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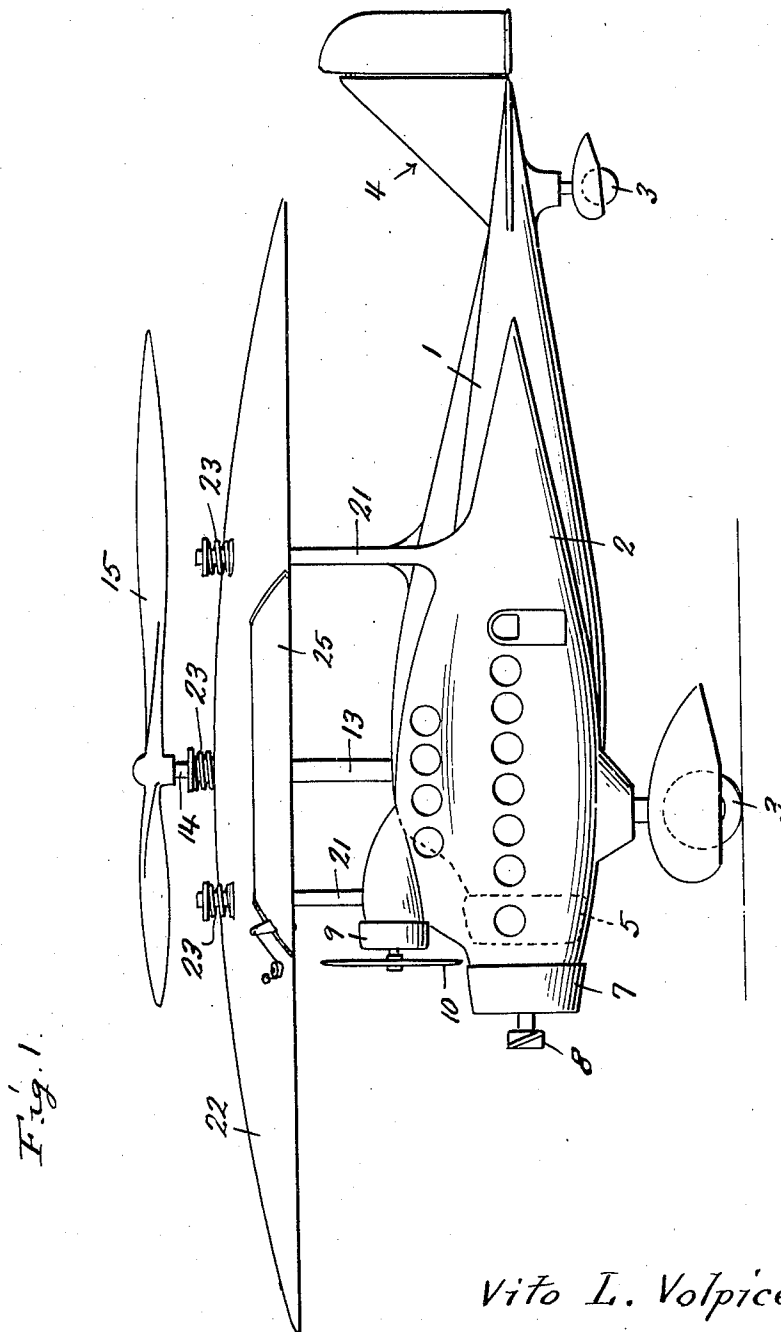
V. L. VOLPICELLI

2,054,610

AEROPLANE

Filed Oct. 24, 1935

4 Sheets-Sheet 1



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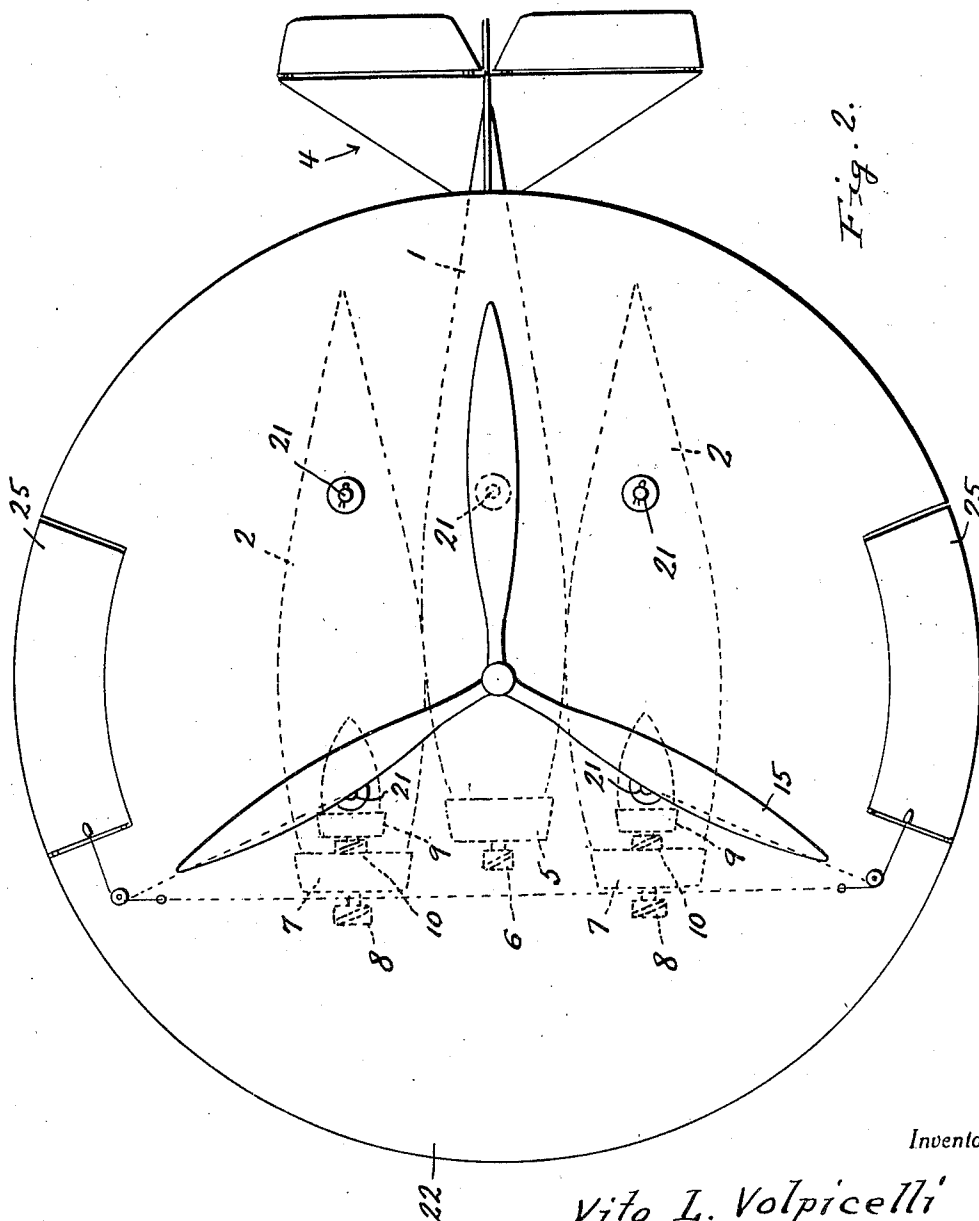
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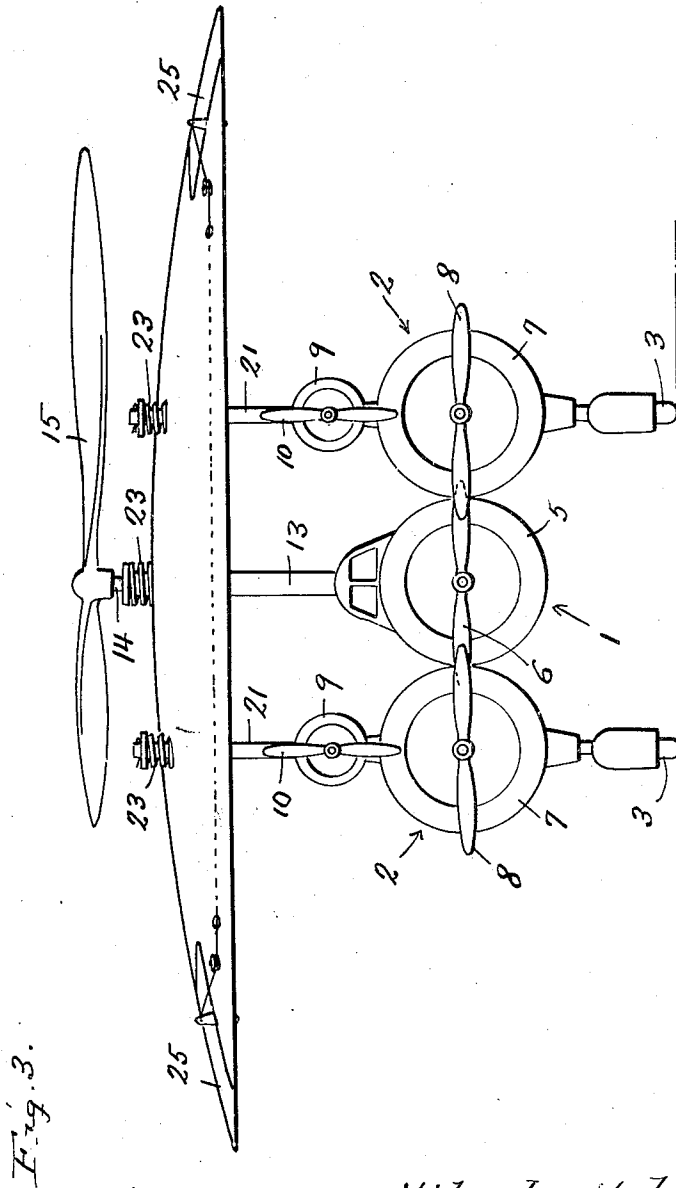
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Fig. 5.

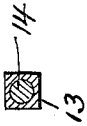
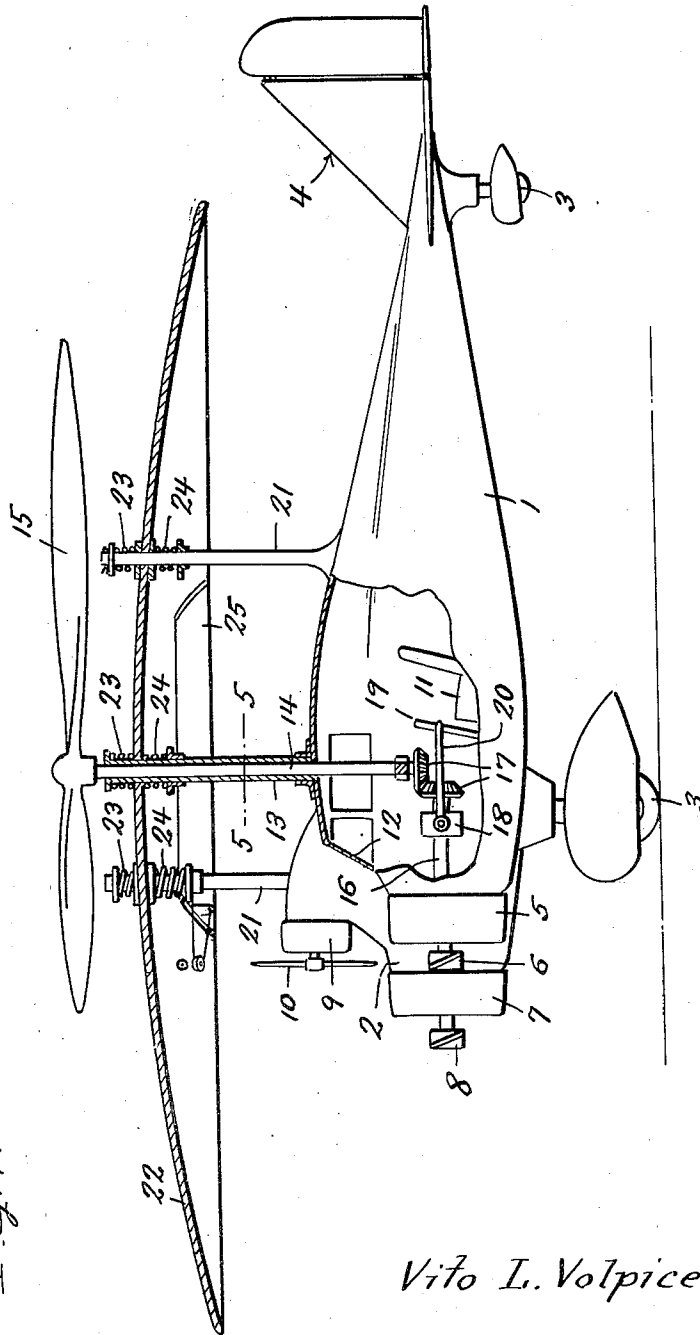


Fig. 4.



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UNITED STATES PATENT OFFICE

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AEROPLANE

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Application October 24, 1935, Serial No. 46,571

2 Claims. (Cl. 244—15)

The present invention relates to new and useful improvements in aeroplanes and has for one of its important objects to provide, in a manner as hereinafter set forth, a device of this character which is capable of carrying comparatively large and heavy loads on long flights with economy and safety.

Another very important object of the invention is to provide an aeroplane embodying a novel construction, combination and arrangement of parts through the medium of which takeoffs and landings in comparatively restricted areas may be accomplished at low speeds.

Still another very important object of the invention is to provide an aeroplane of the character described embodying a novel construction and mounting of wing whereby the speed of descent in case of engine failure will be materially lowered for permitting safe landings to be made under such circumstances.

Other objects of the invention are to provide an aeroplane of the character described which will be comparatively simple in construction, strong, durable, compact, light in weight and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:—

Figure 1 is a view in side elevation of an aeroplane constructed in accordance with the present invention.

Figure 2 is a view in top plan thereof.

Figure 3 is a front elevational view.

Figure 4 is a view partially in vertical longitudinal section and partially in side elevation.

Figure 5 is a detail view in horizontal section, taken substantially on the line 5—5 of Figure 4.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a centrally located main fuselage 1 on the sides of which comparatively small fuselages 2 are mounted. Landing wheels 3 are provided beneath the outer fuselages 2 and on the rear end portion of the main or inner fuselage 1. It will be observed that the main fuselage 1 extends rearwardly beyond the fuselages 2 and is provided with a tail assembly which is designated generally by the reference numeral 4.

A radial engine 5 on the forward end or nose of the main fuselage 1 drives a tractor or puller

propeller 6. Radial engines 7 on the forward ends or noses of the outer fuselages 2 drive propellers 8. Auxiliary engines 9 are provided on top of the outer fuselages 2 and drive propellers 10. The main fuselage 1 is to accommodate the pilot of the craft and, as best seen in Figure 4 of the drawings, said main fuselage 1 is provided with a seat 11, observation windows 12, etc.

Rising from the top of the main or intermediate fuselage 1 is a substantially square post 13 having a circular bore (see Figure 5) in which a vertical propeller shaft 14 is journaled. Fixed on the upper end of the shaft 14 is a horizontally arranged lifting propeller 15. The vertical shaft 14 is driven by a horizontal shaft 16 from the engine 5 through beveled gears 17. A clutch 18 controls the drive connection between the shafts 16 and 14, said clutch being operatively connected to a hand lever 19 adjacent the pilot seat 11 by a link 20.

Also rising from the inner fuselage 1, and from the outer fuselages 2, are posts 21. The reference numeral 22 designates a substantially concavo-convex circular wing which is floatingly mounted on the upper portions of the posts 13 and 21 between the upper and lower coil springs 23 and 24, respectively. The side portions of the wing 22 are recessed to accommodate ailerons 25. Any suitable means may be provided for actuating the ailerons 25, also for actuating the control surfaces of the tail assembly 4.

It is thought that the operation of the invention will be readily apparent from a consideration of the foregoing. When taking off, the propeller 15 lifts the plane, assisted, of course, by the wing 22, the propellers 6, 8 and 10 pulling said plane forwardly. When sufficient altitude has been reached the propeller 15 may, if desired, be disconnected from the engine 5 through the medium of the clutch 18. Should engine failure occur the substantially concavo-convex circular wing 22 will function somewhat in the manner of a parachute to lower the speed of descent. The wing 22 is of any suitable light but strong and rigid material, such as Duro-aluminum and the resilient or floating mounting of said wing prevents the same from sustaining damage from shock, as when landing, traveling over rough ground, or when flying through rough or bumpy air.

It is believed that the many advantages of an aeroplane constructed in accordance with the present invention will be readily understood, and although a preferred embodiment of the invention is as illustrated and described, it is to be un-

derstood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

5 What is claimed is:—

1. An aeroplane comprising a main fuselage, auxiliary fuselages on each side thereof, posts rising from said fuselages, a rigid, substantially concavo-convex circular wing slidably mounted on said posts, and springs mounted on the posts above and below the wing and engaged therewith for yieldingly resisting upward and downward movement of said wing on the posts and driving motor for each fuselage.

15 2. An aeroplane comprising, in combination, an

intermediate fuselage and outer fuselages paralleling said intermediate fuselage, posts rising from the fuselages, a vertical shaft extending rotatably through one of said posts, an elevating propeller mounted on the upper end of said shaft, clutch controlled means for actuating said propeller, means on the forward ends of the fuselages for propelling the aeroplane in a horizontal plane, a rigid, substantially concavo-convex circular wing slidably mounted on the posts, and coil springs mounted on said posts above and below the wing and engaged therewith for yieldingly resisting upward and downward movement of said wing on the posts.

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