

Z. STONE.
AERIAL NAVIGATOR.

No. 77,850.

Patented May 12, 1868

Fig. 1.

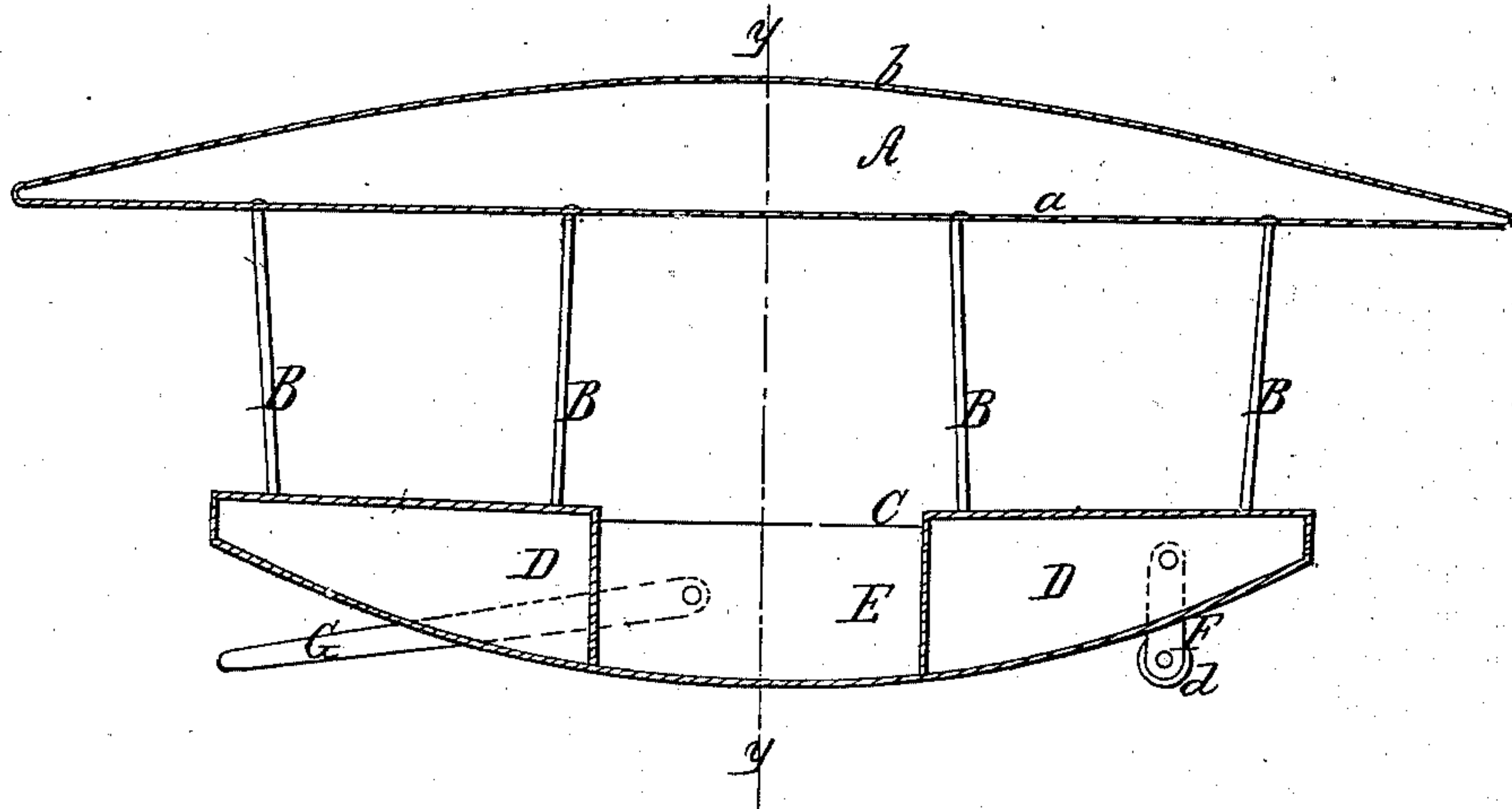
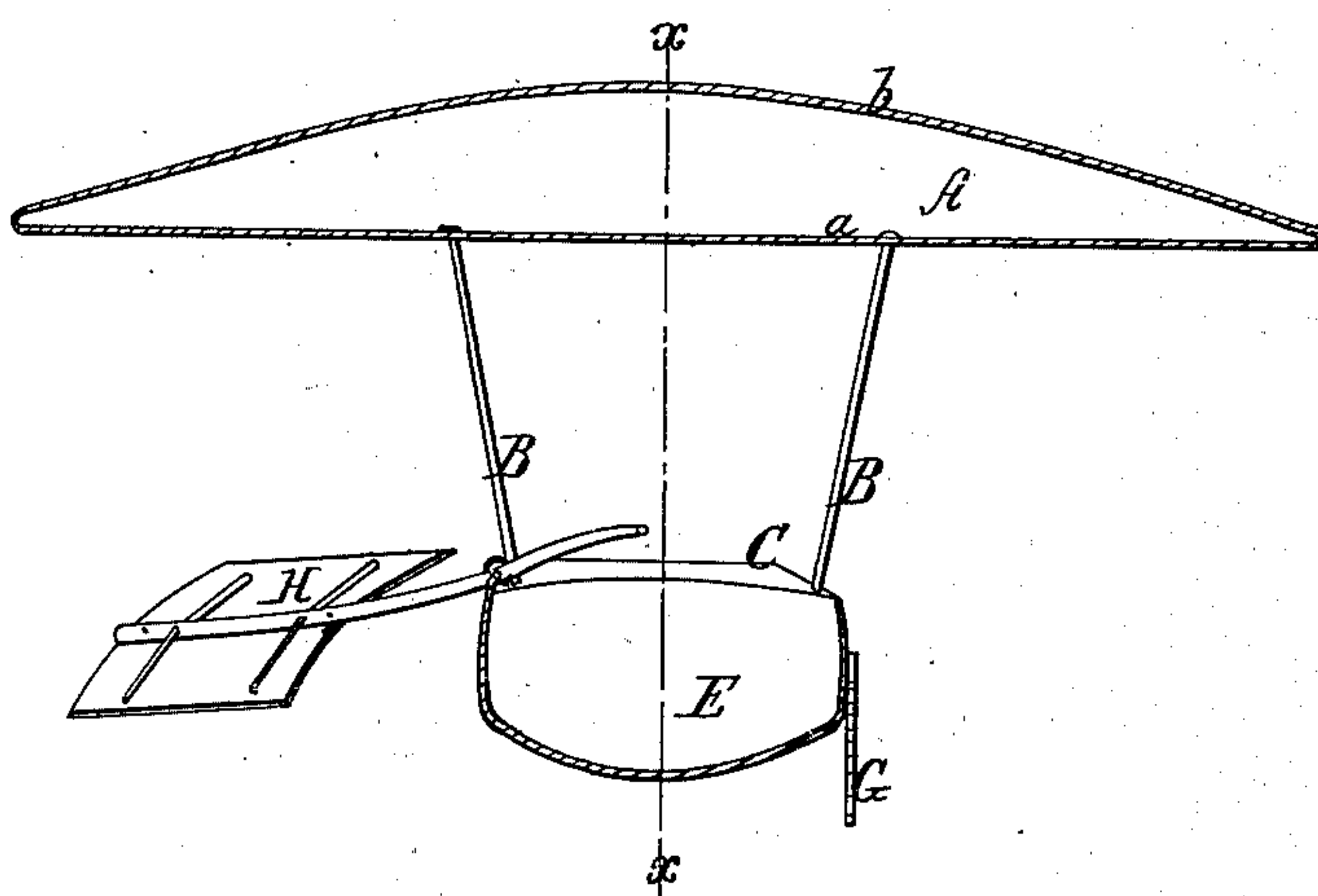


Fig. 2.



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ZAPHNA STONE, OF KINSMANS, OHIO.

Letters Patent No. 77,850, dated May 12, 1868.

IMPROVED AERIAL NAVIGATOR.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ZAPHNA STONE, of Kinsmans, in the county of Trumbull, and State of Ohio, have invented a new and improved Aerial Navigator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to a new and improved device for navigating the air; and it consists in constructing a balloon in a novel way, as hereinafter fully shown and described, whereby it may be made to rise and descend, at the will of the operator or navigator, and be under the complete control of the latter.

In the accompanying sheet of drawings—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, fig. 2.

Figure 2, a transverse vertical section of the same, taken in the line *y y*, fig. 1.

Similar letters of reference indicate like parts.

A represents the upper portion of the balloon, which is constructed of an extremely light framework, covered with varnished silk, such as is now used for the ordinary balloons.

This upper part A has a flat or plane bottom or under surface, *a*, and a rounded or convex upper surface, *b*, as shown in both figures, and is filled or inflated with gas, such as is now used for inflating the ordinary air-balloons. This upper part A may be rounded at its ends so as to form an oval or ellipse in its plan view.

This upper part A is connected by rods B to a car, C, to hold the passengers, and this car is of sufficient length to admit of being partitioned off to form two compartments, D D, which are, like the upper part A, inflated with gas. The central compartment E, which is open at the top, is the car proper, in which the passengers are seated.

To each side of the car C, near one or both ends, there are attached by pivot-bolts *c*, bars F, having rollers *d* at their outer ends, and to the sides of the car, near its centre, there are attached, by pivot-bolts *e*, bars G.

This balloon, thus constructed, is propelled along through the air by oars or paddles H, worked by hand, and it is designed to have the balloon ascend by inclining it, so that its upper part, A, when moving with its elevated end foremost, will have an inclination to ascend, the ascension being due to its propelling power as well as to the lightness of the balloon, or of the latter being of less specific gravity than the atmosphere; in fact, it is designed to have the balloon, in connection with the persons it carries, of rather greater specific gravity than the atmosphere, so that when the propelling power ceases, or is stopped, the balloon will descend very gradually.

It is designed to tilt or incline the balloon by means of a movable weight, so arranged or applied that it may be moved from one end of the car to the other, and this tilting or inclining may be assisted by an oar or paddle arranged so as to work or operate like the tail of a bird.

The rollers *d* admit of the car C passing readily over the surface of the ground, when the former comes in contact with the latter, and the bars G are designed to prevent any retrograde or backward movement of the car.

The bars G and F may be raised or depressed, to render them operative or inoperative, as occasion may require.

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

A balloon or aerial navigator, constructed with an upper part, A, having a flat or plane surface and an upper convex surface, and adapted to be filled with gas, in connection with a pendent car, C, having compartments D D, which are also adapted to be inflated with gas, and a central compartment, E, for the passengers, substantially as herein shown and described.

ZAPHNA STONE.

Witnesses:

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