May 13, 1947. H. L. WILSON 2,420,510

TOY AIRPLANE

Filed Aug. 6, 1945

Fig. 1.

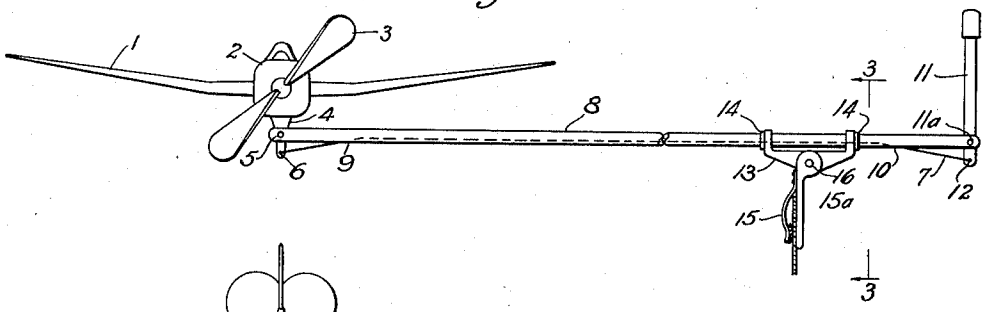


Fig. 2.

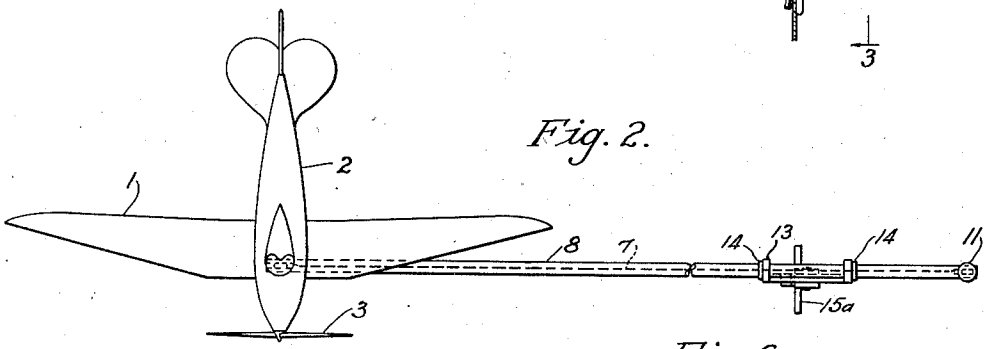


Fig. 6.

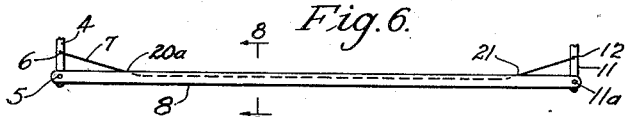


Fig. 3.

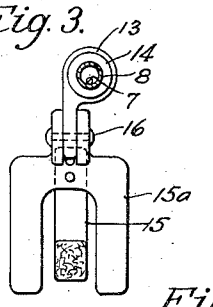


Fig. 7.

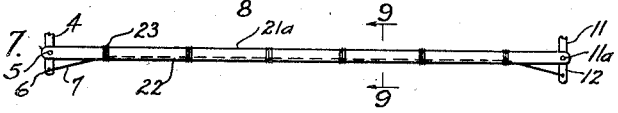


Fig. 8.



Fig. 9.

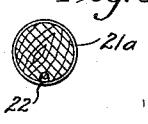


Fig. 4.

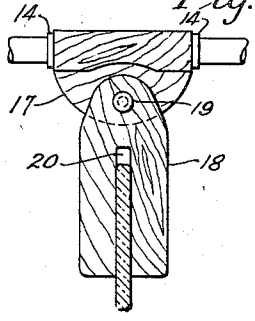
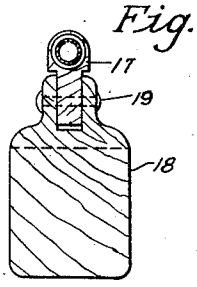


Fig. 5.



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Patented May 13, 1947

2,420,510

UNITED STATES PATENT OFFICE

2,420,510

TOY AIRPLANE

Harlan Leffingwell Wilson, San Diego, Calif.

Application August 6, 1945, Serial No. 609,162

6 Claims. (Cl. 46—77)

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The present invention relates to a toy airplane, and has particular reference to a toy airplane which may be attached to the door of a moving vehicle such as an automobile or to the window therein.

There are a number of toy airplanes on the market, which may be operated from a car or automobile but these are limited to the type that are attached to a stick and are held outside of the car window while the car is in motion. The above type of toy airplanes are limited in their maneuverability, that is, they are not capable of diving, banking or climbing while being manipulated from the inside of the car.

It is thus an object of the present invention to produce a toy airplane capable of being operated through a car door while the car is in motion, and capable of making right and left banks while being operated from the inside of the car.

It is another object of the present invention to produce a toy airplane capable of being operated through a car door, while the car is in motion, and capable of making dives while being operated from the inside of the car.

A further object of the present invention is to produce a toy airplane capable of being operated through a car door while the car is in motion, and capable of climbing while being operated from the inside of the car.

The above and other objects may be obtained by providing a structure comprising in combination a model toy airplane attached to one end of an extension stick or a hollow tube, the hollow tube having a clamp thereon capable of being attached to the glass in a car door, and which will allow the hollow tube to rotate and pivot, a control stick attached to the end of hollow tube opposite from the end having the model toy airplane, a stiff wire attached to the control stick and running through the hollow tube and being attached to the model toy airplane and capable of causing the model toy airplane to bank on the proper manipulations of the stick.

More specifically, the invention comprises a model toy airplane consisting of a fuselage, wings, rudder, tail and propeller, with a drop stick attached and extending down from the bottom of the fuselage. The drop stick extending down from the fuselage having a bushing therein capable of holding a pin and on its lower extremity a hole capable of holding a stiff wire line. A hollow tube having a pivot hole at one end suitable for inserting a pin therein. A pin is positioned in the pivot hole in the hollow tube and extends through the hollow tube and into the

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bushing positioned in the drop stick extending down from the fuselage. A stiff wire line is positioned inside of the hollow tube with one end of the wire leaving the hollow tube by means of a hole in the tube and is fastened to the hole on the end of the drop stick extending down from the fuselage. The opposite end of the stiff wire line also leaves the confines of the hollow tube by means of a hole in the tube at the opposite end from where the model toy airplane is located. The end of the wire is attached to a control stick which is provided with a hole at its lower extremity. The control stick is connected to the hollow tube by means of a pin which allows the control stick to pivot in the hollow tube. Positioned on the hollow tube is a window clamp with a spring thereon suitable for being attached to the window of a car door. This clamp is arranged in such a manner that the hollow tube may be either pivoted on the clamp or revolved therein. Additional objects and features, as well as the various particulars of the present invention will become apparent from the description of the accompanying drawings in which:

Figure 1 is a view in elevation of the model toy airplane with the appurtenances thereto.

Figure 2 is a plan view of the model toy airplane with the appurtenances thereto.

Figure 3 is a sectional view on line 3—3 of Figure 1.

Figure 4 is a side view of a modified form of the window clamp.

Figure 5 is an end view of the modified window clamp.

Figure 6 is a horizontal view of a modified hollow tube.

Figure 7 is a horizontal view of a substitute for the hollow tube.

Figure 8 is a sectional view on line 8—8 of Figure 6.

Figure 9 is a sectional view on line 9—9 of Figure 7.

Referring more particularly to the drawing, and to Figures 1, 2 and 3 in particular, 1 represents the wings of the toy model airplane, 2 the fuselage, 3 the propeller, and 4 a drop stick attached to fuselage and extending down therefrom. A pin represented at 5, of which one end is positioned on drop stick 4 while the other end of pin 5 is positioned at the end of a hollow tube, hereinafter more fully described. 6 represents a hole in drop stick 4 through which stiff wire is attached. The above-mentioned hollow tube is represented by 8 which is attached by pivot

pin 5 to stick 4 as above described. Wire 7 which is attached to stick 4 is introduced into hollow tube 8 through hole 9 and leaves hollow tube 8 by means of hole 10. The end of wire 7 is attached to control stick 11 through hole 12. Control stick 11 is pivoted on hollow tube 8 by means of pin 11a. Hollow tube 8 is positioned in window clamp 13 and held therein by means of bushings or collars 14. The window clamp is provided with spring 15 which can be positioned on the window glass of car window, so as to make a tight fit, the upper end of clamp base 15a holding spring is attached to window clamp 13 by means of pin 16, which will allow clamp 13 to pivot on clamp base 15a.

In Figures 4 and 5 of the drawings, a modified construction of window clamp 13 is shown, wherein clamp 13 which holds hollow tube 8 is shown as a solid piece of material and designated as 17, with a hole therethrough for the insertion of said hollow tube. 14 represents bushings or collars similar to those described in relation to Figure 1. Solid section 17 is attached to modified clamp 18 by means of pin 19 so as to allow the solid section to pivot on clamp 18. Clamp 18 is provided with slot 20, which is capable of being positioned over the glass window of the car door so as to make a tight fit thereto.

In Figures 6 and 8 of the drawings, a modified construction of hollow tube 8 is shown, wherein the hollow tube 8 as above described is inverted, thus causing wire 7 to position itself against the top of the inside of the hollow tube and entering and leaving hollow tube 8 by means of holes 23a and 21 positioned on the top of the hollow tube. This modification will place holes 6 in drop stick 4 and 12 in control stick 11 above pins 5 and 11a.

In Figures 7 and 9 of the drawings, another modification of hollow tube 8 is shown, wherein a solid piece of material designated as 21a is used in place of the above-mentioned hollow tube. In this modification, the solid piece of material is provided with groove 22 wherein wire 7 is positioned. Wire 7 is held in groove 22 by means of tape or the like and shown as 23.

In operation the toy airplane is attached to the glass in a car window by means of clamp 13, with the airplane section extending outside of the car door and control stick 11 inside. By moving the control stick forward and downward, the toy airplane will go into a dive, by moving the control stick backwards and downwards, it will cause the toy airplane to go into a climb. The manipulation of the control stick by pulling it inwardly will cause the toy airplane to make a left bank, the forcing of control stick outwardly will cause the toy airplane to go into a right bank.

While the invention has been disclosed in what is considered to be the preferred form, it is to be understood that it is not limited to the specific details thereof, but covers all changes, modifications and adaptations within the scope of the appended claims.

I claim:

1. A maneuverable toy airplane comprising a model toy airplane, means on said model toy airplane for attaching a pivotally connected extension stick, a control stick pivotally connected to the other end of the extension stick, means extending through the extension stick and being attached to the model airplane and control stick, and capable of causing the model airplane to bank when the control stick is moved forwards or backwards.

2. A maneuverable toy airplane comprising a model toy airplane, means on said model toy airplane for attaching a pivotally connected extension stick, a control stick pivotally connected to the other end of the extension stick, means extending through the extension stick and being attached to the model airplane and control stick, and capable of causing the model airplane to bank when the control stick is moved forwards or backwards, a clamp attached to said extension stick capable of allowing said extension stick to be revolved therein or pivoted thereon by manipulation of said control stick.

3. A maneuverable toy airplane comprising a model toy airplane consisting of a fuselage, wings, rudder, tail, and propeller, a drop stick attached at one end to said model toy airplane and extending downwardly therefrom, a hollow tube pivotally attached to the opposite end of said drop stick, a control stick attached to the other end of said hollow tube, a wire extending through said hollow tube with one end attached to said drop stick and the other end to said control stick, a clamp positioned on said hollow tube capable of allowing said hollow tube to revolve therein.

4. A maneuverable toy airplane comprising a model toy airplane consisting of a fuselage, wings, rudder, tail, and propeller, a drop stick attached at one end to said model toy airplane and extending downwardly therefrom, a hollow tube pivotally attached to the opposite end of said drop stick, a control stick attached to the other end of said hollow tube, a wire extending through said hollow tube with one end attached to said drop stick and the other end to said control stick, a clamp positioned on said hollow tube capable of allowing said hollow tube to revolve therein and pivot thereon.

5. A maneuverable toy airplane comprising a model toy airplane consisting of a fuselage, wings, rudder, tail and propeller, a drop stick firmly attached to the bottom of said fuselage and extending downwardly therefrom, a hollow tube pivotally attached at one end to said drop stick, a control stick pivotally attached to the opposite end of said hollow tube, a stiff wire extending through said hollow tube, one end of said stiff wire leaving said hollow tube a short distance from the end thereof and being attached to said drop stick at a point below that of the pivotal connection between said drop stick and hollow tube, the other end of said stiff wire leaving the opposite end of said hollow tube a short distance from the end thereof and being attached to said control stick at a point below that of the pivotal connection between control stick and hollow tube, a clamp attached to said hollow tube capable of allowing the hollow tube to pivot thereon and to revolve therein, said clamp being provided with a clip thereon thus allowing said clamp to be firmly attached to the window in a car door.

6. A maneuverable toy airplane comprising a model toy airplane consisting of a fuselage, wings, rudder, tail and propeller, a drop stick firmly attached to the bottom of said fuselage and extending downwardly therefrom, a solid piece of material, with a groove running the length thereof pivotally attached at one end to said drop stick, a control stick pivotally attached to the opposite end of said solid piece of material, a stiff wire positioned in said groove, one end of

said stiff wire leaving said groove a short distance from the end of said solid piece of material and being attached to said drop stick at a point below that of the pivotal connection between drop stick and solid piece of material, the other end of said stiff wire leaving said solid piece of material a short distance from the end thereof and being attached to said control stick at a point below that of the pivotal connection

between control stick and said solid piece of material, a clamp attached to said solid piece of material capable of allowing the solid piece of material to pivot thereon and to revolve therein, said clamp being provided with a clip thereon thus allowing said clamp to be firmly attached to the window in a car door.

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