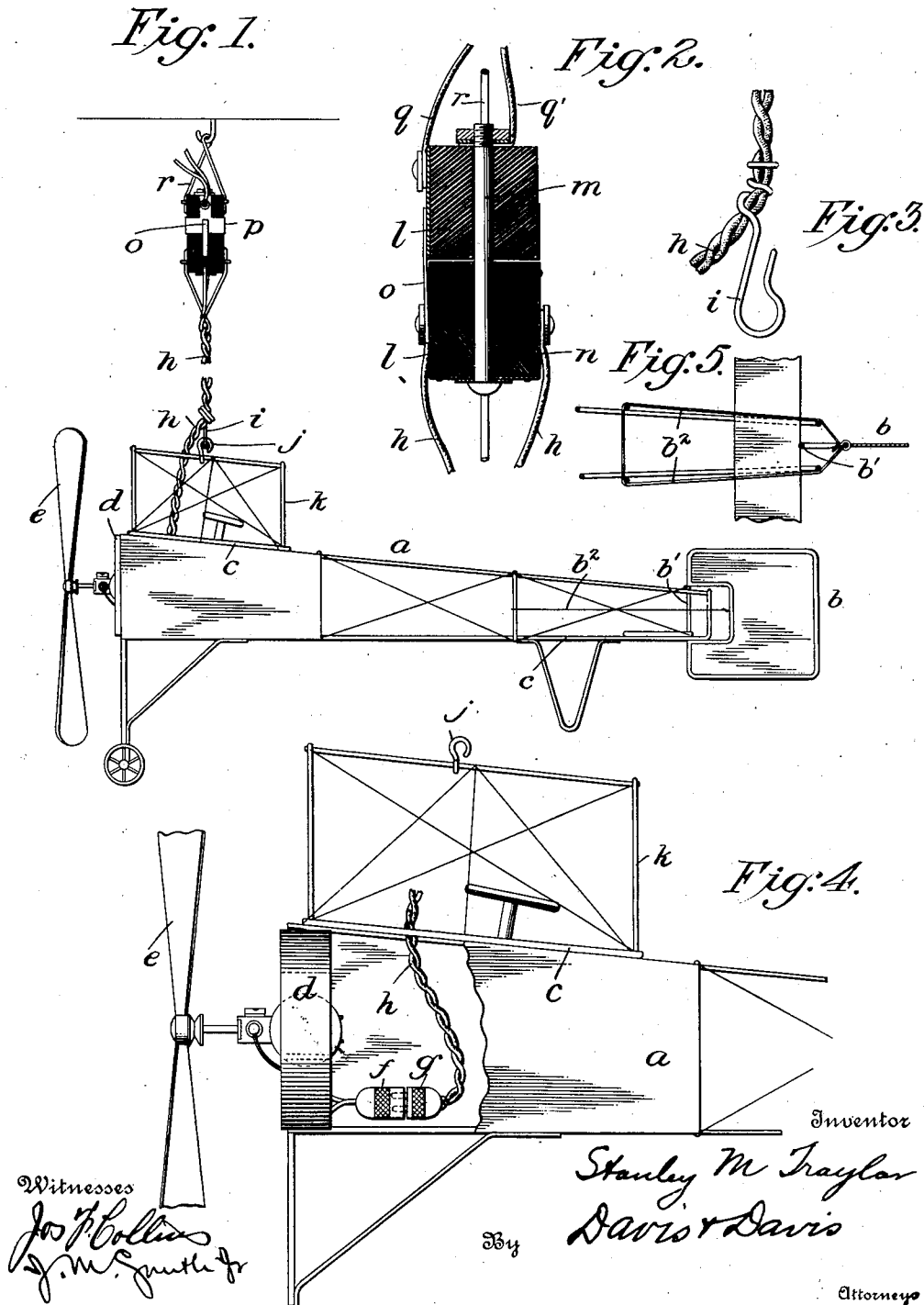


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TOY AEROPLANE.
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Patented July 23, 1912.



UNITED STATES PATENT OFFICE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, STANLEY M. TRAYLOR, a citizen of the United States, and a resident of Petersburg, in the county of Dinwiddie, State of Virginia, have invented certain new and useful Improvements in Toy Aeroplanes, of which the following is a full and clear specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation showing my device swung from an overhead support; Fig. 2 a detail vertical sectional view of the swivel contact member; Fig. 3 a perspective view of the suspending hook attached to the electric cable; and Fig. 4 a side elevation of a portion of the aeroplane. Fig. 5 is a detail plan view showing the manner of adjusting the rudder.

The object of this invention is to provide a simple electrical aerial toy of the aeroplane or dirigible air ship type, as more fully hereinafter set forth.

In the drawing *a* designates a miniature aeroplane of a well known type provided at its rear with an adjustable rudder and also with the usual planes *c*. The aeroplane illustrated is the Bleriot type but it will be understood that any other type of aeroplane may be employed or any form of balloon or dirigible air ship.

At the forward end of the air ship is affixed an electric motor *d* which is adapted to rotate a propeller *e*. Electrical connection to the motor is made through the socket *f* of ordinary construction, which is attached to the terminals of the motor, and which is adapted to receive an ordinary electrical plug *g* attached to the lower extremity of an electric cable *h*, composed of two wires adapted to carry the current to and from the motor. The plug *g* is detachable from the socket *f* in the usual manner in order that the air ship may be disconnected from the cable.

The cable *h* is suitably attached at its upper end to an overhead support such as a ceiling of a room, and hangs freely therefrom, thus supporting the weight of the air ship. To prevent the weight of the air ship from disconnecting the plug *g* from its socket and to insure an evenly balanced suspension, I attach to the cable *h*, at a distance above the plug *g*, a hook *i*, which is adapted to be engaged in an eye *j* projecting upwardly from a light frame *k* attached to the body of the air ship at its forward end.

The means for attaching the upper end of the cable to the overhead support consists of a swivel contact coupling consisting of a pair of cylindrical blocks 1 of insulation material, these blocks being rotatably attached together, one above the other, by a vertical connecting bolt or pin *m*. The two wires or conductors of the cable *h* are separated at the upper end of the cable and connected to the lower block at opposite sides thereof. One of these conductors is electrically connected by means of a metal plate *n* with the lower end of the bolt *m*, and the other conductor is electrically connected to a vertical contact finger *o* whose upper free end bears resiliently upon an annular band of metal *p* attached to the upper block. The band *p* is electrically connected to a conductor *q* attached to the upper block, and the central bolt *m* is attached to another conductor *q'*, these two conductors *q*, *q'* being extended to a suitable point or place, where they are connected to a battery of suitable strength and character.

It will be observed that when the current is sent through the motor, the propeller will cause the miniature air ship to move forwardly, and the air ship being tethered by the suspending cable and the suspending cable being free, the air ship will be caused to move in a circle, and the centrifugal force will cause the air ship to rise higher and higher as the speed increases, the tendency being to swing the cable toward the horizontal. To prevent the twisting of the cable interfering with the free movement of the device, I provide the swivel coupling above described and locate the same at the upper end of the suspending cable. The operation of this coupling is obvious; it permits free rotation of the depending cable without breaking the electrical connections. It will be observed that a feature of importance lies in employing the electrical conductors themselves as the suspending means for the device. It will be observed that the upper block of the coupling is adapted to be suspended from the overhead support by means of a bail *r*.

It will be understood that the rudder *b* is pivotally attached to the frame *a* by the vertical pivot rod *b'* and adjustment of the rudder is secured in any suitable manner, preferably by means of a cord loop *b²* which will be made sufficiently taut to frictionally hold the rudder in its adjusted position. By

means of this rudder the circles described by the air ship in its flight may be made larger or smaller, as is obvious.

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

1. In a device of the character set forth, a miniature air ship of suitable type, an electric motor thereon connected to a propeller, an electrical suspending cable adapted at its lower end to be detachably connected to the motor and at its upper end to an overhead support, and a suspending hook attached to the cable near its lower end and means for detachably connecting this hook to the air ship frame thereby relieving the detachable connection from strain.

2. In a toy of the class set forth, a miniature air-ship of suitable type carrying an electric motor and a propeller, and means for suspending the airship and supplying current to the motor consisting of a two-wire suspending cable adapted at its lower end to be connected to the motor, a pendant swivel attached to the upper end of the cable and consisting of a pair of blocks ar-

ranged one under the other and means for swivelly connecting the blocks, means for suspending the upper block from an overhead support, and contact devices adapted to carry the current across the swivelly connected blocks.

3. In a toy of the class set forth, a miniature airship of suitable type carrying an electric motor and a propeller, and means for suspending the airship and supplying current to the motor consisting of a two-wire suspending cable adapted at its lower end to be connected to the motor, a pendant swivel attached to the upper end of the cable, a bail for suspending the swivel from an overhead support, contacts carrying the current across the swivel, and conductors connected to the contacts above the joint of the swivel, for the purpose set forth.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

STANLEY M. TRAYLOR.

Witnesses:

C. LEONARD MAYES,
COURTNEY A. QUICKE.