May 2, 1939. H. A. SELLERS, JR 2,156,741

ADJUSTABLE STABILIZER CONTROL FOR TOY AIRPLANES

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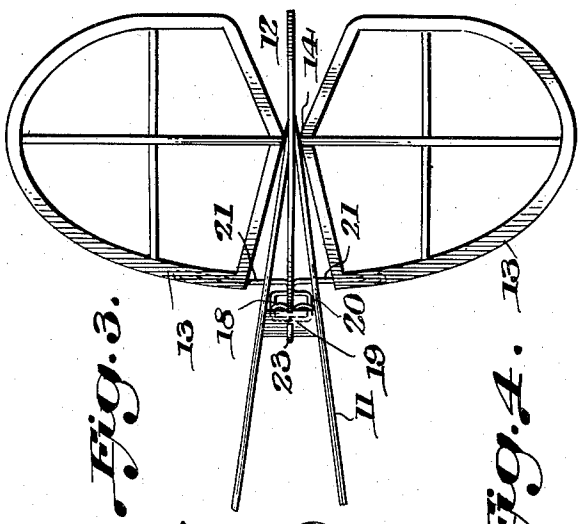


Fig. 3.

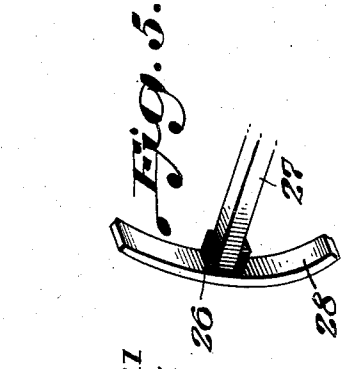


Fig. 5.

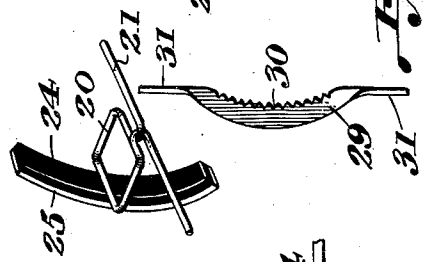


Fig. 6.

Fig. 4.

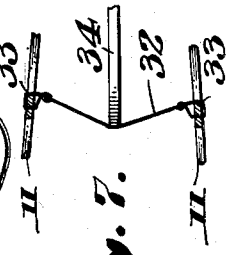


Fig. 7.

Fig. 1.

Fig. 2.

Inventor,
Harvey A. Sellers, Jr.

By N. W. Byrnes
Atty.

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ADJUSTABLE STABILIZER CONTROL FOR TOY AIRPLANES

Harvey A. Sellers, Jr., Decatur, Ill.

Application March 15, 1938, Serial No. 196,082

1 Claim. (Cl. 46—76)

The present invention relates to toy airplanes or gliders and consists in the combinations and arrangements of elements hereinafter described and particularly set forth in the accompanying claim.

The purpose of the invention is to provide a device of this character having associated therewith a directional controlling means whereby the course or direction of flight thereof may be predetermined by a simple and easy adjustment, and it is further proposed to have such adjusting means of simple construction and so arranged that the same may be included in the manufacture and assembly of the aero or glider at little or no appreciable increase in cost.

A further purpose of the invention is to provide a device of this character which is readily applicable to both the vertical and horizontal stabilizers and in so locating the same that either or both of the stabilizers may be conveniently set or positioned by the fingers of the hand without requiring any special skill or knowledge.

The invention is shown by way of illustration in the accompanying drawing wherein:

Figure 1 is a perspective view of an airplane or glider showing the application of the invention thereto.

Figure 2 is an enlarged view, partly in section, showing the adjusting device per se.

Figure 3 a detailed top plan view thereof.

Figure 4 a detail in perspective of a modified construction.

Figure 5 a like view of another construction.

Figure 6 illustrates a further construction, and;

Figure 7 shows still another form of the device for accomplishing the result desired.

Referring to the construction in further detail, and wherein like reference characters designate corresponding parts in the different figures shown, 8 represents the body or fuselage of an ordinary toy plane or glider having the usual wings 9, and the blade 10 symbolizing a propeller may or may not be used as desired. Said body or fuselage 8 is of suitable framework 11, substantially rectangular in cross section, and at the tail end thereof are mounted a vertical stabilizer 12 and a horizontal stabilizer 13, said stabilizers being mounted for slight angular adjustment on pintles 14 and 15 as indicated. In the construction herein the framework only of said stabilizers is illustrated, though it will be understood that the same are designed to have appropriate fabric coverings of suitable material, or said stabilizers may be made from single material of appropriate rigidity, e. g., paper, a composition substance or otherwise if desired.

The means for effecting the dual adjustment or control of the stabilizers consists essentially of an engaging member carried by each stabilizer adapted to frictionally contact with a fixed and graduated piece within the arc of its turning movement. Thus the vertical stabilizer 12 has a projecting member or finger 16 with its tip end 17 adapted to frictionally engage with a detent 18 secured to a cross piece 19 that fits between and connects the side portions of the fuselage 11 as shown in Figure 3. The detent 18 is indicated herein as formed from a piece of wire so shaped that the finger piece 16 may adjustably engage therewith in different positions. Thus in Figure 3 it will be seen that said member 16 may engage within the middle indenture of the piece or at either end thereof accordingly as it is desired to fix the horizontal direction of flight.

The control device for the horizontal stabilizer 13 likewise employs a projecting piece 20 of wire 21 that adjustably engages within the notches of member 22 (Figure 2). Said part 22 is constructed of wire appropriately curved and has its respective ends 23 fastened to the framework 11 of the fuselage.

In the arrangement shown in Figure 4 it is proposed to employ a pliable portion 24 fixed to an arc-shaped piece 25, and with which the detent 20 has friction engagement for holding the stabilizer in its depressed or elevated position. It will be understood, of course, that a similar device would be used for adjusting the vertical stabilizer.

The arrangement disclosed in Figure 5 utilizes a pliable piece 26, e. g., rubber or the like, on the part 27 of the stabilizer and functions to frictionally contact with the arc-shaped piece 28. In Figure 6 the arc member is formed of a metal piece 29, e. g., tin, having a notched or serrated and curved edge 30, and the ends 31 of said piece are bent for securement to the frame. In Figure 7 a rubber strand 32 stretched between the ends of the support 33 frictionally holds the detent 34 and thereby secures the stabilizer in the angular position to which it is adjusted.

It will be understood the invention as herein disclosed is not limited to the details of construction shown and described, and that these may be varied without departing from the spirit of the invention as defined by the claim.

What is claimed as new is:

A toy airplane or glider having a fuselage frame-work formed of assembled pieces, a supporting wing, a stabilizer therefor comprising a hinged plane member provided with a forwardly projecting portion, and a pliable member secured to the frame-work and interposed within the arc of movement of said forwardly projecting portion and adapted to have frictional engagement with said forwardly projecting portion of said hinged plane member to adjust the latter and hold the plane member in set position.

HARVEY A. SELLERS, JR.