

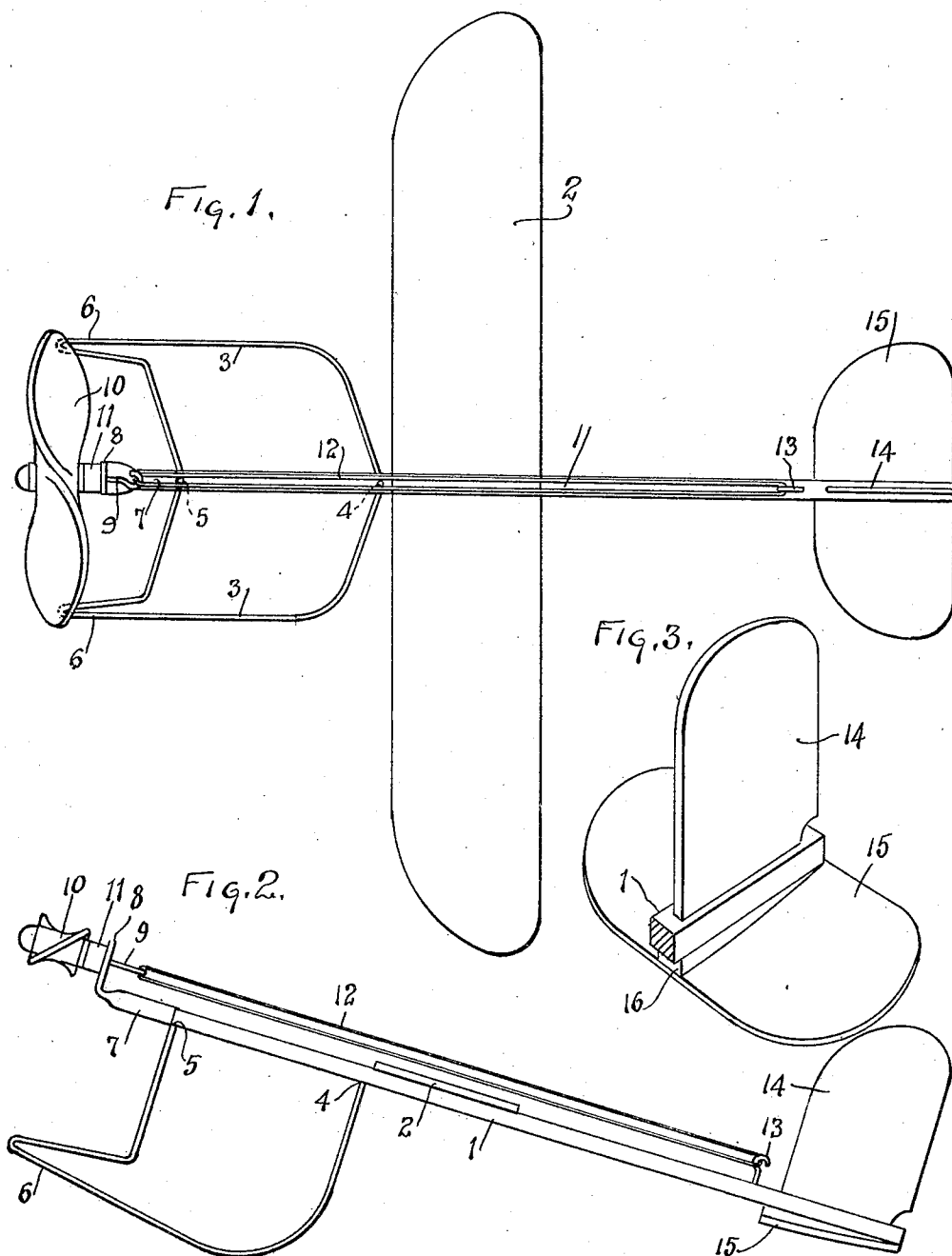
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TOY AIRPLANE

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UNITED STATES PATENT OFFICE.

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TOY AIRPLANE.

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

It is the object of my invention to provide an airplane structure which is adaptable to all types of airplanes but in this particular instance I have embodied it in a toy airplane.

It is my primary object to provide main plane surfaces with a zero angle of incidence without warping surfaces and a tail structure such as stabilizers having a predetermined angle of incidence, preferably a negative angle of incidence. These plane surfaces can be cambered or not as desired.

The main plane surfaces may also be cambered.

When I refer to stabilizers I desire to include similar structures which are sometimes termed elevators. I comprehend within stabilizers generally that transversely located surface mainly in the horizontal found at the end of the tail structure of an airplane.

It is my object to provide a toy airplane which will have cheaply constructed flat main plane surfaces and a fixed stabilizer surface with a predetermined negative angle of incidence.

Referring to the drawings:

Figure 1 is a plan view of the plane;

Figure 2 is a side elevation of the plane and

Figure 3 is an isometric perspective of the tail of the plane showing the particular construction of this invention.

Referring to the drawings in detail, 1 is the backbone of the plane corresponding to the fuselage of the plane. 2 indicates a plane surface having a zero angle of incidence as it has a flat surface in a horizontal plane parallel to the plane of the backbone 1.

The forward end of the backbone 1 carries a pair of diverging U-shaped wires 3 connected to the backbone at 4 and 5 and extending forwardly into a skid 6, thus providing a landing gear for the plane. On the forward end of a backbone 1 is a fitting consisting of a tubular member 7 fitting over the end of the backbone and a right angle plate 8 which has an aperture for receiving the propeller shaft 9. This propeller shaft has on its forward end mounted a propeller 10 with a rear bearing collar 11.

The rear end of the propeller shaft 9 has connected thereto a rubber band 12 which is connected at its rear end to a hook 13 at the rear of the backbone 1 adjacent the tail structure.

The rear end of this backbone 1 carries a vertical rudder 14 and a transverse stabilizing member 15 placed at an angle to give it a negative angle of incidence to the backbone 1. A triangular shaped block 16 with its thicker end forward is placed beneath the backbone and between it and the stabilizer 15. This stabilizer may be cambered or not as desired. The stabilizer extends on either side of the backbone or fuselage member 1.

It is 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 an airplane having a main plane surface and fuselage, a stabilizer surface having a negative angle of incidence, the main plane surfaces having no camber surfaces, having a zero angle of incidence, and a vertical rudder structure, said stabilizer surface being cambered.

2. In a toy airplane, a central body structure, a propeller mounted on one end thereof, a propeller shaft extending through a bracket on the end of said structure, a bracket, an elastic means connected to said propeller shaft, and a stationary support on said body structure, landing gear, a plane surface, and a stabilizer mounted on the body structure at a negative angle thereto and to the plane surface.

3. In a toy airplane, a central body structure, a propeller mounted on one end thereof, a propeller shaft extending through a bracket on the end of said structure, a bracket, an elastic means connected to said propeller shaft, a stationary support on said body structure, landing gear, a plane surface, and a stabilizer mounted on the body structure at a negative angle thereto and to the plane surface, and a rudder surface mounted vertically on said body.

4. In a toy airplane, a central body bar, a bracket on one end thereof, a propeller, a propeller shaft loosely mounted therein, an elastic driving means connected to said

propeller shaft at one end to rotate there-
with and fixed at the other end remotely
on said body member, a diverging U-shaped
wire landing gear extending downwardly
5 and forwardly on either side of said body
member, a plane surface on said body mem-
ber adjacent said landing gear, a vertical
rudder surface on the rear end of said
body member, a transverse stabilizing sur-
10 face on the rear end of said body member
at an angle thereto.

5. In a toy airplane, a main plane sur-
face, a stabilizer surface, a fuselage mem-

ber, said main plane surface having a per-
manently fixed zero angle of incidence and 15
said stabilizer surface having a permanently
fixed negative angle of incidence whereby
the rear end of the fuselage member with
the stabilizer will tend to descend relatively
to the plane of movement of the forward 20
end of the fuselage member and the main
plane surface whereby the plane will loop
the loop.

In testimony whereof I affix my signature.

DANIEL I. DWYER.