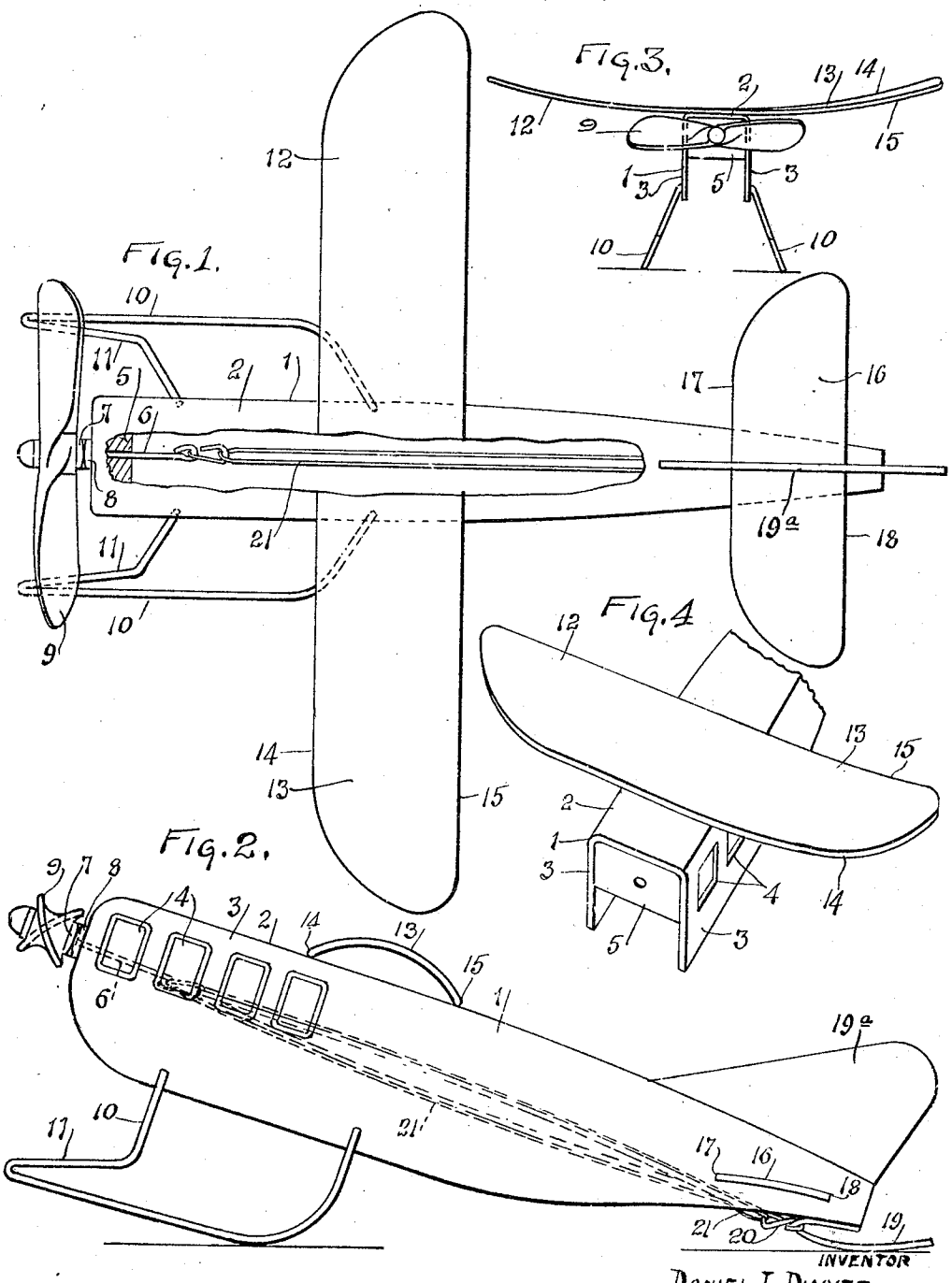
Aug. 11, 1925.

1,549,073

D. I. DWYER

TOY AIRPLANE

Filed Feb. 2, 1925



INVENTOR

DANIEL I. DWYER,

Faulkner & Faulkner

ATTORNEY.

Patented Aug. 11, 1925. 1,549,073

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. 6,210.

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.

It is the object of my invention to provide an airplane and in particular a toy airplane in which the rubber bands or other source of motive power may be completely enclosed within a hollow inverted U-shaped fuselage structure. This structure may be closed at the bottom or not as desired.

It is a further object to provide such a plane with a main wing surface warped to compensate for the propeller torque and to provide in combination therewith a stabilizer surface on the tail having a negative angle of incidence.

It is my object to provide a fuselage structure in a toy which will have all of the appearance of the fuselage of a large full size plane and at the same time have the structure serve for enclosing, concealing and protecting a source of motive power for the propeller.

It is an additional object to provide means of hooking this motive power such as rubber bands upon the tail skid.

It is my object to change the normal angle of incidence of one wing to a greater angle of incidence than that of the other to overcome the effect of torque of the propeller by giving one wing a greater lifting effect as the toy proceeds in flight, whereby the torque is overcome and the toy kept in horizontal balance, and combine with this a tail structure with a negative angle of incidence.

Referring to the drawings:

Figure 1 is a plan view of the plane;

Figure 2 is a side elevation thereof;

Figure 3 is a front elevation showing the warping of the left hand wing to compensate for the torque; and

Figure 4 is a perspective of the fuselage body and main wing.

Referring to the drawings, 1 generally designates a fuselage body which is preferably U-shaped having a top wall 2 and side walls 3 which may have window openings 4 if desired. In the forward end of this fuselage is mounted a block or plate 5 for supporting the propeller shaft 6 and the universal propeller bearings 7 and 8 which are semi-circular conical disks. On this shaft is mounted the propeller 9.

The side walls of the fuselage structure carry the landing skids 10 which are U-shaped having a forwardly projecting loop 11. These skids are mounted on either side of the machine diverged outwardly and downwardly forming together a substantially V-shaped structure when viewed from the front of the machine.

The upper surface of the fuselage 2 carries the main wing structure which on the right hand side is either flat or cambered as the outer end of the wing tips upwardly. This wing surface is designated 12. The other wing surface designated 13 on the left hand side is warped on the major axis of the wing surface so that the forward or leading edge 14 is higher than the trailing edge 15. This compensates for the propeller torque.

I also provide a stabilizer surface on the tail of the fuselage, such stabilizer being located at a negative angle of incidence with the major axis of the machine. These surfaces are designated 16. The forward edge 17 is in a lower plane than the rear edge 18. A vertical rudder structure 19^a is provided between and above the stabilizer surfaces.

The under surface of the tail structure carries a U-shaped tail skid 19 upon which is hooked a hook 20 carrying the rubber bands 21 which are connected at their forward end to the propeller shaft 6.

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

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

1. In a toy airplane, a main plane surface having one half of the surface warped about the major axis of the plane surface and fuselage, a propeller, means for actuating the propeller, a rudder, a stabilizer having a negative angle of incidence, said fuselage consisting of a body having enclosing side walls for enclosing the actuating means for the propeller, said actuating means consist-

ing of a plurality of rubber bands connected to a propeller shaft at one end within the fuselage and connected at the other end to a tail skid carried at the lower rear end of the fuselage, and a tail skid, whereby the rubber bands are enclosed and hidden within the fuselage.

2. In a toy airplane, an inverted U-shaped fuselage, a supporting block in the forward end thereof for a propeller, a propeller shaft carried thereby, a resilient means connected to said propeller shaft and located within said fuselage and enclosed thereby, landing skids carried by said fuselage, a main plane surface carried by said fuselage, a stabilizer surface and a rudder surface carried by the tail end of said fuselage, a tail skid, means thereon for supporting said resilient means, said main plane surface having a portion thereof warped about its major axis and the stabilizer surface having a negative angle of incidence to the major axis of the plane.

In testimony whereof, I affix my signature.

DANIEL I. DWYER.