Feb. 9, 1926. 1,572,270

D. I. DWYER

TOY AIRPLANE

Filed Feb. 2, 1925

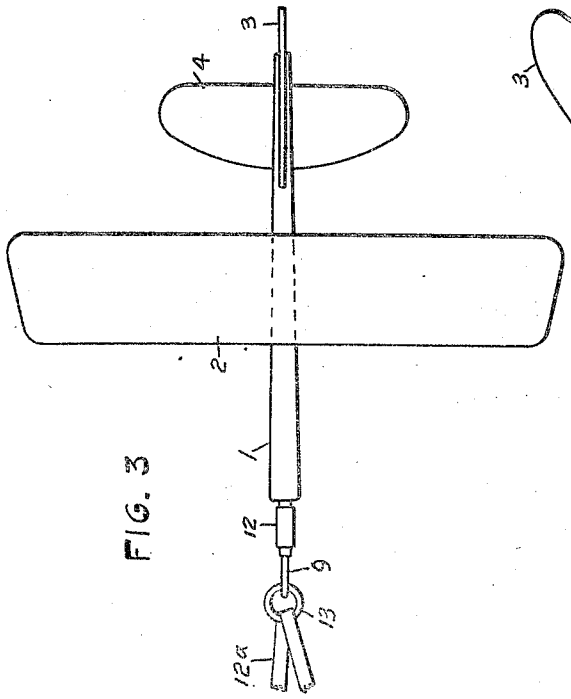


FIG. 3

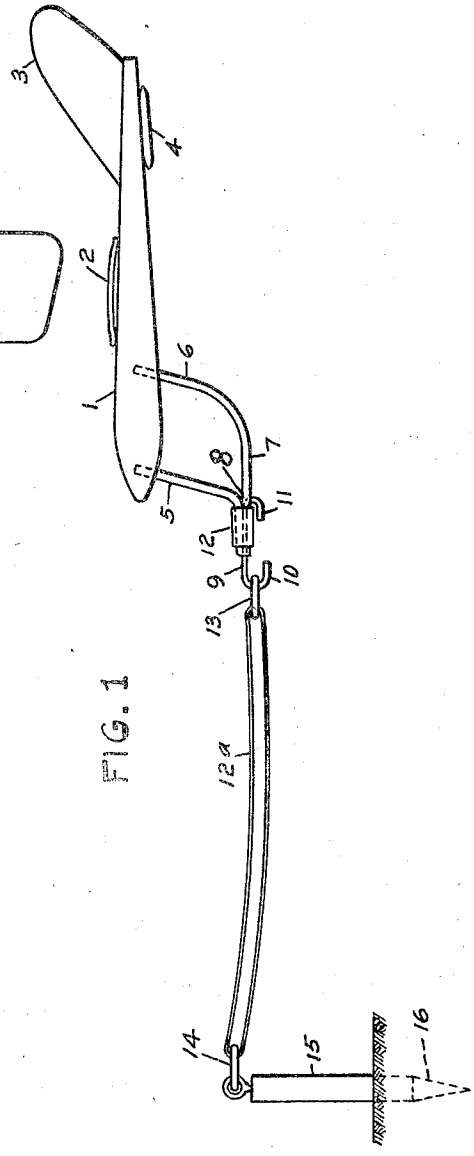


FIG. 1

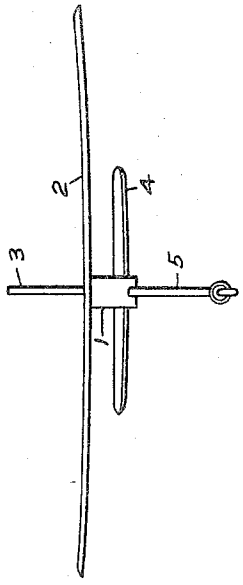


FIG. 2

INVENTOR

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UNITED STATES PATENT OFFICE.

DANIEL I. DWYER, OF DAYTON, OHIO, ASSIGNOR OF ONE-HALF TO EARL A. SMITH, OF DAYTON, OHIO.

TOY AIRPLANE.

Application filed February 2, 1925. Serial No. 6,211.

To all whom it may concern:

Be it known that I, DANIEL I. DWYER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Toy Airplanes, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to airplanes and in particular to toy airplanes.

The object of my invention is to provide a toy airplane which may be propelled by a catapult or a sling.

It is a further object of my invention to provide a toy airplane which will loop the loop.

It is an additional object to provide an airplane which can be made to loop the loop when propelled by a sling or catapult, which may be operated by a single person and which may be very simply and cheaply made.

Referring to the drawings:

Figure 1 is a side elevation showing the catapult in position;

Figure 2 is a front elevation of the plane; and

Figure 3 is a plan view of the plane.

Referring to the drawings, my plane consists of a central backbone or fuselage member 1 having a transverse plane surface 2 which may or may not be cambered as desired. The rear portion of the fuselage member is provided with a vertical rudder member 3 and a transverse stabilizer member 4 which is located with a negative angle of incidence with respect to the major axis of the fuselage member. The forward under side of the fuselage member is provided with a landing skid consisting of a downwardly and forwardly projecting landing members designated 5 and 6. The member 6 not only projects downwardly, but projects forwardly through the member 7 until it meets at 8 with the skid member 5. At this meeting point is located an attaching hook 9. This hook has a forward hook member 10 and a rear hook member 11. The rear hook member engages with the wrapping 12 which joins the skid members together and maintains the hook member in position. The forward hook 10 engages with an elastic band or bands 12^a through the agency of a metallic eye or ring 13 mounted on the ends of the bands which prevents the bands from becoming cut by the hook 10 and which also serves to assemble the bands if there are more than one, so that it is easy to mount the catapult upon the hook 10.

The forward ends of the elastic bands are mounted on a ring 14 which in turn is mounted upon the end of the stick 15 which may be either held in the hand or have its sharpened ends 16 thrust into the ground.

By holding the stick 15 stationary in the hand or by placing it in the ground and pulling the plane backwards until the bands are flexed and stretched and then suddenly releasing the plane, it will be found that the plane proceeds forwardly at a rapid rate, disengaging itself from the ring 13, rising in a graceful arc and making one or more loops. This facility for looping is due to the fact that the pressure of the air on the upper surface of the stabilizer surface having the negative angle of incidence, depresses the rear end of the plane, causing it to turn about its transverse axis and to make a loop.

It will be understood that I desire to comprehend within my invention such modifications as may be necessary to adapt it to varying conditions and uses.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In combination in a toy, of a toy airplane having a fuselage member, a plane surface, a rudder surface, a stabilizer surface, and a landing skid, means of detachably connecting the plane landing skid to an elastic catapult, and a catapult, whereby the plane may be projected over the catapult and detached therefrom upon being released and the catapult being allowed to actuate the plane.

2. In a toy airplane, a fuselage member, a plane surface, a rudder surface, and a stabilizer surface, a downwardly and forwardly extending skid member, and a hook carried on the end of said member for attaching to a catapult.

3. In a toy airplane, a fuselage member, a main plane surface, a rudder surface, a fixed stabilizer surface, a downwardly and forwardly extending skid member, and a hook carried on the end of said member for attaching to a catapult, said main plane

surface having a negative angle of incidence on its stabilizer surface.

4. In a toy airplane, a fuselage member, a main plane surface, a rudder surface, a fixed stabilizer surface having a negative angle of incidence, a downwardly and forwardly extending skid member and a hook carried on the end of said member for attaching to a catapult.

5. In a toy, a toy airplane, a catapult adapted to be detachably attached to the plane, such catapult consisting of a handle, a ring thereon, elastic members carried by said ring, and a ring on the free end of the elastic members to engage with a hook on the plane, and a hook on the plane.

6. In a toy, a toy airplane, a catapult adapted to be detachably attached to the plane, such catapult consisting of a handle, a ring thereon, elastic members carried by said ring, and a ring on the free end of the elastic members to engage with a hook on the plane, and a hook on the plane, said hook on the plane being adapted to reciprocate relative to said plane.

7. In a toy, a toy airplane, a catapult adapted to be detachably attached to the plane, such catapult consisting of a handle, a ring thereon, elastic members carried by said ring, and a ring on the free end of the elastic members to engage with a hook on the plane, and a hook on the plane, said hook being located below the general level of the plane.

8. In a toy airplane, a fuselage member, a main plane surface, a rudder surface, a fixed stabilizer surface having a negative angle of incidence, a downwardly and forwardly extending skid member and a hook carried on the end of said member for attaching to a catapult, said hook consisting of an intermediate member adapted to slide relatively to the skid, an abutment on one end of the intermediate member to limit the movement of the intermediate member, and a hook on the other end of the intermediate member for engaging with the catapult.

In testimony whereof I affix my signature.

DANIEL I. DWYER.