

P. SCHNEIDER.
 AEROPLANE.
 APPLICATION FILED JULY 30, 1910.

1,001,223.

Patented Aug. 22, 1911.

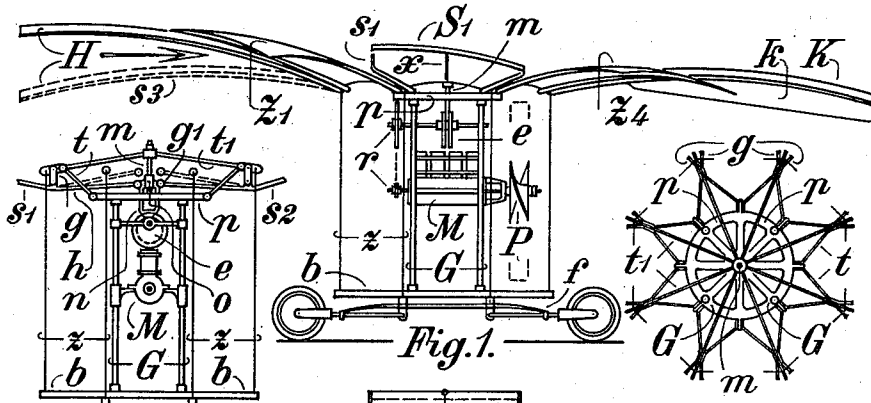


Fig. 2.

Fig. 4.

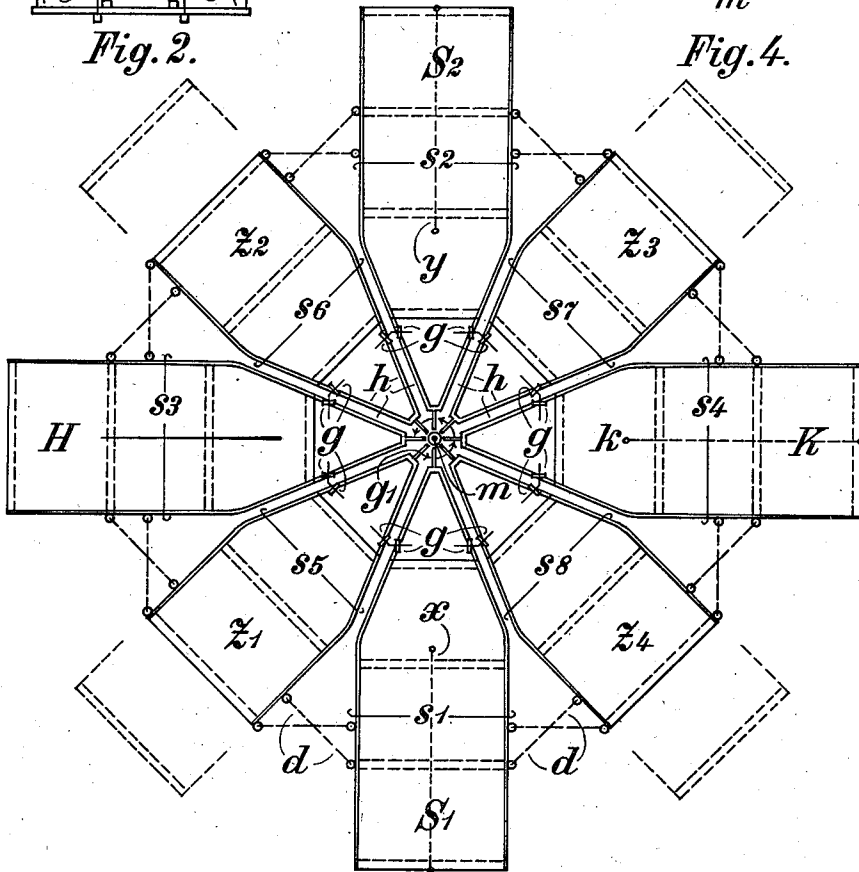


Fig. 3.

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UNITED STATES PATENT OFFICE.

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AEROPLANE.

1,001,223.

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To all whom it may concern:

Be it known that I, PAUL SCHNEIDER, a subject of the German Emperor, and resident of Tegel, near Berlin, Germany, have invented a certain new and useful Improvement in Aeroplanes, of which the following is a specification.

This invention relates to improvements in aeroplanes and consists in arranging around a vertical shaft elastic umbrella-shaped supporting surfaces separated by intermediate air spaces, the arched vertices of which surfaces are arranged externally of the axis of the vehicle so that equilibrium may be obtained in all directions of flight.

The supporting surfaces may be rigidly arranged about a shaft arranged in the vertical axis of the aeroplane and a number of them may also be capable of actuation. They thus offer to the air resistances in all directions of flight a symmetrical form with the center of gravity of the vehicle constant by reason of the arrangement of all mechanical parts below the center of gravity of the supporting planes.

The machine is brought into position ready for flight in the direction of the arrow in Figure 3 by adjustment of the vertically rigid planes at a suitable angle to the arrow in Fig. 1, the parts of the supporting surfaces inclined to the direction of flight under the influence of the propeller imparting when slightly inclined a slow flight and when more inclined a faster flight of the vehicle.

The motive power for the aeroplane can also be employed to increase its buoyancy by imparting a positive vibrating motion to the separate parts of the planes. This however is not a necessity and is only to be considered as an auxiliary means for increasing the buoyancy during flight.

The alterations in direction of flight are effected by movement of an aileron on either side, the return to position of which takes place after completion of the turning movement while for direct flight under the rear supporting surfaces over the propeller is arranged a keel plane.

The invention is illustrated in accompanying drawings in which—

Fig. 1 is a view of the invention showing the planes inclined relatively to the direction of flight. Fig. 2 is an elevation of the frame showing the supporting mecha-

nism of the planes. Fig. 3 is a plan of the planes with the lever mechanism. Fig. 4 is a plan of the framework for the plane frame.

Referring to the drawings, on the resilient frame *f* rests the rigid bottom frame *b* and with this is rigidly connected the fixed frame *G* for supporting the motor *M* and actuating mechanism. The upper end of this frame is formed by the top plate *p* with the guiding mast *m* said plate serving to hold the plane frame concentrically.

The top plate *p* of the motor frame *G* serves also as a rigid bearing for the parts *t* and *t'* of the frame work for the planes which are held by steel trusses *z* to the bottom frame *b* so that the rigid connection of all the above mentioned parts is insured.

In the present arrangement the plane body consists of 8 double arched planes of which the planes *S'* and *S²* on each side of the aeroplane are used in place of the hitherto well known supporting surfaces while the plane *H* serves as an elevator, *K* as a keel and the intermediate planes *Z'* to *Z⁴* in proportion to their dimensions increase the lifting effect of the planes.

The plane frames *S'* to *S⁸* are provided with inner ends *h* formed as levers and which are pivotally connected by members *g* (Fig. 2.) at *g* (Fig. 3.) with the heads of the framework rods *t'* and at *g'* (Figs. 2 and 3.) with the bush *o* adjustable on the guide mast *m*.

In order to increase the buoyancy of the aeroplane during flight the lateral planes *S'* and *S²* are positively vibrated by means of a cam *e* driven by the sprocket wheels *r* and by means of the foot *n* of the bush *o* sliding therein, connecting wires *d* serving to tension, the planes (Fig. 3.) in this case being guided from *Z'* and *Z²* direct to *Z⁴* and *Z³*.

The keel *k* arranged beneath the plane *K* serves to insure direct flight which is departed from by the motion of one of the two similar lateral planes *x* or *y* so that on the side to which it is turning, a suitable air resistance from the direction of flight comes into operation during the movement.

The motor *M* mounted in the frame *G* has a shaft on which the air propeller *P* is directly mounted while the parts *r* and *e* of the driving mechanism may be actuated as required in order to effect simultaneous positive motion of the lateral sails *S'* and *S²*.

Having now described by invention I declare that what I desire to secure by Letters Patent of the United States is:

5 In an aeroplane, the combination with a supporting frame-work, and propulsion means carried thereby, of an elevating plane and a keel plane radiating in opposite directions from said frame-work, vibratory
10 supporting planes radiating in opposite directions from the frame-work, means carried by the frame-work for vibrating said planes,

and supporting planes radiating from the frame-work which are disposed intermediate the planes aforesaid.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PAUL SCHNEIDER.

Witnesses:

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