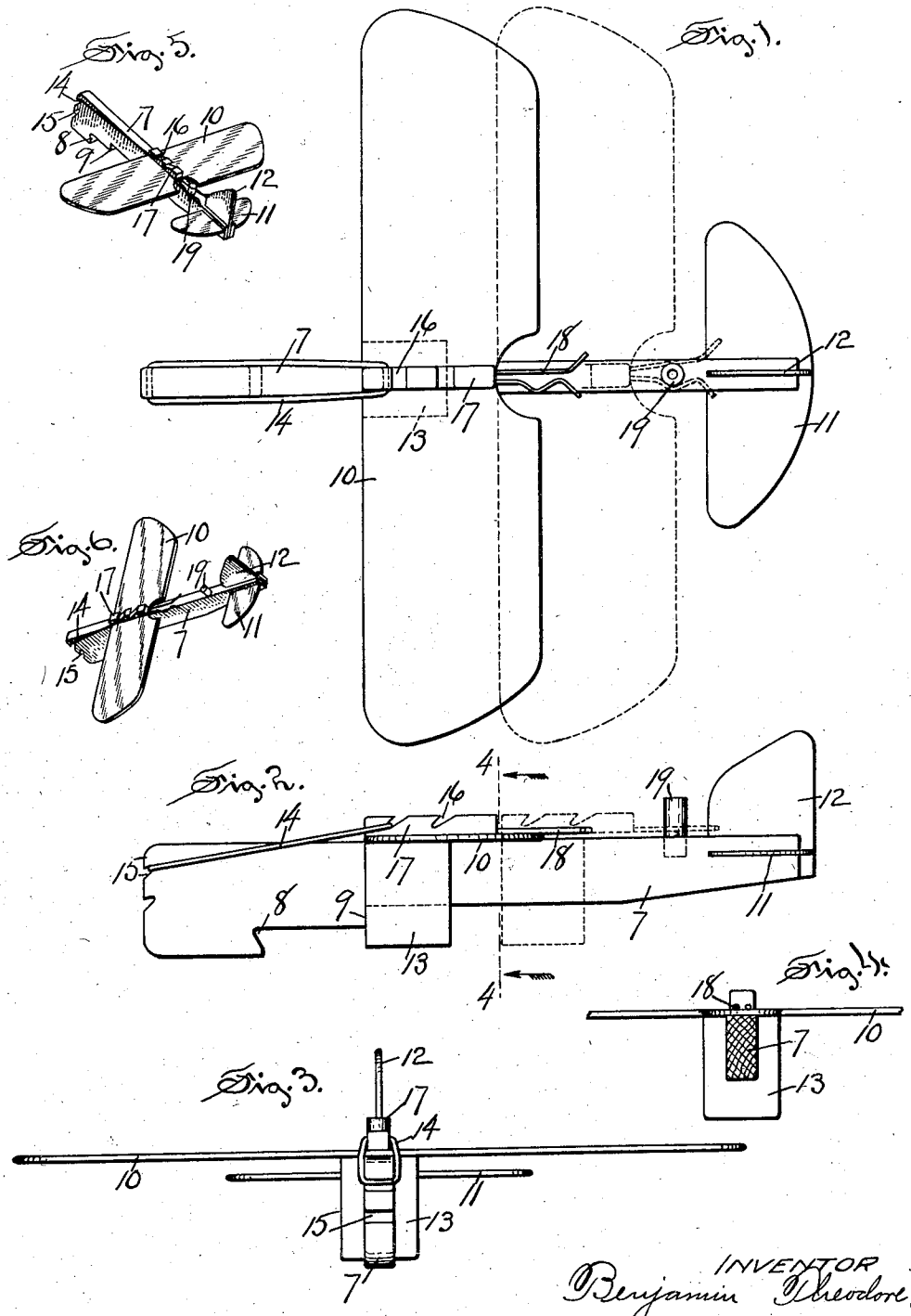
July 23, 1935. B. THEODORE 2,008,997

GLIDER

Filed Dec. 13, 1934



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Patented July 23, 1935 2,008,997

UNITED STATES PATENT OFFICE

2,008,997

GLIDER

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Application December 13, 1934, Serial No. 757,283

6 Claims. (Cl. 46—50)

My invention relates to that class of devices which are constructed to be self-maintained in the air during brief periods of flight, and an object of my invention, among others, is to provide a structure of this type provided with means to produce maximum results in initiating flights and in maintaining itself in the air for maximum lengths of time after the flight has been initiated.

One form of a glider embodying my invention and in the construction and use of which the objects herein set out, as well as others, may be attained is illustrated in the accompanying drawing in which—

Figure 1 is a plan view of my improved glider.

Figure 2 is a side view of the same.

Figure 3 is a front view.

Figure 4 is a view in cross section on a plane denoted by the dotted line 4—4 of Fig. 2.

Figure 5 is an isometric view on reduced scale illustrating the position of the planes at the starting of a flight, and

Figure 6 is a similar view illustrating the position of the planes after the flight has begun.

In the accompanying drawing the numeral 7 denotes the body or fuselage of my improved glider, such body having a flight notch 8, preferably in its under surface, and a stop shoulder 9 for a purpose to be hereinafter mentioned. Planes or wings 10 of any approved form project from opposite sides of the body, and guiding planes 11 and 12 project from the rear end of the body in a manner common to aeroplane structures.

It will now have been observed that the glider serves the purpose of a toy and the notch 8 is to receive a flexible launching member comprising part of a sling by means of which the glider is catapulted in a manner that will be readily understood. In the operation of toys of this sort I have found that if the wings or planes are located near the rear end of the body at the time that flight is initiated much better results are obtained in the distance to which the glider can be projected, the planes or wings in their regular and forward position of flight obstructing movement of the glider when it is being driven through the air as from the force of a sling or other propelling device.

I have therefore provided my improved glider with means whereby the planes or wings may be located at the rear end of the body or fuselage and from which they will be automatically moved to their regular position further forward on said body for the purpose of sustaining flight. To this end I provide a sliding support 13 which is fitted to the body 7 to slide lengthwise thereon, the forward position of this support being against the shoulder 9 which limits its forward movement and against which it is held as by means of a flexible retainer 14 engaged at one end with a notch 15 at the front end of the body and at its opposite end with a notch 16 in a rib 17 secured to the top of and projecting backwardly from the sliding support 13.

Spring fingers 18 are secured to and project backwardly from the end of the rib 17, these fingers having a recess for engagement with a retaining post 19 secured to and rising from the top of the body 7 just in front of the guiding planes 11—12 and as shown in Figs. 1 and 2 of the drawing.

The fingers 18 are of such resiliency that the force of the retainer 14 will gradually overcome their grip upon the post 19, so that the planes or wings 10 will be held in their rearward positions only for a short period, this being the interval between disengagement of the sling from the notch 8 and the time when the force of propulsion is practically exhausted.

It will thus be seen that when the flight is started the planes or wings will be in the positions shown in dotted lines in Figs. 1 and 2 of the drawing. This enables maximum results to be obtained in the projection of the glider into the air. At about the time the plane ceases to have the force of the initial propulsion the fingers will be released from the post 19 and the wings will be forced forward by the elastic retainer 14 into the position shown in full lines in Figs. 1 and 2. This will enable the plane to get the full benefit of the wings or planes in its gliding movements and I have found that with this construction, all other conditions being equal, the flight of the plane will be longer than in the case of one in which the planes or wings are fixed, for the reason that the starting point for the glider will begin at a higher altitude, as when the planes or wings are in their rearward positions the glider may be propelled to such higher altitude.

In accordance with the provisions of the patent statutes I have described the principles of operation of my invention together with the device which I now consider to represent the best embodiment thereof; but I desire to have it understood that the device shown is only illustrative and that the invention may be carried out by other means and applied to uses other than those above set out.

I claim:

1. A glider including a body, wings projecting

from opposite sides of the body and movably mounted thereon, means for forcing said wings forwardly on said body, and means for temporarily retaining said wings in a rearward position for initial flight, said first named means being adapted to effect the release of said wings from their rearwardly retained position for forward movement on the body for gliding flight.

2. A glider including a body, wings projecting from opposite sides of the body and slidably mounted thereon, means for forcing said wings forwardly on said body, and means for temporarily retaining the wings in a rearward position during initial flight, said first named means being adapted to effect the release of said wings from their rearwardly retained position for forward movement on the body for gliding flight.

3. A glider including a body, a support slidably mounted on the body, wings projecting from opposite sides of the support, means for forcing said support forwardly on said body, and means for temporarily retaining the support in a rearward position during initial flight, said first named means being adapted to effect release of said support from its rearwardly retained position for forward movement of said wings on the body for gliding flight.

4. A glider including a body, wings projecting from opposite sides of the body and movably mounted thereon, resilient means for forcing the wings forwardly on the body, and means for temporarily retaining the wings in a rearward position during initial flight, said first named means being adapted to effect release of said wings for forward movement on the body for gliding flight.

5. A glider including a body, wings projecting from opposite sides of the body and movably mounted thereon, means for forcing the wings forwardly on said body, spring fingers for retaining the wings in a rearward position, and a retaining post for engagement by said fingers to releasably retain the wings in a rearward position.

6. A glider including a body, a support slidably mounted on the body, means for forcing the support forwardly on the body, spring fingers projecting rearwardly from said support, and a retaining post projecting from the body for engagement with said fingers to releasably retain said wings in a rearward position.

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