propeller when starting or landing against contact with the ground or water the power plant is so positioned that the axis of rotation of the propeller and of the drive shaft and the wing chord form an angle which opens rearward and upward, or means are provided for temporarily lifting or swinging the pushing propeller upward. The last mentioned means may be of such nature that only the propeller with its drive shaft can be displaced and the motor remains in its position or that the whole propelling plant including the motor can be lifted or swung. The present invention can be applied to planes in which the propeller is driven by one or a plurality of motors.

By combining the various features set forth above a new aeroplane type is produced which constitutes an important progress in the art. The advantages of the new construction are as follows:

- (a) crew and passengers are not disturbed by noise or fumes,
- (b) completely clear vision,
- (c) unobstructed shooting range,
- (d) lowest possible resistance of the propelling plant,
- (e) no undesired influence of the propeller wind on the tail unit.

Division of the fuselage in such manner that the compartment for the pilot and/or passengers is at the nose end of the fuselage was hitherto only possible with multi-motor aeroplanes the motors of which are positioned on the wings or in a special motor gondola above the fuselage.

In one-motor aeroplanes of conventional construction the compartment for the operator and/or passenger may be arranged at the nose end of the fuselage only if the motor is situated above the fuselage. In all these cases the power plant is located outside of the fuselage and causes greater air resistance than a power and driving plant which is located within the fuselage. An exception is made by aeroplanes having no tail. Such aeroplanes, however, are not as stable as aeroplanes according to the present invention. Multimotor aeroplanes are in many cases too expensive; the same is the case with arrangements whereby a motor situated in the fuselage drives one or more propellers by means of bevel gears and transmission shafts. The present invention is applicable to land planes as well as sea planes.

Further and other object of the present invention will be hereinafter set forth in the accompanying specification and shown in the drawings which, by way of illustration, show what I now consider to be a preferred embodiment of my invention.

In the drawings:

Figure 1 is a diagrammatic lateral view of an aeroplane according to the present invention.

Figure 2 is a diagrammatic lateral view with parts broken away of a modified aeroplane according to the present invention.

Figure 3 is a diagrammatic cross-sectional view taken along line 3-3 in Fig. 2 of an aeroplane according to the present invention.

Referring more particularly to Fig. 1 of the drawings, numeral 1 designates the fuselage the interior of which is divided by means of walls 2 and 3 into three compartments. The forward or nose compartment 4 serves as room for operator and passengers. The intermediate compartment 5 may serve as storage for operating material, luggage etc. The rear or tail compartment contains a motor 7, which drives the pushing propeller 9 by means of a shaft 8. The axis of rotation of the propeller 9 and shaft 8 form with the chord of the wing 15 an angle α which opens rearward and upward. Forward of the propeller and below shaft 8 is the tail plane 10 and elevator 18. Numeral 11 designates the fin and 12 the rudder.

If an aeroplane of the type shown in Figure 1 is built as an amphibian an undercarriage is provided having wheels 13 which can be laterally swung into suitable recesses of the fuselage into the position 13' when the machine has taken the air. A forward landing wheel 14 is provided which also can be swung into a suitable recess

of the fuselage into the position indicated by numeral 14'.

Figure 2 is a lateral view of an aeroplane according to the present invention having a displaceable power plant and propeller. The rear part of a lateral wall of the fuselage is broken away so that the motor and its swingable support is visible. The fuselage is divided into three compartments by means of the partition walls 21 and 22. The forward or nose compartment 23 may be used for accommodating passengers and pilot.

In the intermediate compartment 24 containers for fuel and oil, luggage and the like may be stored. The rearward part of the fuselage contains a motor 25 which drives the pushing propeller 27 by means of the shaft 26. In front of and below shaft 26 is the tail plane 28 and the elevator 36. The motor 25 together with its support 29 is swingable about an axis 30. A hydraulic cylinder 31 is provided which is swingably connected at 32 with the fuselage. If a pressure fluid is supplied to said cylinder motor 25 is swung upward. The bearings of shaft 26 and the pushing propeller 27 and also the part 33 of the fuselage which is located above the shaft 26 are rigidly connected with the motor and

its support. The movable part 33 of the fuselage can also be seen in Fig. 3. Whenever the motor 25 is swung upward the shaft 26, the propeller 27 and the fuselage part 33 also are swung upward so that they assume the position indicated in dash- and dotted lines and designated by numerals 26', 27' and 33'. The larger part of the rearward end of the fuselage together with the tail plane and elevator remain in their original position. There are two fins and two rudders which may be connected to the outward end of the tail plane and positioned on both sides of the driving unit. The aeroplane according to Fig. 2 may also be built as an amphibian and is then provided with landing wheels 34 which can be swung into the position designated by numeral 34' and a forward landing wheel 35 which can be swung into the position 35'.

While I believe the above described embodiments of my invention to be preferred embodiments, I wish it to be understood that I do not desire to be limited to the exact details of design and construction shown and described, for obvious modifications will occur to a person skilled in the art.

CLAUDE DORNIER.