United States Patent

Spencer

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[54] **TOY GLIDER**

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[52] **U.S. Cl.** **46/79**

[51] **Int. Cl.** **A63h 27/00**

[58] **Field of Search** 46/74, 79, 76, 80, 81

[56] **References Cited**

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[57] **ABSTRACT**

A toy glider having a fuselage and two wings. The fuselage has a longitudinal channel which is open at the forward end of the fuselage, and an elongated ballast element slidably arranged in the channel and frictionally held in it in any one of a plurality of positions.

3 Claims, 3 Drawing Figures

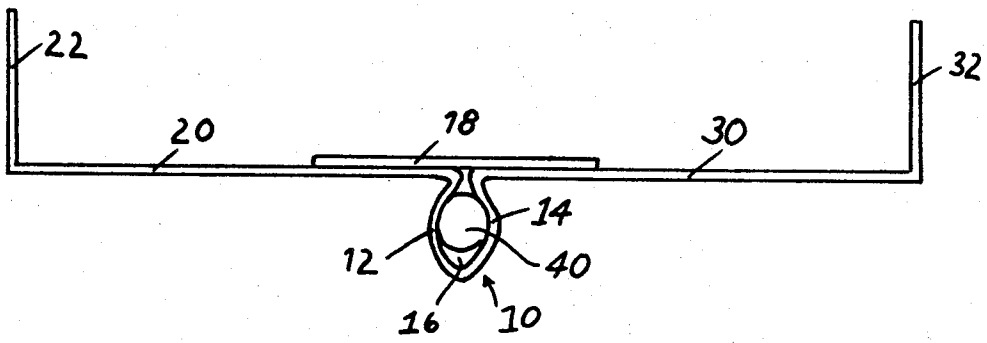


Fig. 1

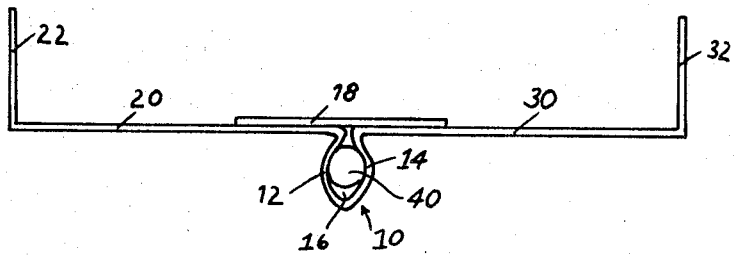


Fig. 2

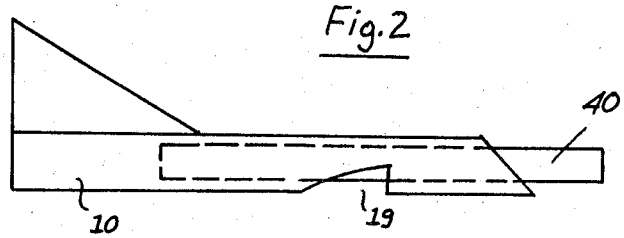
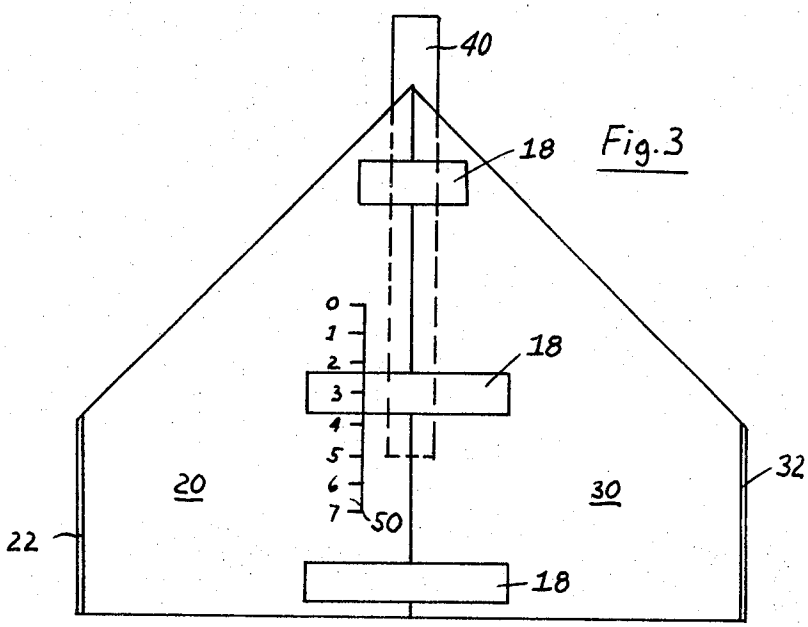


Fig. 3



INVENTOR

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TOY GLIDER

The present invention relates to a toy glider.

There exist various toy gliders, many of which have the problem of how to adjust the proper fore-and-aft balance. To do this, the child playing with the glider may bend various tabs in the wing, but even after preliminary balance is achieved, the tabs do not retain their position so that the glider is, sooner or later, no longer in balance.

It is, therefore, the primary object of the present invention to provide a glider which overcomes the above drawback, and, with this object in view, the present invention resides in the provision of a glider which has an adjustable balance element which is capable of being moved forward or backwards within a longitudinal channel that is provided in the fuselage. The balance element is, in practice, a simple ballast stick, and the glider itself is made of paper, so that the toy as a whole is inexpensive indeed.

The invention will best be understood in conjunction with the drawings, in which:

FIG. **1** is a front view of the toy glider.

FIG. **2** is a side view of the toy glider.

FIG. **3** is a top view of the toy glider.

Referring now to the drawing, the same shows a toy glider having a fuselage **10** and two wings **20** and **30**, all made of a single piece of relatively stiff paper which is folded symmetrically along the longitudinal center line of the glider. The fuselage is constituted by two generally vertical, opposite panels **12** and **14** which are slightly bowed away from each other to form a longitudinal channel **16** which is open at both ends, although for purposes of the present invention the fact that the channel is open at the forward end is of greater significance. Slidably arranged in the channel and frictionally held therein in any one of a plurality of selectable positions is an elongated balance or ballast element **40** which may, in practice, be constituted by a simple wooden stick of round cross section. The frictional engagement between the stick and the side panels **12** and **14** of the fuselage is maintained by pieces of tape **18**, such as gummed or adhesive tape, which extend across the upper edge of the fuselage and which hold together the two panel sections constituting the wings **20, 30**.

In the illustrated embodiment, the wings **20, 30**, carry, at their outer ends, rudders **22** and **32**, respectively.

Before flight, the stick **40** is inserted into the channel in such a position that the stick extends a short way out of the forward end of the channel. A test flight is then made, and if the glider is found to be nose-heavy or tail-heavy, the stick **40** is either pushed back further into the channel of the fuselage or it is pulled out somewhat further, whereupon a new test flight is made, so that, by trial and error, a suitable position for the stick is established.

As shown in FIG. **3**, the glider is provided with indicia means **50** which are arranged along the length of the channel for enabling any position of the stick to be noted. In this way, once a proper fore-and-aft balance of the glider has been established, the stick can always be properly positioned.

In the illustrated embodiment, the indicia are placed along the wings. Inasmuch as the paper used will be translucent enough to allow the position of the stick to be seen through the paper, it is a simple matter to hold the glider up to the light and to fix the position of the stick with respect to the indicia.

The glider has a great safety feature, in that if it strikes any object, the nose, constituting the forward, exposed end of the ballast stick, will readily slide back into the channel, thus preventing damage to the article being struck by the glider, or injury to the person who happens to be in the flight path of the glider. If, of course, the stick is pushed back as the result of an impact, it is a simple matter to relocate the stick in the previously established proper balance position, by referring to the indicia means **50**.

If desired, the fuselage can be provided with a notch **19**, which allows the glider to be launched by a rubber band.

Various modifications will readily be apparent to persons skilled in the art, and they are intended to be comprehended within the scope of the appended claims.

I claim:

1. A toy glider comprising a fuselage and two wings, said fuselage having a longitudinal channel which is open at the forward end of the fuselage, and an elongated ballast element slidably arranged in said channel and being frictionally held in any one of a plurality of positions.

2. A toy glider as defined in claim **1**, further comprising indicia means arranged along the length of said channel for enabling said ballast element to be placed into predetermined positions within said channel.

3. A toy glider as defined in claim **2**, wherein said fuselage and said wings consist of a single piece of paper which is folded symmetrically along the longitudinal centerline of the glider with said fuselage being constituted by two generally vertical, opposite panels which are slightly bowed away from each other to form said channel and with said wings being constituted by two further panels which lie in a common horizontal plane intersecting the upper edge of said fuselage, and wherein said two further panels constituting said wings are held together by tape extending across said fuselage.

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