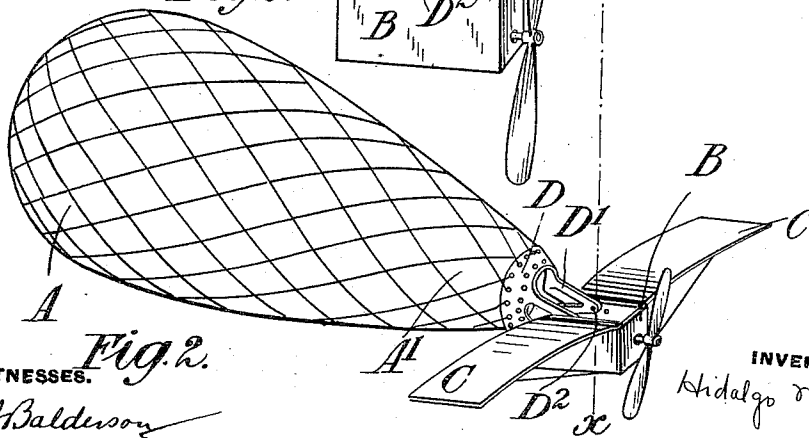
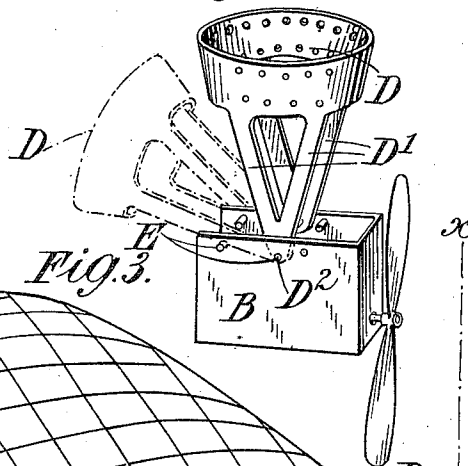
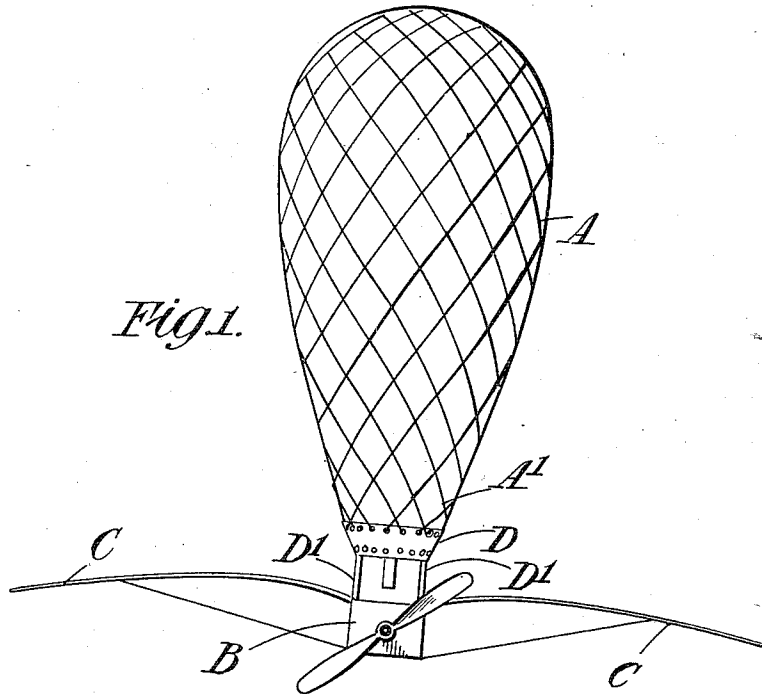


1,019,514.

Patented Mar. 5, 1912.



WITNESSES.

R. A. Baldwin
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INVENTOR.

Hidalgo Moya,
by Bahwell, Byones & Parneloe
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UNITED STATES PATENT OFFICE.

HIDALGO MOYA, OF LEICESTER, ENGLAND.

AERIAL VESSEL.

1,019,514.

Specification of Letters Patent.

Patented Mar. 5, 1912.

Application filed November 4, 1910. Serial No. 590,612.

To all whom it may concern:

Be it known that I, HIDALGO MOYA, a citizen of the United States of America, residing at Leicester, in England, have invented certain new and useful Improvements in Aerial Vessels, of which the following is a specification.

This invention is for improvements in or relating to aerial vessels and more particularly refers to the type of vessel wherein propelling means are employed.

This invention consists in providing an aeroplane with a gas chamber pivoted to it in such a manner that normally the gas chamber takes a vertical position over the aeroplane to partly sustain it in vertical descent and when the same is in forward motion and supported by its planes the gas chamber swings to the rear and thereby provides automatic stability for the aeroplane.

Referring to the accompanying drawings which show one method of carrying my invention into effect—Figure 1 is a front view of a monoplane provided with a gas chamber; Fig. 2 shows in elevation the position taken by the gas chamber when traveling, and Fig. 3 shows on a larger scale, a detail of the apparatus shown in Figs. 1 and 2.

Like letters indicate like parts throughout the drawings.

The vessel comprises a balloon A and an aeroplane that has a car B to carry the propelling means. Preferably the balloon is not quite sufficient to raise the car, the lifting being done by the further aid of planes C secured to the car. These planes may however be dispensed with and the buoyancy of the balloon alone be relied on for lifting the car and its load. The balloon A has the usual net A' covering it whereof the end is secured to a rigid support D. The support has two legs D' that are hinged to the car by means of pins D² that project from the sides of the car and pass through holes in the legs D'.

When the machine is stationary the balloon takes up a position vertically above the load-carrying portion so that the vertical axes of these two parts are in line with each other, as shown at X—X in Fig. 2. When, however, the vessel moves forward the balloon will cant rearwardly, and at a high speed it takes the position shown in Fig. 2, thereby decreasing the air-resistance and also providing automatic stability for the

aeroplane the car being air-borne by the planes.

Stops E keep the balloon from swinging beyond given points. The rear stops are merely for safety purposes but the forward stops also operate to allow a slight tilt of the car when the propeller is started so that the vessel travels upward. It will be seen that if the car be balanced the propeller, which lies below the point of pivoting, will cause the car to swing until the forward stops are pressed against the legs D'. The propeller will thus be automatically carried out of the horizontal position and the whole vessel will rise along an inclined path. Obviously the tilt of the car to automatically elevate the propeller may be obtained by shifting the load.

It will be seen that many modifications may be introduced without departing from the spirit of this invention, for instance, the aerial vessel might be of the bi-plane or other type, in fact any type of aeroplane may be attached to the balloon as described above, though a monoplane is preferred.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In an aerial vessel the combination with a car, of lifting planes connected to said car, a balloon situated above the car and hinged thereto, the axis of the hinge being horizontal and disposed transversely to the direction of travel, and arranged to permit the balloon to automatically swing backwardly and downwardly during the movement of the aeroplane through the air; substantially as described.

2. In an aerial vessel, the combination of a lifting or supporting plane, a car or load carrying vessel supported therefrom a propeller for the aerial vessel, a balloon situated above the lifting plane and car, a support connected to the lower end of said balloon, and a hinged connection between the support and the car, the axis of the hinge being horizontal and transverse to the direction of travel and arranged to permit the balloon to automatically swing to the rear when moving through the air; substantially as described.

3. In an aerial vessel, the combination of a lifting or supporting plane, a car or load carrying vessel supported therefrom, a propeller for the aerial vessel, a balloon situated above the lifting plane or car, a sup-

port connected to the lower end of the car, and a hinged connection between the support and the car, the axis of the hinge being horizontal and transverse to the direction of travel and arranged to permit the balloon to automatically swing rearwardly and downwardly when moving through the air, and stops for limiting the swinging movement of the support; substantially as described.

4. In an aerial vessel the combination of an aeroplane, a balloon situated above said plane, a support connected to the lower end of the balloon, a hinged connection between

the aeroplane and the support, the axis of the hinge being horizontal and transverse to the direction of travel, said support being arranged to prevent the lateral swaying of the balloon, and a propeller for the aeroplane situated at a lower level than the hinge; substantially as described.

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

HIDALGO MOYA.

Witnesses:

WALTER W. BALL,
F. HOOD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."