

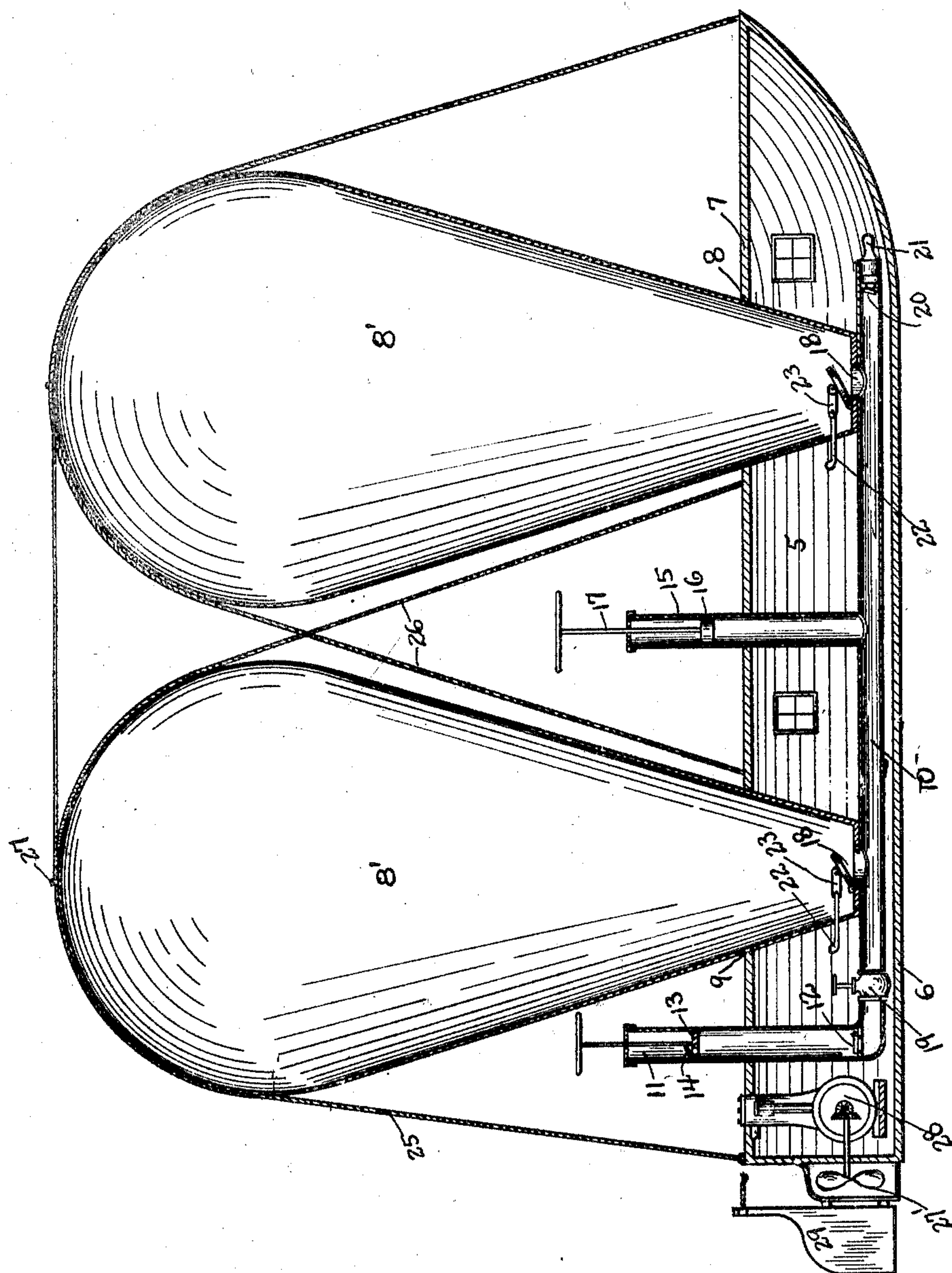
No. 817,442.

PATENTED APR. 10, 1906.

C. F. PAGE.  
AIR SHIP.

APPLICATION FILED APR. 24, 1903.

2 SHEETS—SHEET 1



Witnesses  
Charles Morgan.  
Harry Gehlman

Inventor  
CHAS. F. PAGE.

67 CHAS. F. PAGE.  
Chandler & Lavoie.  
Attorneys

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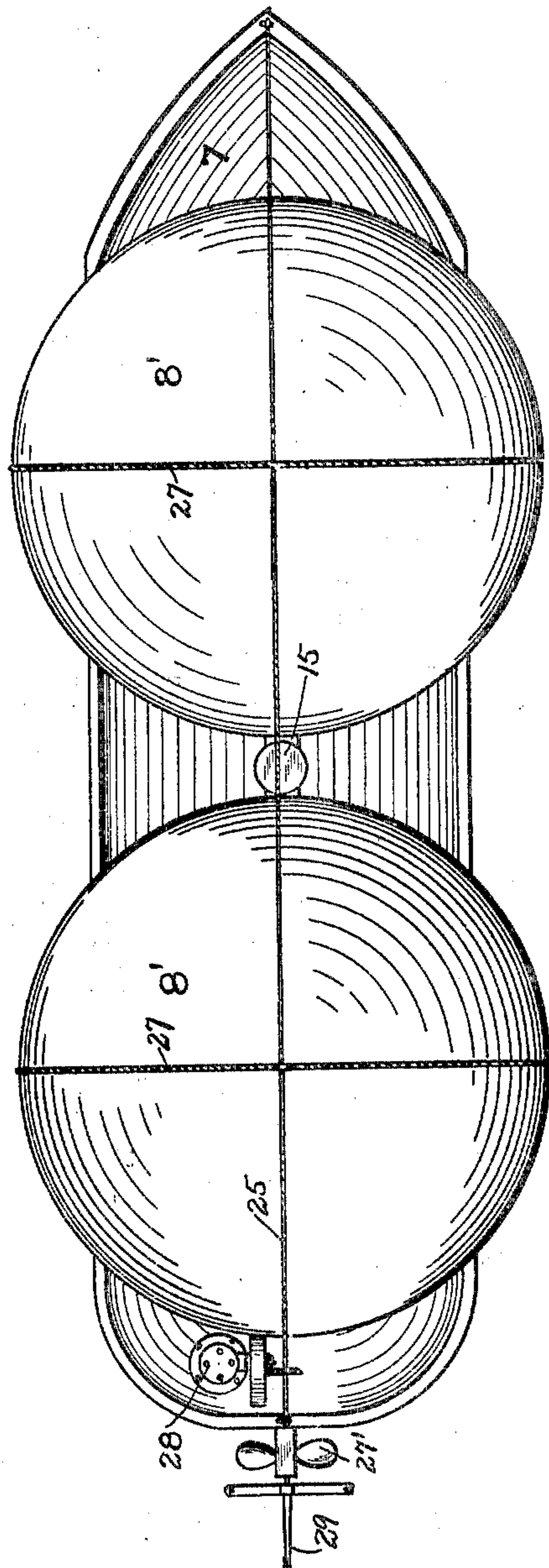


Fig. 2.

Witnesses  
Charles Morgan.  
Wm. Ellis Chandler

Inventor  
CHAS. F. PAGE  
by *Charles Chandler*  
Attorneys



# UNITED STATES PATENT OFFICE.

CHARLES F. PAGE, OF PINEVILLE, LOUISIANA.

AIR-SHIP.

No. 817,442.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed April 24, 1903. Serial No. 154,046.

*To all whom it may concern:*

Be it known that I, CHARLES F. PAGE, a citizen of the United States, residing at Pineville, in the parish of Rapides, State of Louisiana, have invented certain new and useful Improvements in Air-Ships; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to air-ships; and it has for its object to provide a simple and readily manufactured construction wherein the dead-weights will be buoyed and the buoyancy may be varied to cause the ship to ascend or descend, as desired.

Other objects and advantages of the invention will be understood from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in both the views, Figure 1 is a vertical section of the ship. Fig. 2 is a top plan view of the ship.

Referring now to the drawings, the present ship comprises a hull consisting of a framework of wire, shown at 5, and upon which is stretched a covering 6, of oiled canvas or similar material, the deck being formed in the same manner.

In the deck 7 there are two circular openings 8 and 9, one of which is at the bow of the boat and the other at the stern, and in each of these openings is disposed the lower reduced end or neck portion of a pear-shaped bag 8', which projects downwardly into the hull. Connected to the lower ends of the gas-bags is the pipe 10, which extends longitudinally of the hull and has an upturned rear end, to which is connected a pump 11, having therein an upwardly-opening valve 12 at its lower end, above which is a piston 13, having an upwardly-opening valve 14. Thus as the piston is reciprocated the pump acts to exhaust from the pipe and from the gas-bags, so that the gas in the bags may be reduced in quantity to decrease the buoyancy of the bags. Connected to the pipe 10 at a point between the gas-bags and extending upwardly through the deck is the barrel 15 of a second pump, having a piston 16 therein and a rod 17 connected to the piston and projecting from the upper end of the barrel. At the

lower end of the gas-bags are inlet-valves 18, and between the bags and the exhaust-pump is a cut-off valve 19, so that when the valve 19 is closed the piston 16 may be operated to draw gas into the pipe 10 and then force it into the bags, said pipe having an inlet-valve 20 at one end and having also a plug 21 beyond the valve, so that the pipe may be sealed. The valves 18 normally act free; but when the gas is to be exhausted from the bags they are raised and held in raised or open position. The valves are operated by means of sliding rods 22, which are connected with the valve by means of links 23, so that the valves may have lost motion with respect thereto, while said rods may be operated when desired to raise the valves and hold them in raised position. There is thus provided means for charging the gas-bags and also means for reducing the charges, so that the buoyancy of the bag may be readily varied.

Connected to the bow and stern of the hull of the air-ship are the ends of a cable 25, which passes over the gas-bag and holds them against displacement longitudinally of the ship when filled, there being other cables 26 extending from the tops of the gas-bags between them to the deck and crossed between the bags. Additional cables 27 are attached to the first-named cable and pass downwardly at the sides of the bags, where they are attached to a deck.

A propeller-wheel 27' is provided and is driven from a gas-engine 28, located in the hull of the vessel, and there is also a rudder 29 for steering the vessel.

Suitable windows are provided for the hull, and it may be otherwise equipped for comfort and efficiency.

What is claimed is—

An air-ship comprising a closed hull having means for propelling it, means for steering the hull, the top of the said hull having openings therethrough, gas-bags having their lower ends reduced and passed through the openings into the hull, a tubing arranged longitudinally of and within the hull near the bottom thereof, an upwardly-directed pipe passed through the top of the hull and communicating with the said tubing, the bottom of the said bags having a valve for registration and for operation with corresponding openings in the aforesaid tub-



ings, a valve arranged within the tubing at the juncture between the longitudinal tubing and the upwardly-directed pipe, the latter having a piston mounted for operation there-  
5 in, a pump communicating with the tubing intermediate its ends and extending upwardly through the top of the hull between said bags, and ropes connected with the hull

and passing over the said bags to hold the latter rigidly with respect to the former. 10

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

CHARLES F. PAGE.

Witnesses:

DAVID GUNTER,  
LAWSON IBS.