March 24, 1953 P. B. JOHNSON 2,632,282

TOY GLIDER AND CARRIER

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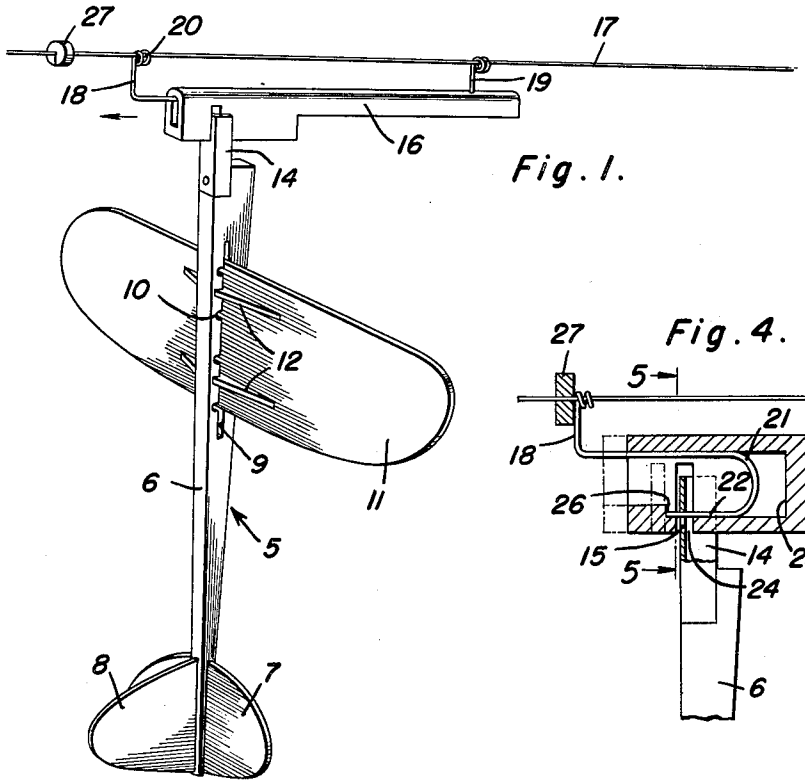


Fig. 1.

Fig. 4.

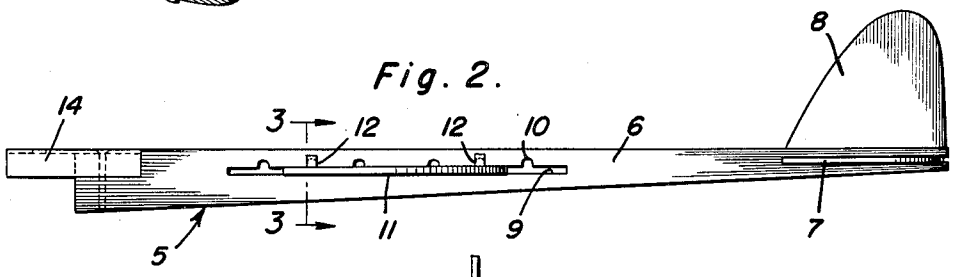


Fig. 2.

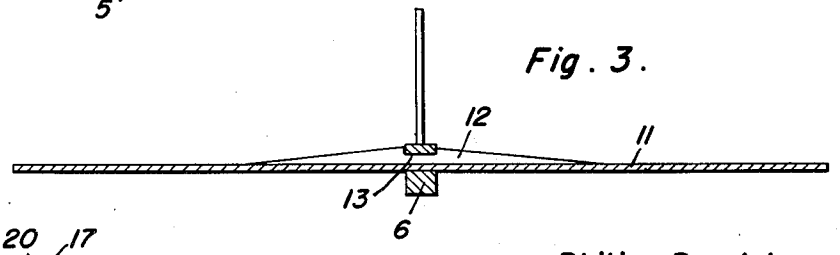


Fig. 3.

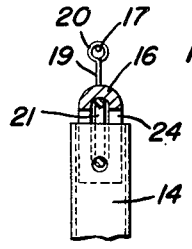


Fig. 5.

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TOY GLIDER AND CARRIER

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3 Claims. (Cl. 46—79)

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The present invention relates to new and useful improvements in toy gliders and releasable carriers therefor for use with kite strings to elevate the glider to a desired position on a kite string and to automatically release the glider for descending to the ground.

An important object of the invention is to provide means for suspending the glider below the carrier to position the wings of the glider opposed to the wind to slide the carrier with the glider attached thereto upwardly on the kite string to its point of release.

A further object of the invention is to provide a novel channel-shaped hanger for suspending the glider from the carrier and which engages the carrier to hold the glider from turning or twisting while being carried upwardly on the kite string.

A still further object is to provide a novel releasing mechanism for the glider.

A still further object is to provide means for easily and quickly adjusting the position of the wings on the body or glider stick to provide for different maneuvers of the glider during its descent.

A still further object is to provide a device of this character of simple and practical construction, which is efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view showing the glider and carrier in its ascending position on a kite string;

Figure 2 is a side elevational view of the glider;

Figure 3 is a transverse sectional view taken on a line 3—3 of Figure 2;

Figure 4 is an enlarged fragmentary longitudinal sectional view of the release for the glider; and

Figure 5 is a sectional view taken on a line 5—5 of Figure 4.

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 the glider generally which is constructed of a longitudinal body or glider stick 6 tapering toward its rear end and having suitably fixed to its rear end the usual elevators 7 and rudder 8.

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The body 6 is formed in its sides with a longitudinal slot 9 having a plurality of longitudinally spaced notches 10 above the slot. A wing 11 is positioned in the slot 10 for adjustment longitudinally therein, the wing having a pair of ribs 12 suitably secured to its upper surface in spaced parallel relation with respect to each other and transversely with respect to the body 6, the central portion of the rib having a notch 13 and with the upper surface of the rib sloping outwardly toward each end from the notch 13. The notches 13 of ribs 12 interlock with the notches 10 of slot 9 in a snapping action to hold the wing 11 in a longitudinally adjusted position in body 6, the change in the position of the wing altering the flight of the glider to create different maneuvers, to set the glider for a dive, glide, loop or other type of aeronautical maneuver. The fuselage is sufficiently resilient to permit the portions on each side of the slot 9 to spread apart slightly, to permit the ribs 12 to be moved into and from the notches 13.

A channel-shaped hanger 14 is secured in an inverted position to the front end of body 6 and projects forwardly therefrom and is provided with an opening 15 in its front end.

The glider 5 is raised into an elevated position for take-off by means of a carrier 16 of elongated construction slidably suspended on a kite string 17 by means of front and rear wire hangers 18 and 19, the upper end of each hanger being formed with an eye 20 for sliding on the kite string.

The front hanger 18 is formed at its lower end with a horizontally positioned hook 21 having its bill portion 22 extending forwardly and positioned in a chamber 23 at the front end of carrier 16, the hook 21 being slidable in the chamber and projecting forwardly from the front open end thereof.

The outer end of hanger 14 enters the chamber 23 through a slot 24 in the lower edge of carrier 16 and with the sides of the carrier positioned in the channel of the hanger to prevent twisting or turning of the glider. The bill 22 of release hook 21 is engaged in opening 15 of the hanger 14 and is moved forwardly against a shoulder 26 in the bottom of chamber 23 in a bridging position with slot 24 to hold the hanger 14 in slot 24 and to support the glider in a suspended position under carrier 16 with the wings 11 transversely of the carrier and kite string 17.

A stop 27 is frictionally held on kite string 17 in a desired adjusted position.

In the operation of the device, the carrier 16 is slidably mounted on kite string 17 by means of the wire hangers 18 and 19 and with hanger 18

positioned forwardly. The hook 21 is moved rearwardly in chamber 23 to uncover slot 24 and hanger 14 at the front end of glider body 6 is inserted upwardly in slot 24 and the hook 21 moved forwardly to engage opening 15 of hanger 14 which thus locks the hanger to the carrier.

The wings 11 are held opposed to the direction of the wind to slide the glider and carrier 16 upwardly on kite string 17 until front hanger 18 of the carrier strikes stop 27 and the forward momentum of the glider and carrier causes hook 21 to move to the rear of chamber 23 to release hanger 14 and glider 5 for descending to the ground. The friction of the hook 21 in the chamber 23 is greater than the friction caused by the eyes 20 sliding on the string 17 to prevent sliding of the body forwardly on the front hanger 18 to release the glider until the stop 27 is reached.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. In combination, a carrier, means slidably mounting the carrier on a line, a stop on the line in the path of the carrier, said carrier having a downwardly opening transverse slot in its lower edge, a toy glider including a body, a channel shaped hanger at the front end of the body positioned in said slot, and an inertia actuated catch carried by the carrier and engaging the hanger to hold the glider in a suspended position, said hanger receiving a part of the carrier in its channel to hold the glider in a rigid position under the carrier.

2. In combination, a carrier, means slidably mounting the carrier on a line, a stop on the line in the path of the carrier, said carrier having a slot in its lower edge, a toy glider including a body, a channel-shaped hanger at the front end of the body positioned in said slot, and an inertia actuated catch slidably carried by the carrier and engaging the hanger to hold the glider in a suspended position, said hanger receiving a part of the carrier in its channel to hold the glider in a rigid position under the carrier.

3. In combination, a carrier, means slidably mounting the carrier on a line, a stop on the line in the path of the carrier, said carrier having a slot in its lower edge, a toy glider including a body, a channel-shaped hanger at the front end of the body positioned in said slot, and an inertia actuated hook-shaped catch slidably carried by the carrier, said hanger having an opening receiving the bill of the catch to hold the glider in a suspended position.

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