P. T. W. HALE.

TOY AEROPLANE.

APPLICATION FILED JUNE 12, 1919.

1,346,956. **Patented July 20, 1920.**

Fig. 1

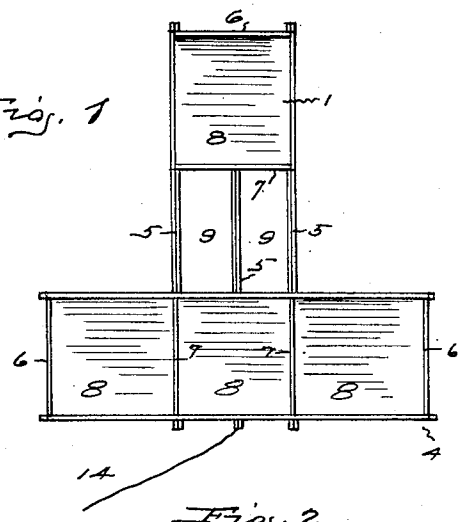


Fig. 2

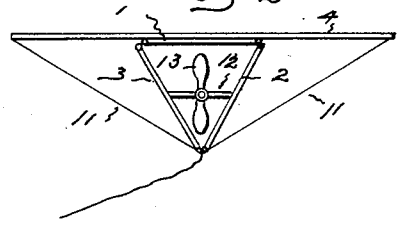


Fig. 3

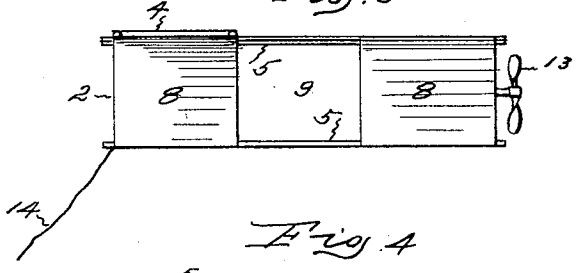


Fig. 4

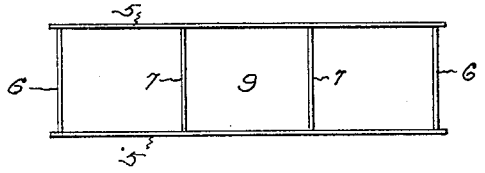


Fig. 5

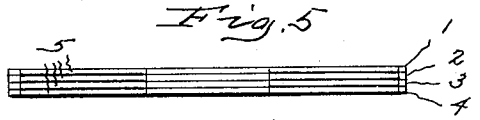
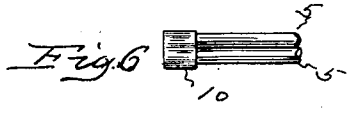


Fig. 6



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UNITED STATES PATENT OFFICE.

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TOY AEROPLANE.

1,346,956. Specification of Letters Patent. Patented July 20, 1920.

Application filed June 12, 1919. Serial No. 303,745.

To all whom it may concern:

Be it known that I, PERRY T. W. HALE, a citizen of the United States, residing at Portland, in the county of Middlesex and State of Connecticut, have invented a new and useful Improvement in Toy Aeroplanes, of which the following is a specification.

This invention relates to a toy heavier-than-air flying machine of the monoplane type, which is designed to be flown by the lifting force of air currents acting on the planes while held under restraint by means of a string or cord in the hands of a child or other person on the ground.

The object of the invention is to provide a toy of this character which is cheap to manufacture, which can be folded into small space for storing or transporting and by anyone quickly assembled in shape for flying, and which will have great climbing power and will remain steady at high altitudes in light or moderate breezes.

In the accompanying drawings Figure 1 shows a plan of a form of the device which embodies the invention, in condition for flying. Fig. 2 is a view looking toward the front end of the device, ready for use. Fig. 3 is a side elevation of the device. Fig. 4 shows a plan of one of the plane frames. Fig. 5 shows the device folded for storing or transporting. Fig. 6, on larger scale, illustrates a means that may be employed for fastening the frames when they are put together in shape for flying.

In the form of the invention illustrated the device is built up of four similar rectangular plane sections, although it is not necessary that all of the sections be alike. The sections 1, 2 and 3 are put together edge to edge so as to form a body that is triangular in cross section and the section 4 is secured flatwise to the body of this form so as to extend transversely near the head end and provide the flying wings.

Each of the plane sections of the particular form of device illustrated has a frame composed of side bars 5, end bars 6 and intermediate cross bars 7. These bars may be made of round, square or other shaped rods of light wood, metal or other convenient material and they may be fastened together in any suitable manner. Each of these frames in the form shown is covered between the end bars 6 and the cross bars 7 with sheets 8 of paper, silk or other light, strong fabric or material. The space 9 between the cross bars 7 is left uncovered. The ends of the side bars 5 of each plane frame may be made to project slightly beyond the covering and when the sections are brought together to form the triangular body, suitably shaped ferrules 10 (Fig. 6) may be slipped over the projecting ends to secure the parts together. When the frames are secured together in this simple manner a rigid yet light body is formed in the shape of two hollow triangular prisms which are separated some distance from each other and yet are connected together by the frames. Upon removal of the securing means the frames may be folded together or packed so that they will lie flat one upon the other as illustrated in Fig. 5.

Wires or cords 11 may be led from the outer corners of the leading and trailing edges of the transverse plane to the lower edge of the triangular body for stiffening the structure and preventing the wings from distortion. If desired, a strut 12 may be arranged across the tail end of the body and an air screw 13 mounted thereon. The leading string or cord 14 held by the flier of the device is fastened to the lower edge of the body at or near the head end.

This device can be manufactured cheaply of readily procurable materials. It can be packed into a very small space for storing and transporting and yet can be quickly erected and secured in flying condition by anyone. The transversely extending wings impart great climbing power, while the body with its hollow prisms adds to the sustaining power and gives stability to the device when in the air.

The invention claimed is:—

A toy aeroplane comprised of four similar rectangular frames, each frame being covered near its ends with fabric, detachable means securing three of said frames together edge to edge so as to form a hollow triangular body, and detachable means securing the fourth of said frames flatwise transversely across one end of one of the frames forming said body.

PERRY T. W. his × mark HALE.

Witness:
HARRY HOWARD.