B. H. HARRIS.

TOY AEROPLANE.

APPLICATION FILED DEC. 2, 1919.

1,342,998. Patented June 8, 1920.

Fig. 1

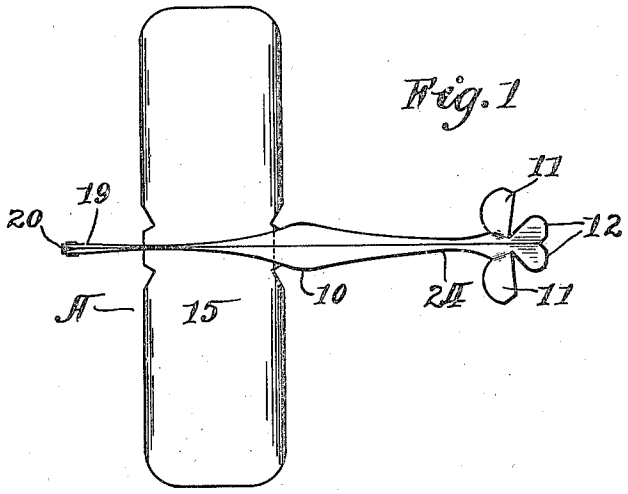


Fig. 2

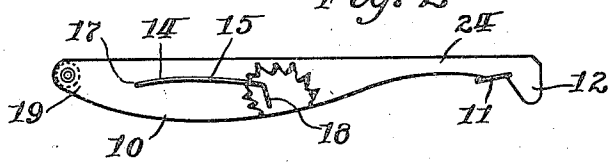


Fig. 3

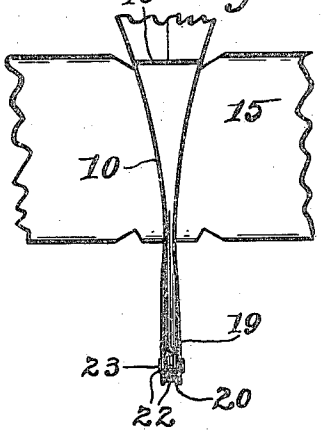


Fig. 4

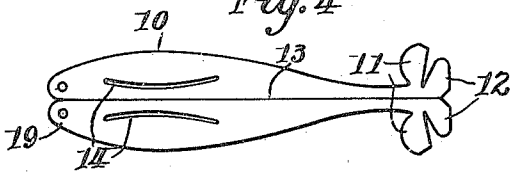
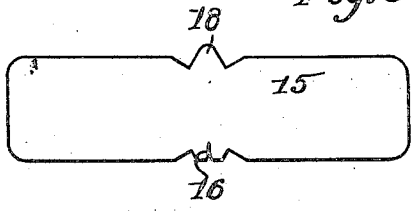


Fig. 5



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Att'y.

UNITED STATES PATENT OFFICE.

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TOY AEROPLANE.

1,342,998. Specification of Letters Patent. Patented June 8, 1920.

Application filed December 2, 1919. Serial No. 341,926.

To all whom it may concern:

Be it known that I, BLAINE H. HARRIS, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented a new and useful Improvement in Toy Aeroplanes, of which the following is a specification.

My invention relates to a toy aeroplane made of paper and is adapted to be easily collapsible so that it can be folded in a small state for convenience of shipping, mailing or otherwise distributing the same. When the paper aeroplane is put together it forms an attractive toy which can be sailed through the air to simulate the ordinary aeroplane.

The construction of my aeroplane is of a convenient form so that the parts can be easily cut out by dies in a flat state and then the fuselage and empennage of the same folded into the desired shape to simulate the ordinary aeroplane. The toy aeroplane is in the form of a monoplane.

The peculiar construction of my aeroplane will be fully described and set forth in the specification and claims.

In the drawing forming part of the specification:

Figure 1 is a plan view of my paper monoplane as it would appear when put together for use.

Fig. 2 is a side elevation of the same, a portion of which is broken away.

Fig. 3 illustrates a detail of a portion of the aeroplane, looking up at the bottom of the fuselage.

Fig. 4 illustrates a geometrical development of a portion of the aeroplane.

Fig. 5 illustrates a geometrical development of another portion of the aeroplane.

The fuselage 10 of my toy paper aeroplane A is formed from stiff paper or cardboard, which is blanked out in the peculiar shape in the geometrical development as illustrated in Figs. 4 and 5 by the use of suitable dies. Suitable wings 11 and 12 are formed on the rear end of the fuselage 10 to make up the empennage of the aeroplane A. The wings 11 form the horizontal portions of the empennage, while the wings 12 extend downward in a suitable angle back of the wings 11. In forming the fuselage or body portion of the aeroplane A the blanked form is folded longitudinally and centrally along the line 13 so that the fuselage 10 will simulate the ordinary similar portion of the regular monoplanes and as is illustrated in Fig. 2.

Curved slots 14 are formed diverging from each other and from the central line 13 in the fuselage 10, these slots being so positioned that when the blank which forms the fuselage is folded on the line 13 the slots will coincide with each other to form a curved recess through the fuselage.

A suitable plane 15 is adapted to extend through the slots 14 and be supported in the fuselage so that the plane will be centrally held by the fuselage 10. The plane 15 is formed with a centrally disposed slot 16 on its forward edge which is adapted to engage into the forward end 17 of the slots 14, and the plane 15 is held in position by a suitable locking tongue 18 which is formed centrally on the rear edge of the same and which is adapted to be bent to engage between the sides of the empennage and thus hold the plane 15 rigidly in position as illustrated in Fig. 2.

The fuselage is formed with a nose 19 which extends forward from the plane 15 and carries suitable weight means 20 formed of metal disks 22 which are held in position by a suitable eye 23. The weight 20 is an important feature of my invention as it tends to balance the toy paper monoplane, which naturally is of a very light weight and by using the weight 20, which simulates the engine weight in the ordinary monoplane, my toy aeroplane is properly balanced so as to glide through the air in a very attractive manner.

When my toy aeroplane A is put together as illustrated in Figs. 1 and 2, the double side walls of the fuselage are held adjacent each other, at the forward end, by the recess 16 to form a thin, flat vein, while the tongue 18 spreads the rear portion of the walls and the slender portion 24, which connects the fuselage with the empennage. By engaging the fuselage below the plane 15 my toy aeroplane can be sailed or sent gliding through the air so as to very closely simulate the ordinary monoplane, making a very attractive toy. The recesses 14 hold the plane extending through the fuselage and thus give a good, rigid construction, strengthening the toy and making it practical, while the recess 16 and the tongue 18 lock the plane 15 in operating position. The

curved shape of the slots 14 gives the plane 15 the desired curve to cause the aeroplane to glide through the air, and the pointed nose 19, with its weight, will give the aeroplane the proper balance.

In accordance with the patent statutes I have described the principles of operation of my invention, together with the apparatus which I now consider to represent the best embodiment thereof, but I desire to have it understood that the construction shown is only illustrative and that the invention can be carried out by other means and applied to uses other than those above set forth within the scope of the following claims.

I claim—

1. A toy paper aeroplane, including a body portion formed of folded paper, a curved recess formed through said body portion, an empennage formed on the rear end of said body portion, a paper air-plane adapted to extend through said curved recess, a recess formed in the forward edge of said air-plane and a locking tongue formed on the rear edge of said air-plane adapted to hold said air-plane rigidly and centrally to said body portion.

2. A toy paper aeroplane, including a fuselage formed of folded paper with a straight, upper, longitudinally extending edge, slots formed in said fuselage below said upper edge, an air-plane adapted to extend through said slots, means formed on said air-plane adapted to engage the sides of said fuselage to hold them in a flat, close relation near the forward end of said fuselage, a locking tongue formed on said air-plane to engage between the side walls of said fuselage to lock said plane to said fuselage and an empennage formed on the rear end of said fuselage.

3. A toy paper aeroplane, including a body portion which composes its fuselage formed of folded paper with similar side walls, which are adapted to lie adjacent each other at their forward end, slots formed through the walls of said fuselage, a plane adapted to extend through said slots transversely to said fuselage, means formed on said plane adapted to hold the same in position centrally in relation to said fuselage and a nose portion formed on said fuselage extending forward from said plane, said nose being adapted to balance said aeroplane.

4. A toy paper aeroplane, including a body portion formed by folding similar shaped paper portions so as to coincide with each other and joined together on a straight, longitudinally extending line which forms the upper edge of the body portion of said aeroplane, having an empennage formed on the rear end, a recess through said body portion and an air-plane extending through and held in said recess.

5. A toy paper aeroplane, including a fuselage portion formed by a double piece of paper having an upper, straight, longitudinally extending edge, an empennage carried by the rear end of said fuselage, a weighted nose on the forward end of said fuselage and a curved air-plane adapted to extend through the walls of said fuselage.

BLAINE H. HARRIS.