

A. F. GODEFROY.
BALLOON OR AIR SHIP.
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909,397.

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Fig. 2.

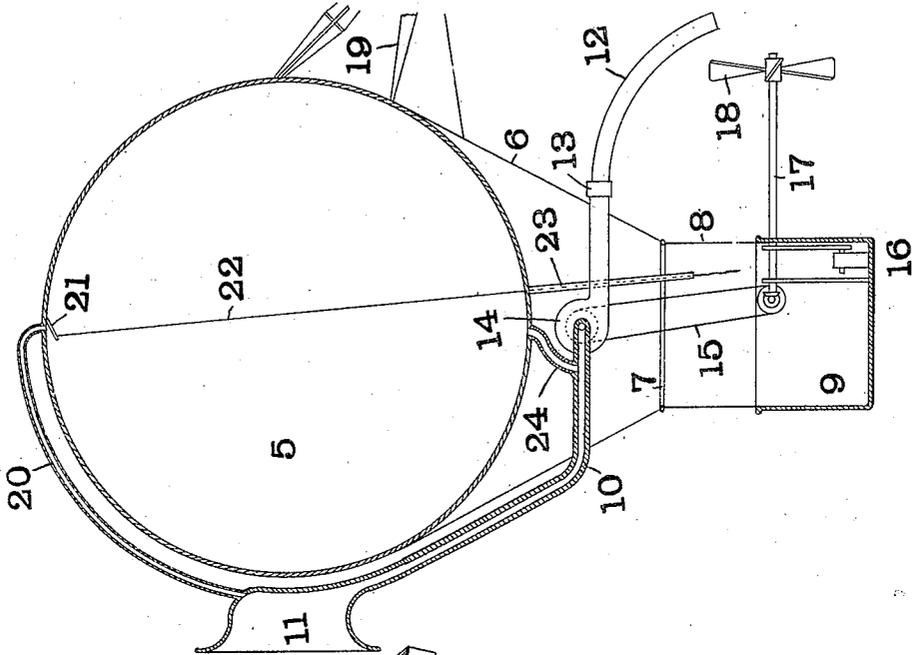
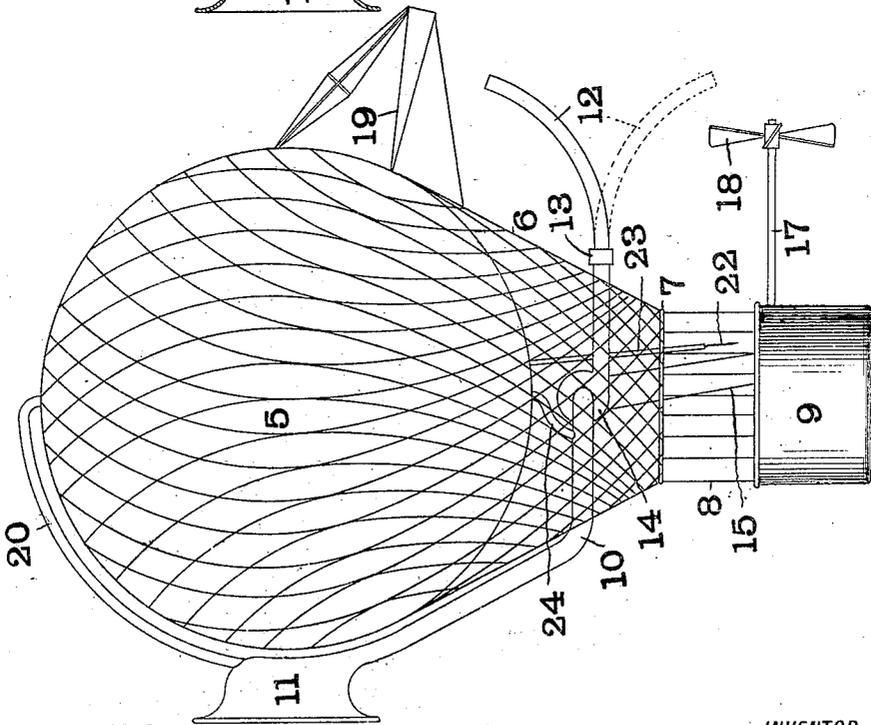


Fig. 1.



WITNESSES:

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BALLOON OR AIR-SHIP.

No. 909,397.

Specification of Letters Patent.

Patented Jan. 12, 1909.

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To all whom it may concern:

Be it known that I, ALEXANDRE F. GODEFROY, a citizen of the United States, residing at the city of Mexico, D. F., in the Republic of Mexico, have invented a certain new and useful Balloon or Air-Ship, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

In balloons or airships the gas used for inflating the vessel must be allowed to escape from the top of the gas receptacle when the vessel descends. The gas also escapes at times from the bottom of the gas receptacle owing to the expansion of the gas, as for instance, when the sun's rays strike the gas receptacle. In either case, the gas may come in contact with the motor while mixed with only sufficient air to form an explosive mixture and the vessel is liable to be destroyed by the explosion of the mixture of gas and air.

One of the principal objects of my invention is to provide means whereby the gas escaping from the gas receptacle is mixed with a sufficient quantity of air to form a nonexplosive mixture and also as a further precaution to discharge the mixture in such a direction that it is carried away from the motor.

Another object of my invention is to provide improved means for controlling the direction in which the balloon or airship is propelled.

In the accompanying drawings which illustrate one form of balloon or airship made in accordance with my invention, Figure 1 is a side elevation and Fig. 2 is a vertical section.

Like marks of reference refer to similar parts in both views of the drawings.

5 represents the bag of impervious material which forms the gas receptacle. In the drawings I have shown this bag as being spherical in form; it may, however, be of any suitable form. The bag 5 is enveloped in the usual netting 6 carrying at its lower end a ring 7 from which is suspended by means of ropes 8, the basket or car 9.

10 represents a conduit which is supported by the netting 6 and extends from one side of the gas receptacle to the other. This conduit 10 is provided at one end with an intake

11 preferably in the form of a funnel and at the other end with a discharge nozzle 12. This discharge nozzle 12 is connected with the main portion of the conduit 10 by means of a revoluble joint 13 so as to allow the nozzle 12 to be turned in different directions for a purpose hereafter to be more fully described.

14 is a fan which is arranged at about the central part of the conduit 10. This fan 14 is driven by means of a belt 15 from a motor 16 contained in the car or basket 9. This motor 16 also drives a shaft 17 carrying at its extremity a propeller 18.

19 is a sail which is carried by the netting 6 at a point above the propeller 18.

20 is a gas passage leading from the top of the gas receptacle 5 to the intake 11 of the conduit 10. The escape of the gas into the passage 20 is controlled by means of a valve 21. This valve 21 is adapted to be opened by means of a cord 22 passing down through the gas receptacle 5 and through a tube 23 to a point within reach of the occupant of the basket or car 9. Leading from the bottom of the gas receptacle 5 is a gas passage 24 which connects with the conduit 10 preferably a short distance in front of the fan 14.

In the operation of the device, the fan 14 is rotated by means of the motor 16 so as to draw air in through the funnel 11 and discharge it through the nozzle 12, thus propelling the balloon in the direction in which the intake or funnel 11 is pointed. In order to control the rise and fall of the balloon the nozzle 12 may be either pointed upwardly so as to discharge against the sail 19, as shown in full lines in Fig. 2, or it may be turned down so as to discharge in proximity to the propeller 18, as shown in dotted lines in Fig. 1 and full lines in Fig. 2. The nozzle 12 may also be turned laterally so as to cause the balloon to rotate on its vertical axis and thus change its direction. When gas escapes from the balloon either through the passage 20 or the passage 24, it is drawn into the conduit 10 by the suction of the fan 14 and there mixed with a sufficient quantity of air to render the mixture nonexplosive, and is discharged through the nozzle 12 at a distance from the motor 16. In this way the safety of the balloon is insured and at the same time no additional mechanism is required as the propelling mechanism is enabled to perform the function of mixing gas.

and air and discharging it away from the motor 16.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. In an aerial vessel, the combination with a gas receptacle, of a conduit leading from one side of said receptacle to the other, a valved gas passage leading from the upper part of said receptacle to said conduit, a gas passage leading from the lower part of said receptacle to said conduit, and means for forcing air through said conduit.

2. In an aerial vessel, the combination with a gas receptacle, of an air intake situated substantially midway of the height of said receptacle, a valved gas conduit leading from the upper part of said gas receptacle downward to said intake, an air conduit leading downwardly from said intake and terminating at the opposite side of said re-

ceptacle, and means for forcing air through said conduit.

3. In an aerial vessel, the combination with a gas receptacle, of a conduit leading from one side of said receptacle to the other, an intake at one end of said conduit, a discharge nozzle at the other end of said conduit, a propeller adjacent to said discharge nozzle, a sail also adjacent to said discharge nozzle, said nozzle being movable to discharge the air in proximity to either said propeller or sail, and means for forcing air through said conduit.

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

ALEXANDRE F. GODEFROY. [L. s.]

Witnesses:

E. F. GODEFROY,
ADOLPH F. GODEFROY.