H. JANDER.

AIRSHIP.

APPLICATION FILED MAR. 21, 1916.

1,209,301

Patented Dec. 19, 1916.

5 SHEETS—SHEET 1.

Fig. 1.

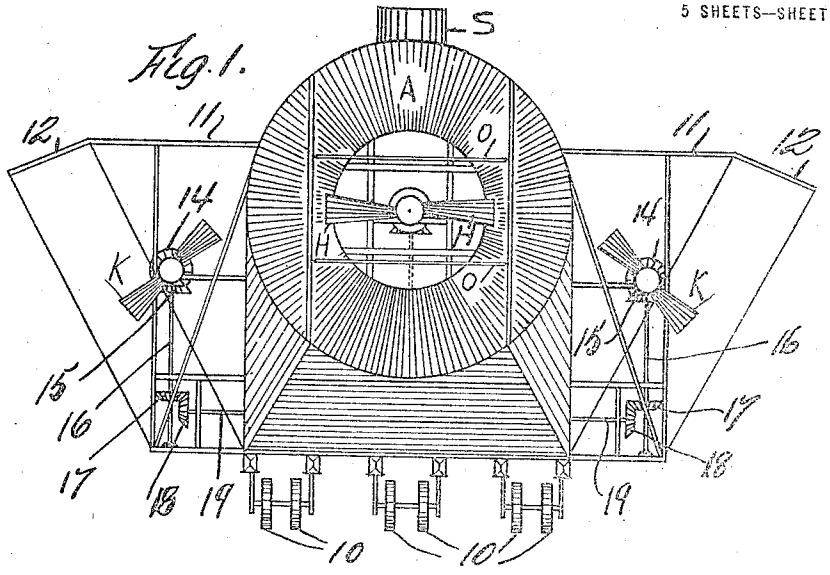
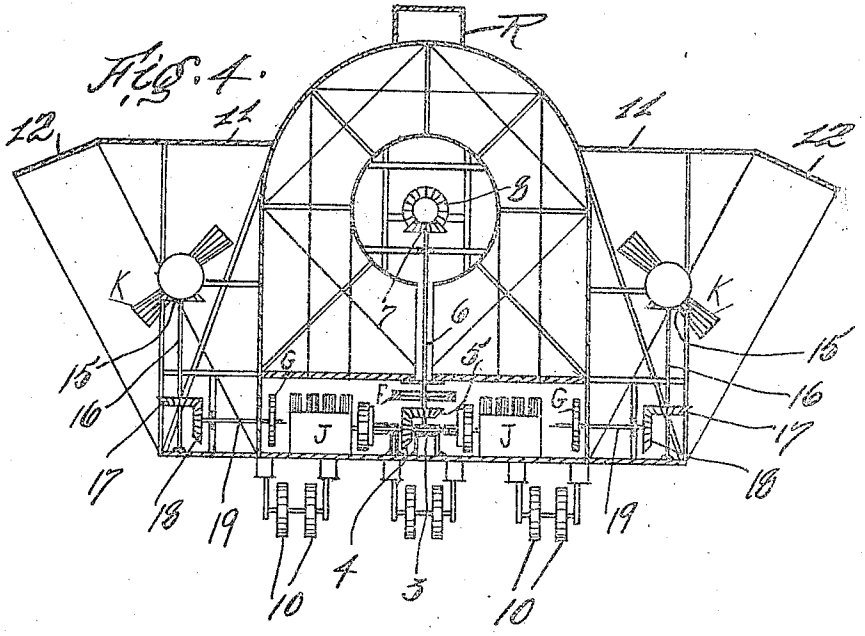


Fig. 4.



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5 SHEETS—SHEET 2.

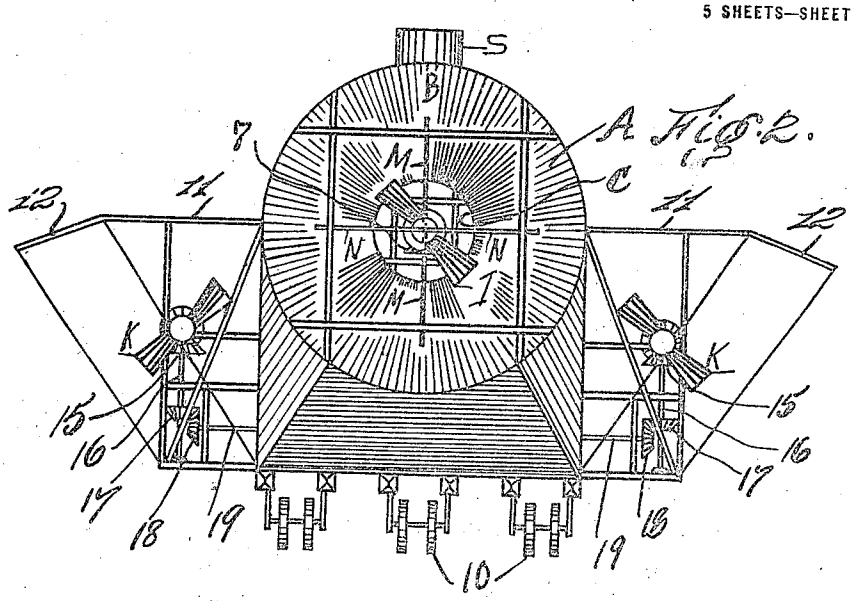


Fig. 2.

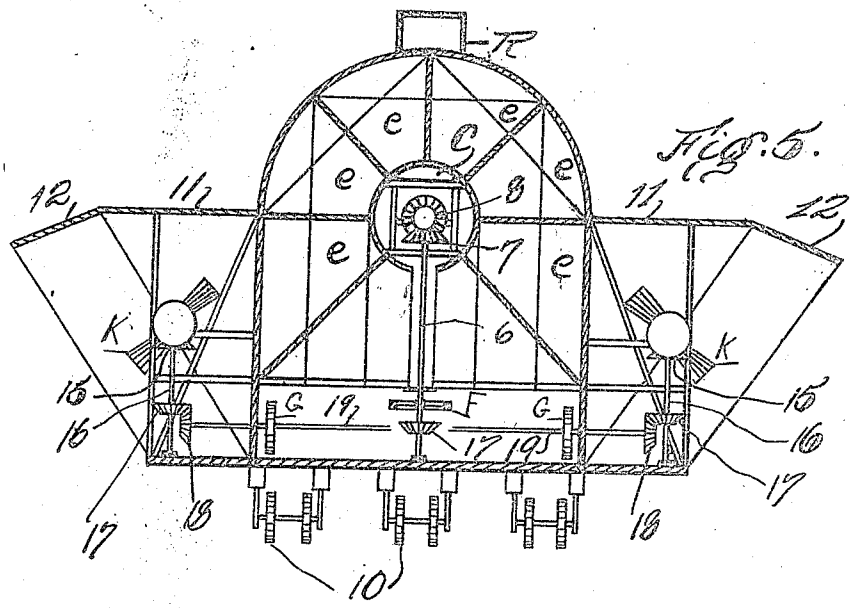


Fig. 5.

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5 SHEETS—SHEET 3.

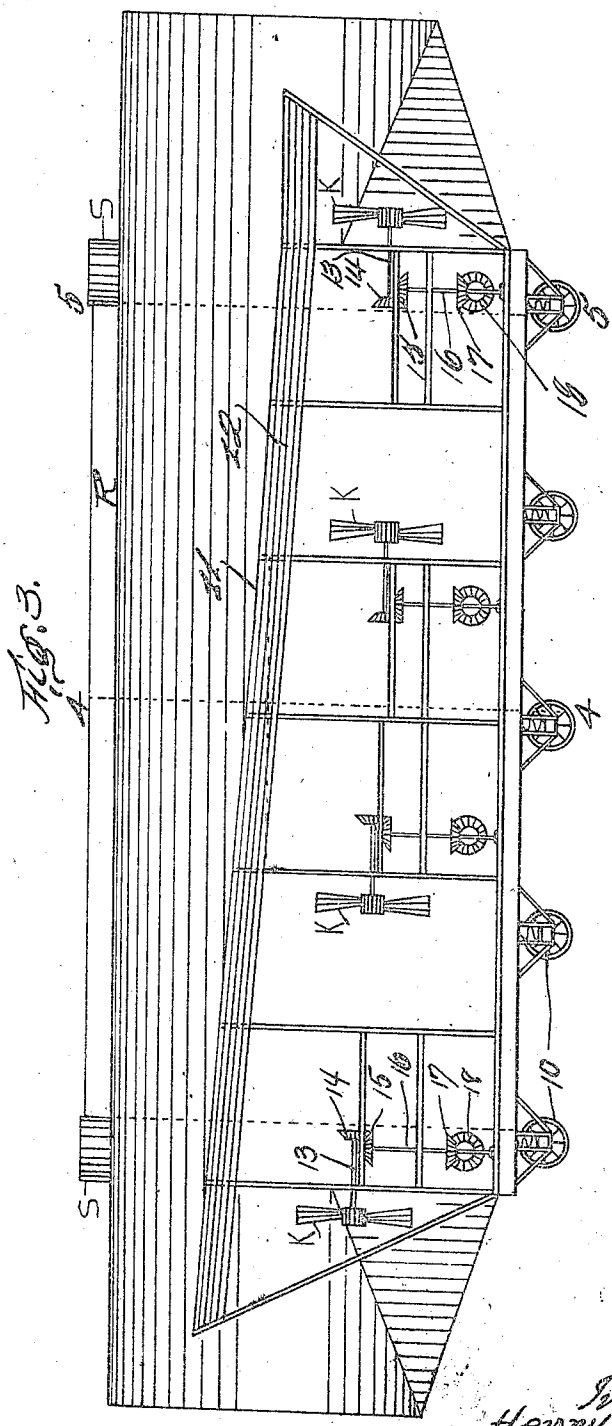


Fig. 3.

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5 SHEETS—SHEET 4.

Fig. 6.

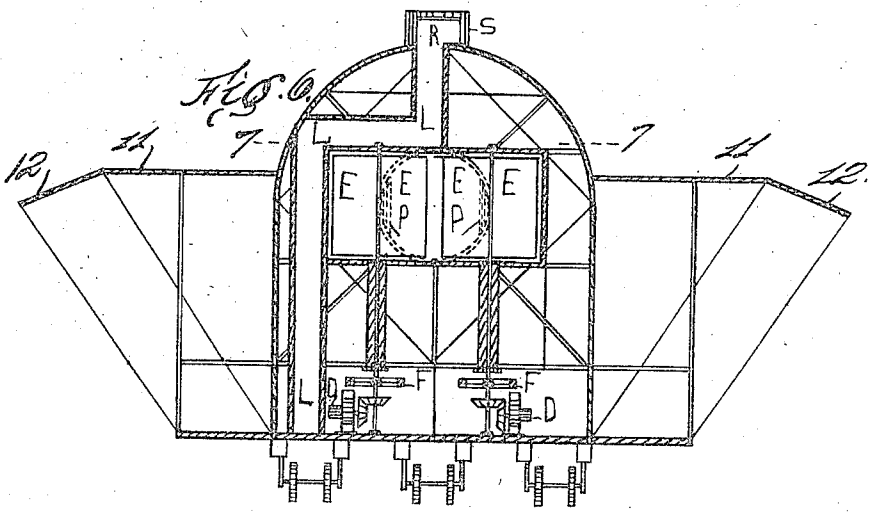
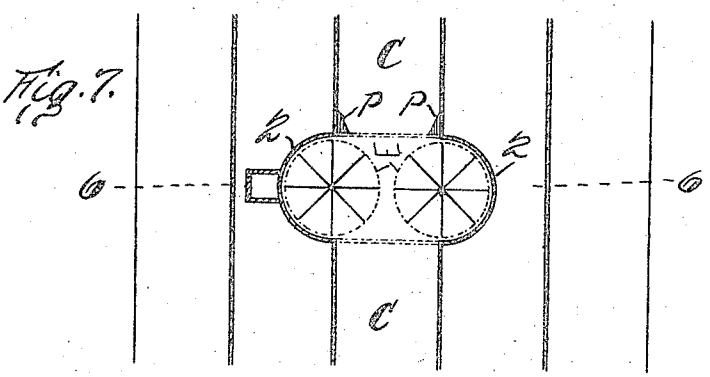


Fig. 7.



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5 SHEETS—SHEET 5.

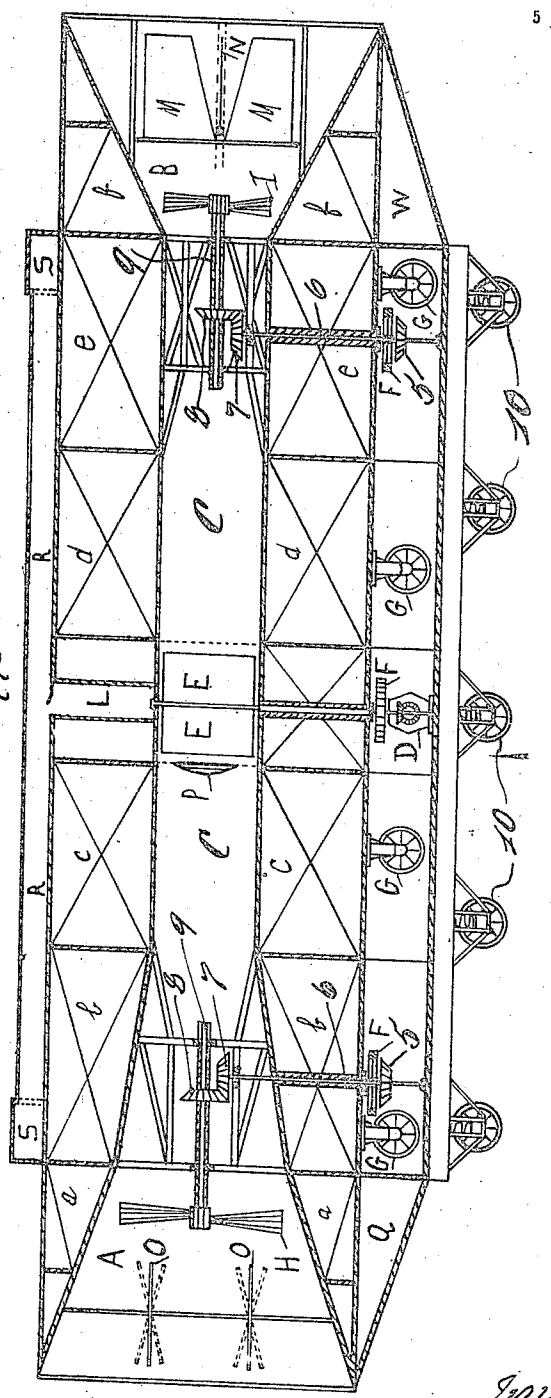


Fig. 6.

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UNITED STATES PATENT OFFICE.

HENRY JANDER, OF BROOKLYN, NEW YORK.

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Application filed March 21, 1916. Serial No. 85,724.

To all whom it may concern:

Be it known that I, HENRY JANDER, a citizen of the United States of America, residing at Brooklyn, Kings county, State of New York, have invented certain new and useful Improvements in Airships, of which the following is a specification.

This invention relates to improvements in air-ships, the object being to provide an air-ship consisting of a dirigible balloon and monoplane.

My improved air-ship is arranged to prevent, to a large extent, the increase of air pressure at the front thereof.

A further feature of my invention resides in the employment of balance wheels which prevent rolling, dipping and shaking.

A still further feature of my invention resides in the employment of air turbines which operate dynamos to regenerate the exhausted power.

I will now proceed to describe my invention in detail, the essential features of which will be summarized in the appended claims, reference being had to the accompanying drawings, forming part hereof, wherein:

Figure 1 is a front elevation of my improved airship; Fig. 2 is a rear elevation thereof; Fig. 3 is a side elevation; Fig. 4 is a cross-sectional view, the section being taken on a line 4—4 in Fig. 3; Fig. 5 is a cross-sectional view, the section being taken on a line 5—5 in Fig. 3; Fig. 6 is a vertical sectional view, the section being taken on a line 6—6 in Fig. 7; Fig. 7 is a sectional plan view, the section being taken on a line 7—7 in Fig. 6; and Fig. 8 is a longitudinal central sectional view.

My improved air-ship is made up of a suitable framework 1 carrying a centrally located longitudinally disposed cylindrical channel C within which are located turbines E, E, adjacent to which are located deflectors P, P (Fig. 7). The turbines E, E, are located in circular wells or pockets 2, 2, so that only a portion of the vanes protrude into the channel C. The deflectors P, P, are beveled and direct the air against the protruding vanes of the turbines E, E as it passes or is forced through the channel C by the propellers H and I (Fig. 3).

The propellers H and I are each driven by motors J and J′, the motor J being for a forward motion and the motor J′ for a reverse motion, both motors in each instance being connected to a shaft 3 by any suitable clutch mechanism. Each shaft 3 carries a gear 4 meshing with a gear 5 carried by a vertical shaft 6 carrying a gear 7 meshing with a gear 8 on the shaft 9 which carries the propeller H. The propeller I is operated by the same arrangement of gears and shafting as the propeller H.

The forward end of the channel C terminates in a conical funnel A, as does the rear end in a funnel B, the funnel B having placed therein vertically disposed steering-planes M, M, for horizontal steering, and a horizontally disposed steering-plane N for vertical steering, these planes being operated by a compressed air-motor, not shown.

Within the funnel A, I place planes O, O, which are used to raise the ship from the ground or direct it toward the ground. The planes O, O can be manipulated in any desirable manner.

The air-ship is provided with tanks Q and W at the front and rear thereof for carrying a supply of gasolene and water. The air-ship is also provided with compartments, *a*, *b*, *c*, *d*, *e*, and *f*, which are filled with hydrogen gas.

The landing gear of my improved air-ship consists of wheels 10 suitably mounted in ball bearings and cushioned by spiral springs.

Access to the interior of the ship is had through domes S communicating with a gangway R, which in turn has in communication therewith a shaft or passageway L.

To the sides of the balloon portions of the air-ship, I attach planes 11 turned down at their outer edges, as at 12, to act as parachutes when the air-ship is descending.

Under each plane 11, I place propellers K, each propeller being carried by a shaft 13 carrying a gear 14 meshing with a gear 15 on a vertical shaft 16. The shaft 16 carries a gear 17 near the lower end thereof, meshing with a gear 18. Each gear 18 is carried by a shaft 19 operated by an electric motor (not shown). Each shaft 19 carries a fly-wheel G, and each shaft 6 for the propellers H and I is also provided with a horizontally disposed fly-wheel F. The vertical shafts for the turbines E also carry horizontally disposed fly-wheels F (see Figs. 6 and 8), the aforesaid fly-wheels tending to steady the air-ship when in motion.

The propeller H in the funnel A acts to force air through the channel C, thus aiding

to operate the turbines E, E, which in turn transmit power to the dynamos D, Fig. 6.

The propeller I draws the air from the channel C and directs it to the steering apparatus M and N, thereby causing the air-ship to respond promptly to the steering apparatus and relieving the propeller H from a certain amount of work.

The deflector P directs the air to the outer edge of the exposed portions of the turbines E, E where it will exert the most power.

The fly-wheels G are located near the sides of the air-ship, and away from the center thereof.

Having now described my invention, what I claim and desire to secure by Letters Patent is:

1. In an air-ship, a buoyant body provided with a channel extending longitudinally through said body, a turbine within said channel, and a deflector adjacent said turbine arranged to direct air toward the periphery of said turbine.

2. In an air-ship, a buoyant body provided with a channel extending longitudinally thereof, said channel being provided with wells or pockets, turbines located within said channel and extending into said wells or pockets, and means within said channel arranged to direct air toward the periphery of that part of said turbines that extends into said channel.

3. In an air-ship, a buoyant body provided with a channel extending longitudinally through said body, a turbine within said channel, a deflector adjacent said turbine arranged to direct air toward the periphery of said turbine, and propellers located at each end of said channel.

4. In an air-ship, a buoyant body provided with a channel extending longitudinally thereof, turbines within said channel, shafts therefor, and fly-wheels carried by said shafts.

5. In an air-ship, a buoyant body provided with a channel extending longitudinally thereof, turbines within said channel, shafts therefor, fly-wheels carried by said shafts, a propeller at each end of said channel, propellers located on each side of said buoyant body, driven shafts to operate said propellers, driving shafts to operate said driven shafts, and fly-wheels carried by the said driving shafts.

6. In an air-ship, a buoyant body, horizontally disposed planes extending from the sides thereof, a horizontally disposed fly-wheel located centrally of said air-ship, and a plurality of vertically disposed fly-wheels located at each side of the buoyant body.

7. In an air-ship, a buoyant body provided with a centrally disposed channel extending longitudinally through said body portion, said channel terminating at each end thereof in a conical funnel, turbines located within said channel, a propeller located in each conical funnel, and means within the channel to deflect the air toward the center thereof and toward the periphery of said turbines.

HENRY JANDER.

Witnesses:
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CHARLES GERSTER.