

1,005,988.

Patented Oct. 17, 1911.
2 SHEETS—SHEET 1.

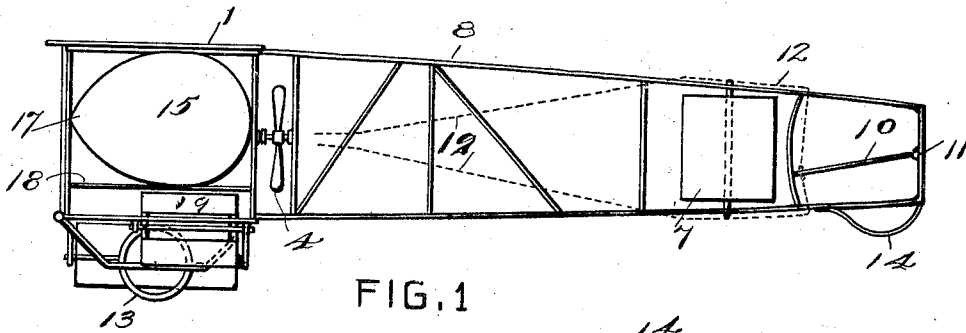


FIG. 1

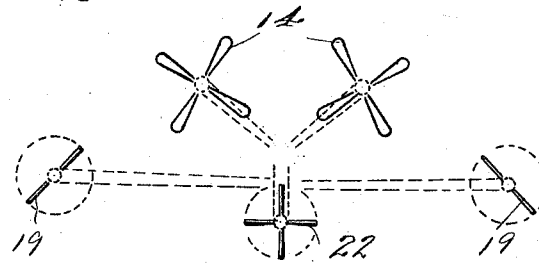


FIG. 9

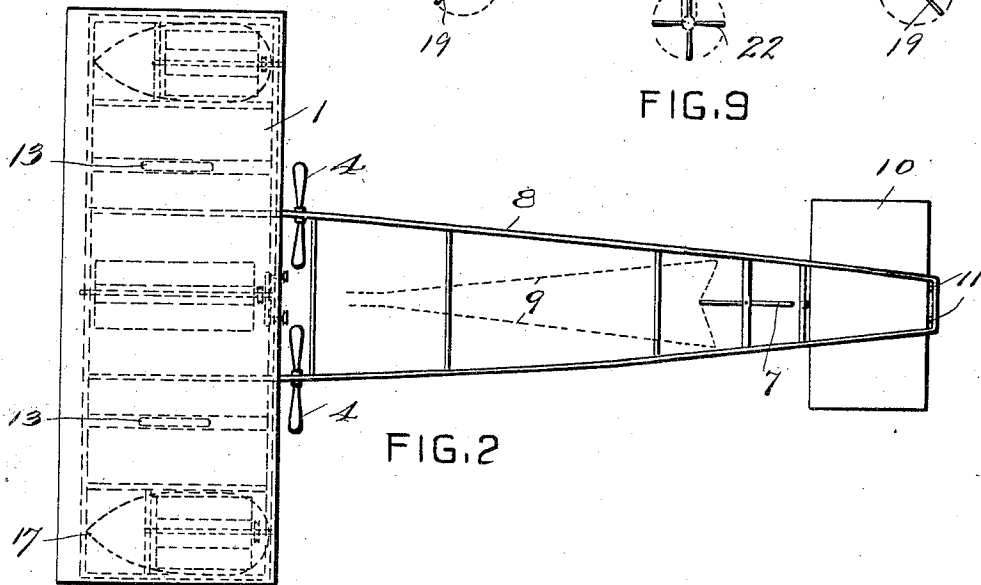


FIG. 2

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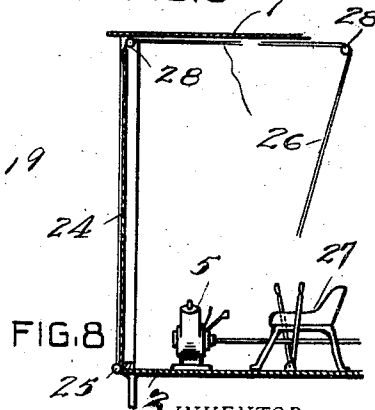
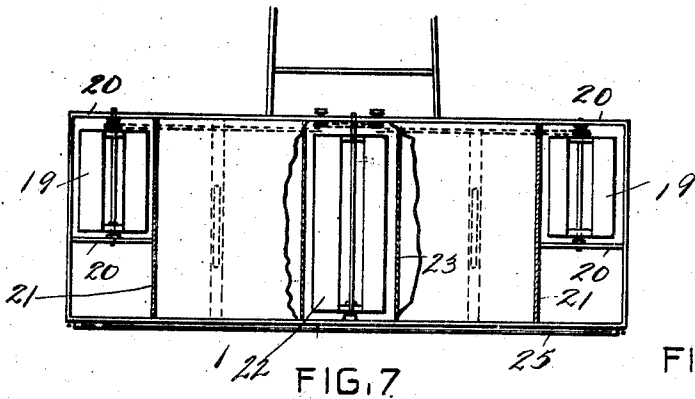
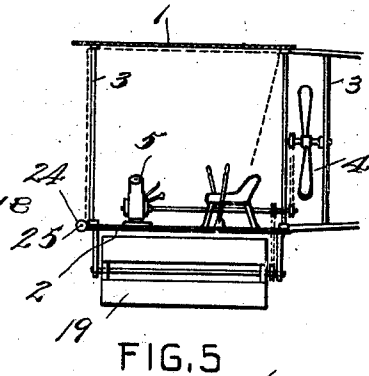
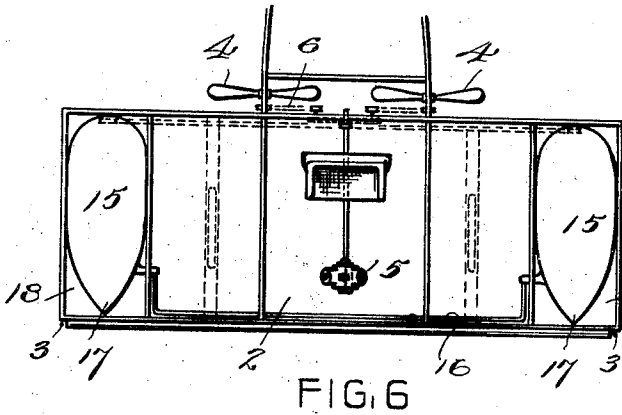
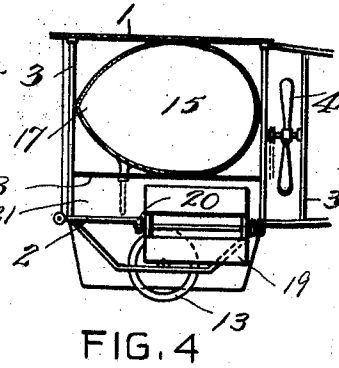
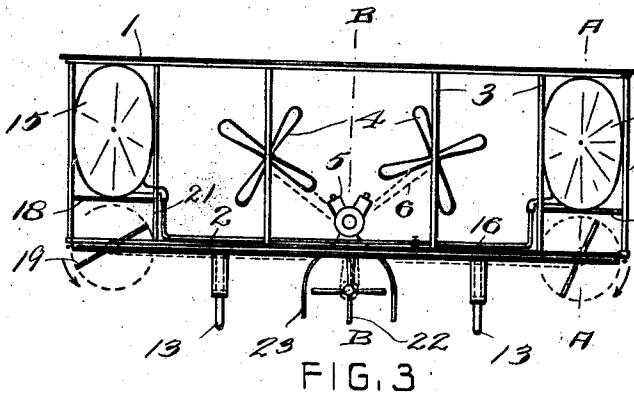
AIRSHIP.

APPLICATION FILED JULY 24, 1911.

1,005,988.

Patented Oct. 17, 1911.

2 SHEETS-SHEET 2.



WITNESSES:

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AIRSHIP.

1,005,988.

Specification of Letters Patent.

Patented Oct. 17, 1911.

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To all whom it may concern:

Be it known that I, JOSEPH G. MARIS, a citizen of the United States, residing at 591 West Town street, Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Airships, of which the following is a specification.

The present invention relates to improvements in air ships and is designed to improve the structure and operation of craft of this character in certain particulars as will be pointed out.

The invention consists in certain novel combinations and arrangements of lifting devices, buoyant supports, and emergency safety appliances, and certain details of construction thereof as are illustrated in the drawings and specified in the claims hereunto appended.

In the accompanying drawings I have illustrated one example of the physical embodiment of my invention constructed according to the best mode I have so far devised for the practical application of the principles.

Figure 1 is a side elevation of an air ship of the biplane type equipped with the features of my invention. Fig. 2 is a plan view of the same. Fig. 3 is an end elevation of Fig. 1 as seen from the rear. Fig. 4 is a vertical sectional view on line A—A Fig. 3. Fig. 5 is a sectional view on line B—B Fig. 3. Fig. 6 is a plan view with the top plane removed. Fig. 7 is a horizontal sectional view with parts broken away for convenience in illustration. Fig. 8 is an enlarged cross section, showing the emergency safety curtain in operative position. Fig. 9 is a diagram of the arrangement of the two propelling and three lifting or equilibrium fans.

As illustrated herein the preferred embodiment of the invention utilizes a biplane, but it will be understood that so far as the features are adaptable the invention may be used with other types of air ships.

In the form exemplified by the figures of drawings the upper plane is designated by the numeral 1, and 2 indicates the lower plane, said planes being of usual construction and connected by the posts 3 forming the customary frame work. The ship is intended to be driven or propelled by the two

propelling wheels 4 driven from the motor 5, connected thereto by either a belt or chain as indicated by dotted lines at 6.

The lateral steering rudder 7 is pivoted vertically in the rearwardly extending frame 8 and may be manipulated by suitably arranged cords as indicated in dotted lines 9. And the vertical steering rudder or elevating and descending plane 10 is pivoted at 11 at the extreme rear end of the supporting frame 8. This rudder or plane is operated by a rope or cord 12, (dotted lines Fig. 1) in any convenient manner. The supporting wheels 13, 13, journaled under the lower plane, and located one at each side of the center of the ship, and the bracket 14 at the extreme rear end of the frame 8 provide supports for the machine while resting upon the ground.

To assist in maintaining the equilibrium of the ship I provide a pair of gas receptacles or bags 15, 15, located equidistant from the center of the ship and disposed between the upper and lower planes of the aeroplane. These receptacles are connected by a pipe 16 so that they are in open communication at all times, the pressure is equalized, and free to travel from one receptacle to the other, thus preserving a constant equalized lifting power, and a uniform equilibrium. These receptacles are to be at all times filled with a gas lighter than the atmosphere, as will of course be understood, and are pointed, as indicated at 17, to provide a minimum resistance.

As clearly seen in Fig. 3 each gas receptacle is supported upon an elevated platform 18. These platforms, one at each side of the lower plane 2, are elevated a sufficient distance above the main portion of the plane 2 to permit the rotation of the lifting or equilibrating fans 19. These fans are journaled in the cross bars 20 of the frame 1 and are suitably driven from the motor 5. A vertical wall 21 connecting the platform 18 with the plane 2, completes a pocket in which the fan 19 rotates. The direction of rotation of these fans is indicated by arrow in Fig. 3, and their function is to elevate, as well as equilibrate the machine. A third elevating fan 22, is located centrally of the lower plane at its under side and driven by the motor. This fan is inclosed by a casing 23 to pre-

vent side thrust of the machine, and may be operated jointly with the fans 19 or independent thereof.

As an emergency safety device I provide
5 an efficient and easily manipulated contrivance, to be brought into service when required, but when not in use, adapted to be stowed away in compact form. This contrivance comprises a curtain 24, of suitable
10 material, and adapted, when not in use to wind about the rod or bar 25, which is conveniently supported at the front ends of the lower plane 2. In Fig. 8 the curtain is illustrated in position for use, and is drawn to
15 that position by means of the cords or ropes 26 manipulated by the operator who may be seated in the seat or chair 27. The cords pass over guide wheels or pulleys 28 and draw the curtain from the bottom plane to
20 entirely close the space at the front of the machine between the upper and lower planes. In an emergency, should the machine "dip" or descend with the rear elevated, the curtain is pulled up to provide a
25 resistance surface against the atmosphere. Should the ship descend with the rear depressed, the upper and lower planes and the drawn curtain will form a parachute with

the steering rudders below, thus permitting the ship to descend in comparative safety. 30

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

1. An air ship comprising upper and lower planes, gas receptacles between said planes and in open communication, propelling devices, a platform formed with side pockets and rotary elevating fans in said pockets, and a central rotary elevating fan with an open bottom inclosure. 35 40

2. The combination in an air ship having upper and lower planes, gas receptacles between said planes, propelling devices, a platform formed with side pockets and rotary elevating fans in said pockets, a central elevating fan, a curtain wound at the front of the lower plane, and means for unwinding said curtain to close the space at the front of the machine between said plane 45

In testimony whereof I affix my signature 50 in presence of two witnesses.

JOSEPH G. MARIS.

Witnesses:

C. M. SHIGLEY,
K. VINCENT.