June 17, 1930. P. R. CHADBOURNE 1,764,932

AEROPLANE

Filed Dec. 31, 1929 2 Sheets-Sheet 1

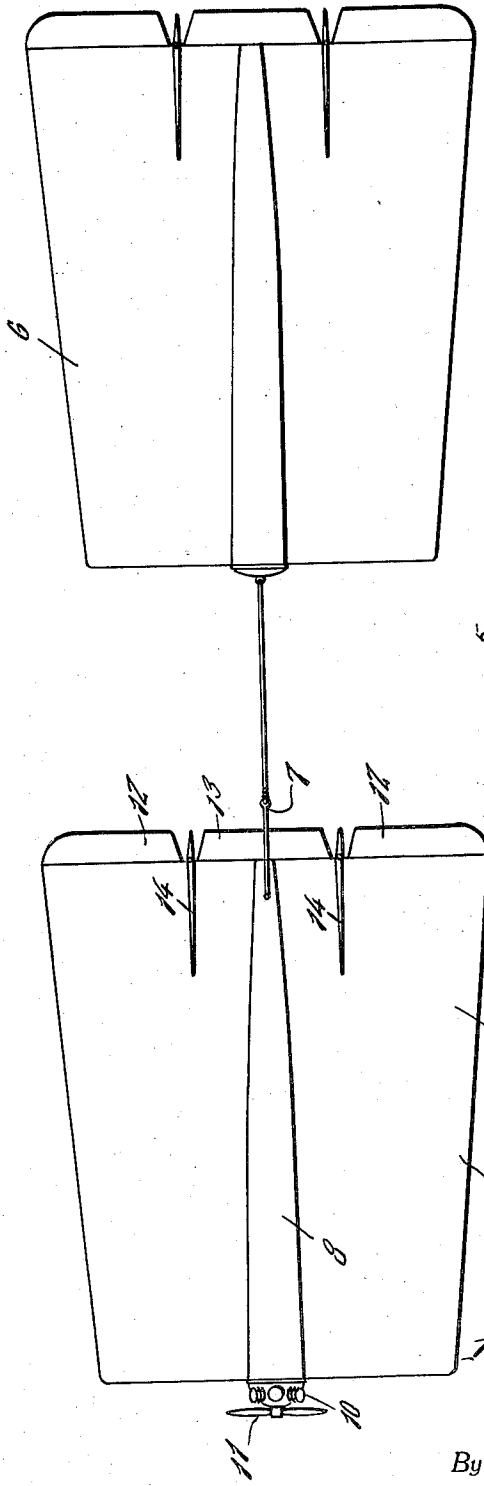


Fig. 1.

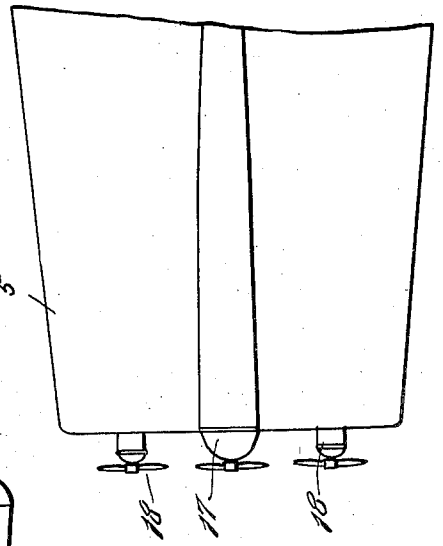


Fig. 4.

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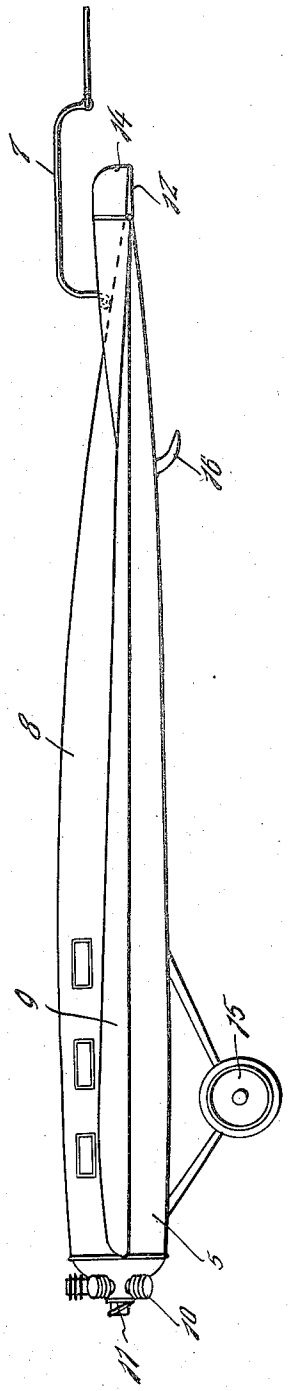


Fig. 2.

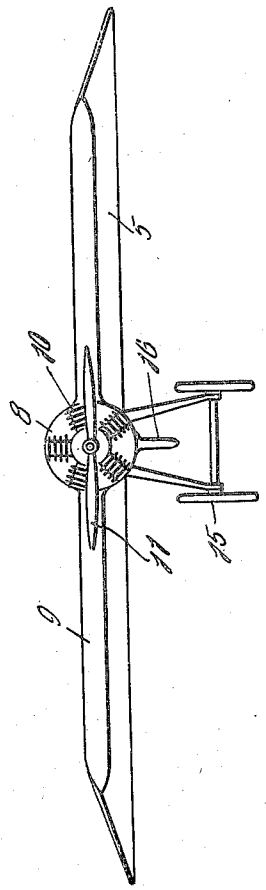


Fig. 3.

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UNITED STATES PATENT OFFICE

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AEROPLANE

Application filed December 31, 1929. Serial No. 417,726.

The present invention relates to aeroplanes and more particularly to an improved wing construction.

One of the important objects of the present invention is to provide a wing construction for aeroplanes by means of which the sustaining surface of the plane is greatly increased.

A still further important object is to provide an aeroplane having wings at each side of the fuselage or body portion, sufficient lifting area to enable the wings to sustain the aeroplane in flight for a limited period without the aid of propelling means after the same has once been put in motion and thus provide for the use of the aeroplane as a trailer adapted to be drawn through the air by a preceding plane, and which trailer may be detached while in flight for gliding to the earth independent of the pulling aeroplane.

A further object is to provide an aeroplane structure which is strong and durable, which may be manufactured at relatively low cost and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the special construction, combination and arrangement of the various elements forming the invention as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a top plan view,

Figure 2 is a side elevational view,

Figure 3 is a front elevational view, and

Figure 4 is a fragmentary top plan view of a modified form of aeroplane.

Referring now to the drawings in detail wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention the numeral 5 designates a pulling aeroplane and the numeral 6 designates a trailing aeroplane adapted to be drawn through the air by a conventional type of coupling member 7 capable of releasing the trailer so that the trailer may glide to the earth independently of the preceding aeroplane.

Both the trailer and pulling aeroplane includes a fuselage or body structure 8 having wings 9 at each side thereof. As clearly illustrated in Figure 1 of the drawings the wings extend laterally from each side of the fuselage and further extends longitudinally of the fuselage for the full length thereof.

The fuselage preferably tapers rearwardly while the wings 9 slightly increase in width rearwardly to provide a greater lifting area at the rear end of the aeroplane.

A motor 10 is mounted at the front end of the fuselage for driving the propeller 11 in the conventional manner. Ailerons 12 are mounted at the rear edge of the wings, adjacent each end thereof with an elevator 13 provided immediately rearwardly of the fuselage.

A pair of rudders 14 are also mounted at the rear edge of the wing, preferably positioned between the adjacent end of the ailerons 12 and elevator 13.

The under side of the fuselage is also provided with the usual landing gear 15 adjacent the forward end and the skid 16 adjacent the rear. As illustrated in Figure 4, the pulling or front aeroplane may be of the dry-motor type including a central propelling unit 17 and a pair of outwardly disposed propelling units 18 mounted in the front edge of the wings 9.

The wings are also preferably constructed along stream line effect as clearly illustrated in Figures 2 and 3 of the drawings.

By constructing the wings in accordance with my invention, it will be apparent that the lifting area of the frame will be greatly increased and enable the aeroplane to be used as a glider after the same has once been given sufficient momentum to remain in flight.

The trailer aeroplane 6 is constructed identical to the pulling aeroplane 5, except for the omission of the propelling unit whereby it will be apparent that the trailer may be relieved and through the manipulation of the elevational and directional control means can be landed independent of the pulling aeroplane.

It is obvious that my invention is suscepti-

ble to various changes and modifications in construction without departing from the spirit of the invention or the scope of the appended claims, and I accordingly claim all such forms of the device to which I am entitled.

Having thus described my invention, what I claim as new is:

An aeroplane comprising a fuselage, wings at each side thereof having their ends terminating at the transverse plane of the front and rear ends of the fuselage, said wings being of a gradually increasing width from the front to the rear ends thereof, ailerons carried at the rear edges of the wings adjacent the side ends thereof, an elevator carried at the rear end of the fuselage and overlapping the adjacent edges of the wings and rudders positioned between the ailerons and the elevator.

In testimony whereof I affix my signature.

PHILIP RAYMOND CHADBOURNE.