Nov. 26, 1940. L. MAIN 2,222,677

MINIATURE AERIAL TOY

Filed May 15, 1939 2 Sheets-Sheet 1

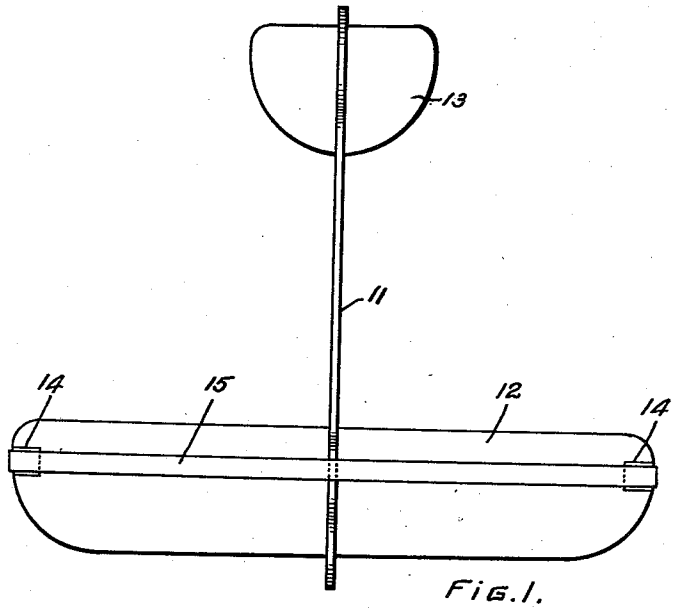


FIG. 1.

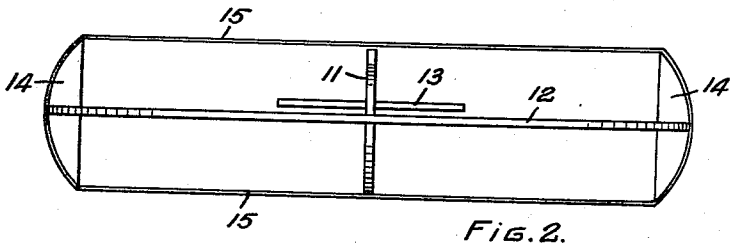


FIG. 2.

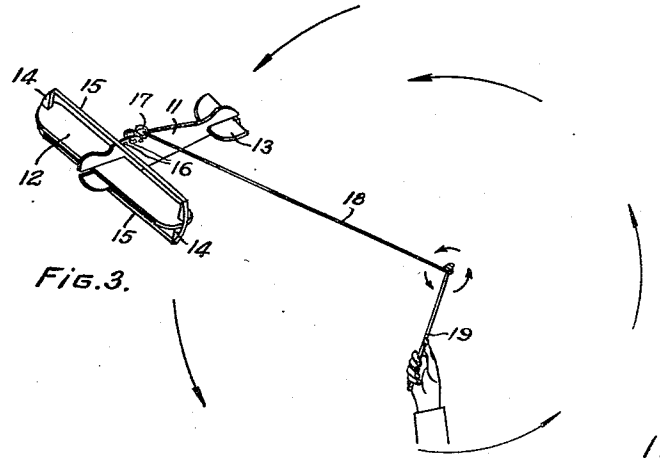


FIG. 3.

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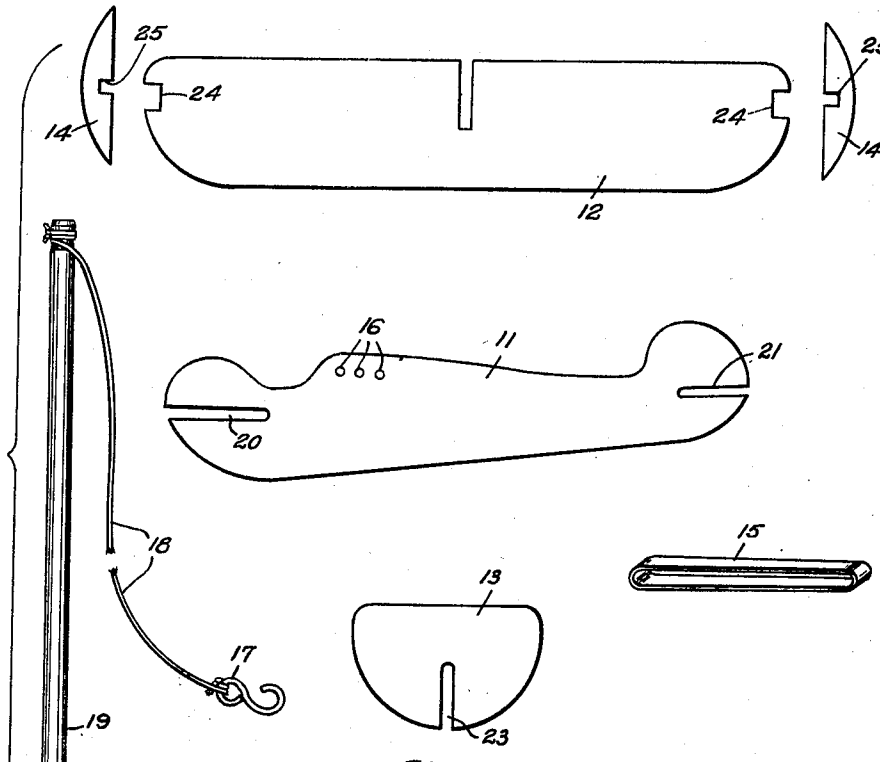


FIG. 4.

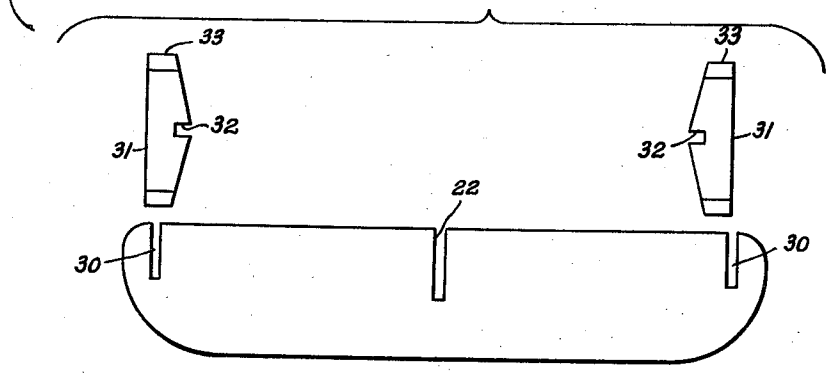


FIG. 5.

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MINIATURE AERIAL TOY

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Application May 15, 1939, Serial No. 273,753
In Canada March 13, 1939

4 Claims. (Cl. 46—52)

This invention relates to a toy aeroplane.

It is a principal object of the invention to provide a toy aeroplane which may be manufactured at exceedingly low cost and yet, will in certain important respects, simulate a real aeroplane admirably so as to intrigue a child. It is a more specific object of the invention to provide a toy of this nature including means causing the plane when in flight to make a droning sound giving the sensation of an actual aeroplane or fleet of aeroplanes.

A further object of the invention is to provide an article of this nature in which the tone of the droning sound may be varied by a simple adjustment.

A still further object is to provide an article of this nature which is made up of a number of separate parts which can be accommodated compactly and yet which are easily assembled into operative form, so as to have the appeal of a structural toy.

With these and other objects in view the toy plane is featured by separate parts comprising a fuselage, wings, and tail, all fitting together to form a composite plane, and spreader members fitted into the wing tips to support an elastic band which is stretched about them. The elastic acts as a reed in producing the droning sound when the plane is in flight. The plane is flown by whirling it centrifugally on the end of a cord.

Detailed description

Having thus generally described the nature of the invention, reference will now be made to the accompanying drawings illustrating a preferred form and in which:

Figure 1 is a top plan view of a toy plane constructed according to the invention.

Figure 2 is a front elevation of the plane shown in Figure 1.

Figure 3 is a perspective view of the plane of the previous Figures 1 and 2, in flight.

Figure 4 is a plan view illustrating the various separate parts of the plane shown in the previous figures.

Figure 5 is a plan view illustrating an alternative way for attaching the spreaders to the wing tip.

Referring more particularly to the drawings, the plane is made up of a fuselage 11 to which is connected a wing 12 and a tail 13. To the tip of each wing is connected a spreader 14. About the spreaders is stretched as indicated in the figure, an elastic band 15. The fuselage 11 is provided with spaced-apart holes 16 preferably located adjacent its upper edge and closer to its forward end than its rear end, which are respectively adapted to accommodate a hook 17 connected to a cord 18 forming a part of the actuating apparatus. The cord 18 is connected to a handle 19.

In this preferred form of construction the fuselage is slotted as at 20 and 21 to receive in a snug fit the wing 12 and the tail 13 respectively, these elements also being slotted at 22 and 23 to engage the inserted portions of the fuselage, as indicated in the drawings. According to this construction, the wing tips are slotted as at 24 to receive in a snug fit spreaders 14, also slotted as at 25 to engage the faces of the wing. The spreaders are preferably segmental in form to present an arcuate outer surface for engagement with the elastic band. The band is stretched about the spreaders presenting a flat surface parallel to the wings, its tension holding the spreaders and itself in place.

For economical construction, the plane may be made of wood, the wing and fuselage preferably being of hard wood, and the tail and spreaders of soft wood. The frictional engagement between the respective soft and hard wood surfaces effects a relatively secure joint of the respective pieces without resorting to nails, screws or adhesive.

An alternative form of construction is illustrated in Figure 5. In this form the wing tips include slots extending inwardly from the rear edge of the wing 30. Flat spreaders 31 engage in the slots 30 and include slots 32 of their own to engage the wing surfaces. The tips of the spreaders are bevelled or rounded as at 33 to form a satisfactory bearing for the elastic, corresponding in function to the arcuate surface of the segmental spreaders 14.

Operation

The aeroplane is flown by whirling it about centrifugally on the end of the cord with the handle 19 as an axis. The pressure of the air when the plane is moving rapidly causes the elastic to vibrate giving a droning sound simulating that of an aeroplane or fleet of aeroplanes. The tone of the droning sound may be varied by adjusting the tautness of the elastic between the spreaders. The shape of the spreaders and their relatively long surfaces enable them to retain a frictional hold on the elastic engaging them so that the band may be slackened by tautening that portion in contact with the surface of the spreaders and vice versa; the taut band gives the

droning sound a high note and a loose band a low note. Varying tones may also be achieved by the use of elastics of different dimensions. The plane's angle of flight and the extent of the droning sound may be adjusted by selection of the appropriate hole 16 within which the hook 17 engages.

Advantages

A toy of this nature has many advantages over other aeroplane-simulating articles. In the first place it is cheap, being made for a few cents and has the appeal of a structural toy. It is capable of making an intriguing noise remarkably similar to that of a real plane or fleet of planes flying overhead. It is sturdy and there are no working parts to go out of order. It is always under the control of the operator and is thus not dangerous to play with, as are toy planes which get out of control and run into furniture, walls, and upholstery. This being the case, the toy can be used in or out of doors, and can also be taken down and neatly packed for carrying about.

It will be understood that preferred forms of the invention have been described and that various modifications may be made without departing from its spirit as defined by the accompanying claims.

The sub-titles used throughout the specification are merely to simplify reference thereto and should otherwise be disregarded.

I claim:

1. In combination, a knock-down toy adapted to be assembled to obtain various points of balance thereof, said toy simulating an aeroplane and comprising a fuselage, wings and a tail, a transverse spreader at each wing tip, an endless elastic band extending about the spreaders, and means for imparting centrifugal motion to said simulated aeroplane to cause droning vibration of said elastic member, said means having removable connection with said fuselage at a selective point of balance thereof.

2. A toy comprising a plurality of parts adapted to be variably assembled whereby different points of balance of said toy are obtained, a vibratory member mounted on said toy, and means for imparting centrifugal motion to said toy to cause vibration of said vibratory member, said means being removably engageable with said toy at a selective point of balance thereof.

3. In a toy comprising a plurality of parts adapted to be variably assembled and provided with a vibratory member, a fuselage part formed with a plurality of holes within the limits of the various points of balance of said toy, and motion imparting means for said toy having removable selective connection with said holes.

4. A toy comprising a miniature aeroplane formed of flat members in simulation of the wings, fuselage and tail of an aeroplane, said members being frictionally engaged with each other to provide an assembly having a variable point of balance, said point being variably found at an intermediate point on said fuselage to the rear of said wings, a transverse spreader at each wing tip, an endless elastic member extending about the spreaders, and means for imparting centrifugal motion to said aeroplane to simulate flight and to cause droning vibration of said elastic member, said fuselage being provided with a plurality of holes whereby said means may be selectively attached to the fuselage at the desired point of balance of the aeroplane.

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