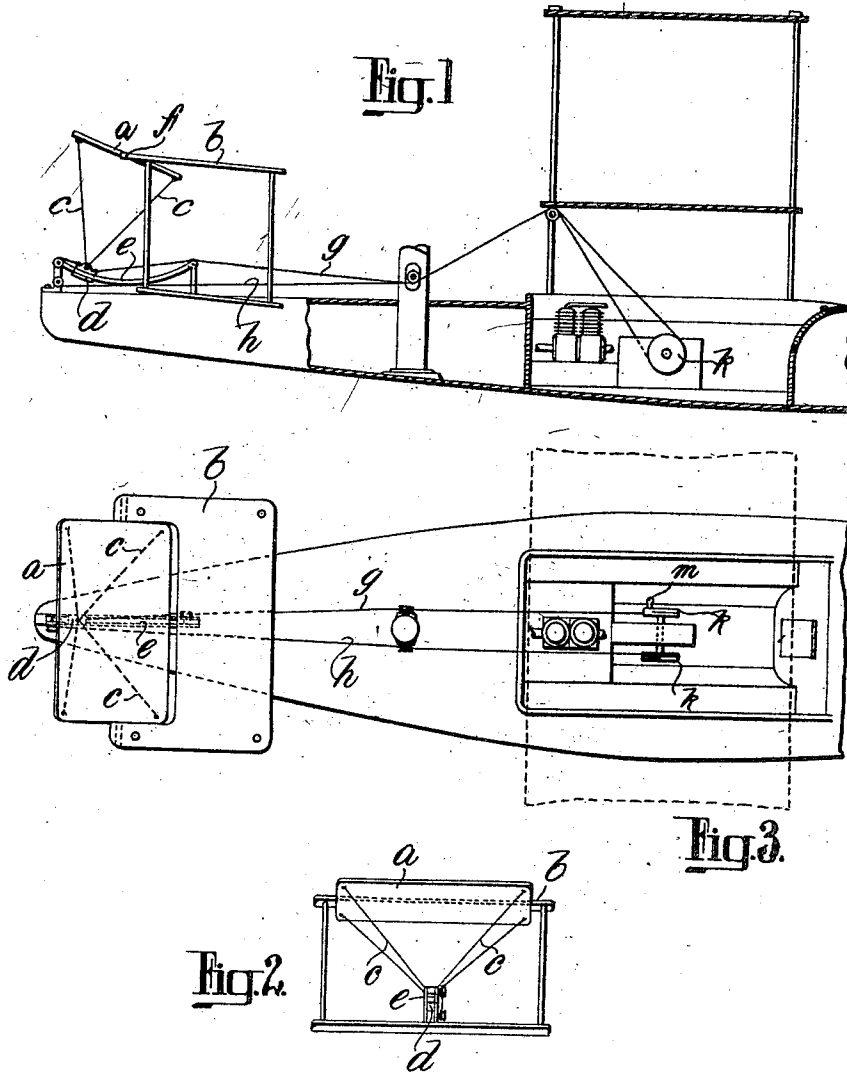


A. HORTON.
ELEVATOR FOR AERIAL VESSELS.
APPLICATION FILED NOV. 11, 1911.

1,045,030.

Patented Nov. 19, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

ALEXANDER HORTON, OF PORTSMOUTH, ENGLAND.

ELEVATOR FOR AERIAL VESSELS.

1,045,030.

Specification of Letters Patent.

Patented Nov. 19, 1912.

Application filed November 11, 1911. Serial No. 659,771.

To all whom it may concern:

Be it known that I, ALEXANDER HORTON, a subject of the King of England, residing at 38 Marmion road, Portsmouth, England, have invented certain new and useful Improvements Relating to Elevators for Aerial Vessels, of which the following is a specification.

This invention relates to elevators for aerial and other vessels and refers to an improved means of actuating such elevators by which the elevator plane or planes are well under control and in which they are held perfectly rigid in all positions.

In carrying out my invention I attach to the corners of the elevator plane suitable stays which pass to a sliding piece adapted to slide along an arc-shaped guide. The curvature of the arc is such that it is struck from the center of rotation of the elevator plane. Suitable means are provided for enabling the pilot to alter the position of the sliding part and thus control the position of the plane. And in order that my said invention may be better understood I will now proceed to describe the same with reference to the drawing accompanying this specification which shows by way of example one method of carrying my aforesaid invention into practice.

Figure 1 is a part sectional elevation of an elevator constructed according to my invention. Fig. 2 is a front elevation of a portion of Fig. 1. Fig. 3 is a plan of Fig. 1. The same letters of reference are employed to denote the same parts in all the views:—
a is an elevator plane suitably pivoted to the supporting plane *b*, said plane *b* being suitably cut away at the front thereof to permit of movement of the elevator plane *a* (see Fig. 3).

c are stays attached to the corners of the elevator plane *a*. These stays are united to a sliding piece *d*, which is adapted to slide along an arc-shaped guide *e*. The curvature of the guide *e* is such that it forms an arc of a circle struck from *f*, which is the center of rotation of the elevator plane *a*.

The piece *d* is set in various positions on

the guide *e* in order to actuate the elevator plane *a* by means of the cables *g h*, the cables passing over suitable guide pulleys. *m* is a handle for operating the drums *k*.

When it is required to alter the angle of inclination of the elevator plane *a* it is simply necessary to turn the handle *m* in the required direction which causes the sliding piece *d* to be drawn into the required position on the guide *e*, carrying with it the stays *c* which set the elevator plane *a* in the required position. Owing to the construction of stays extending to the corners of this plane *a* it is held perfectly rigidly in all positions.

What I claim as my invention and desire to secure by Letters Patent of the United States of America is:—

1. The combination with a supporting plane of an aeroplane, of an elevator plane horizontally pivoted on said supporting plane; an arcuate guiding member rigidly mounted on the aeroplane and having its center co-axial with the pivotal axis of the elevator plane; a member slidably mounted on said arcuate member; stays connecting said slide-
able member with said elevator plane; and means connected with the slidable member for moving the same to actuate the elevator plane, substantially as described.

2. The combination with a supporting plane of an aeroplane, of an elevator plane horizontally pivoted on said supporting plane, said supporting plane being cut away at the front portion thereof to allow of movement of the elevator plane; an arcuate guiding member rigidly mounted on the aeroplane and having its center co-axial with the pivotal axis of the elevator plane; a member slidably mounted on said arcuate member; stays connecting said slidable member with said elevator plane; and means connected with the slidable member for moving the same to actuate the elevator plane, substantially as described.

3. The combination with a supporting plane of an aeroplane, of an elevator plane horizontally pivoted on said supporting plane; an arcuate guiding member rigidly

mounted on the aeroplane and having its center co-axial with the pivotal axis of the elevator plane; a member slidably mounted on said arcuate member; stays connecting
5 said slidable member with said elevator plane; cords attached to said slidable member; and a pair of drums journaled on the aeroplane having said cords oppositely

wound thereon whereby to actuate the elevator plane, substantially as described. 10

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

ALEXANDER HORTON.

Witnesses:

L. SIMMONDS,

T. O. ROWLEY.