

M. A. DEES.
 FLYING MACHINE.
 APPLICATION FILED MAR. 23, 1914.

1,191,501.

Patented July 18, 1916.
 2 SHEETS—SHEET 1.

Fig. 1.

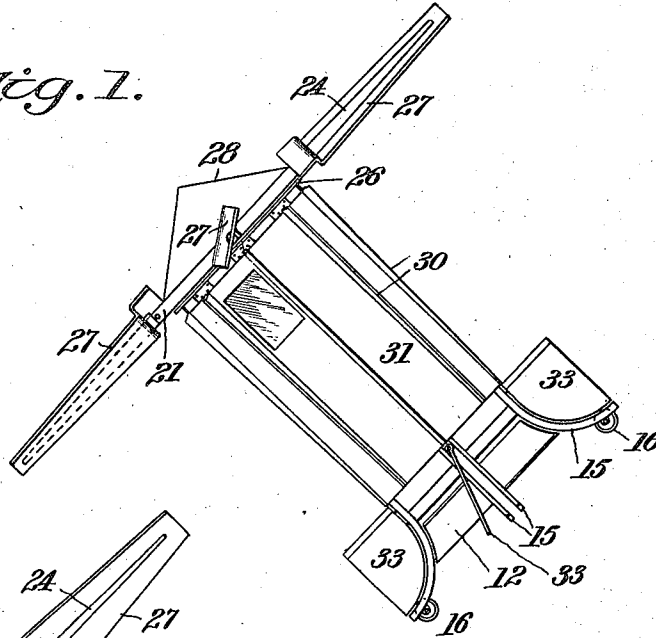


Fig. 2.

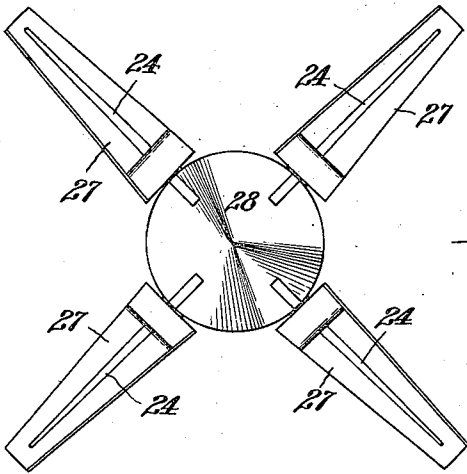
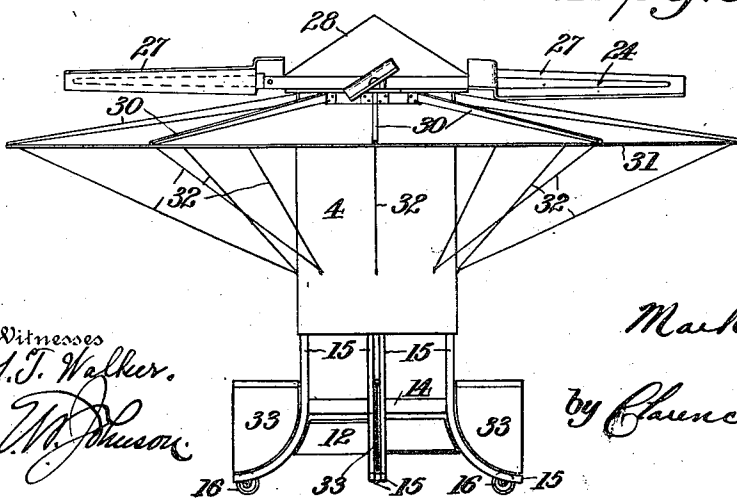


Fig. 5.



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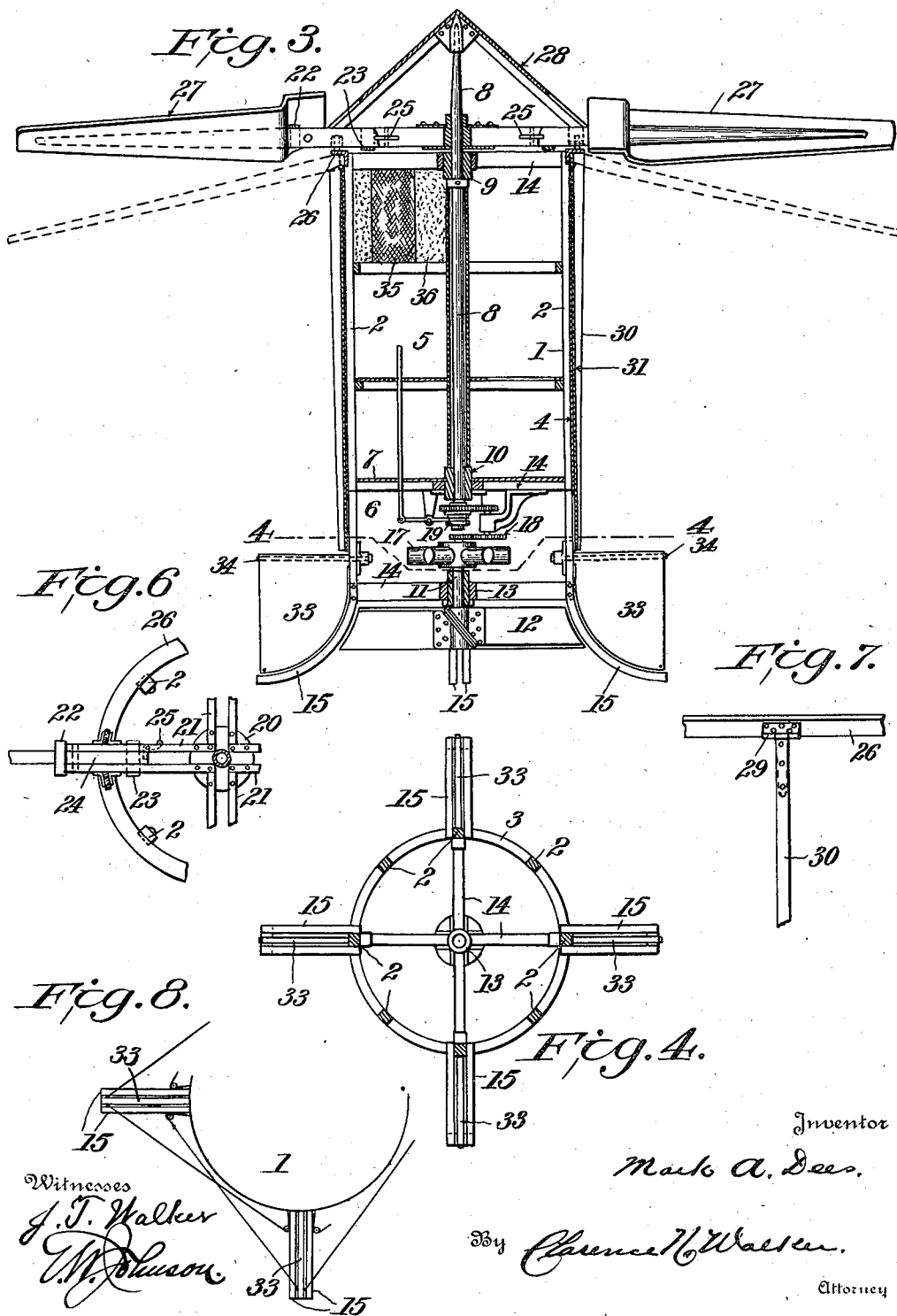
W. H. Johnson.

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UNITED STATES PATENT OFFICE.

MARK A. DEES, OF ST. LOUIS, MISSOURI.

FLYING-MACHINE.

1,191,501.

Specification of Letters Patent.

Patented July 18, 1916.

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To all whom it may concern:

Be it known that I, MARK A. DEES, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Flying-Machines, of which the following is a specification.

This invention relates to flying machines and has for its object to produce a machine that is safe and comfortable to travel in. Discomforts and great loss of life have occurred from the use of the ordinary monoplanes and biplanes and also the dirigible balloons, due to the faults of construction of the above mentioned machines and also the frailties of human nature that occur to a more or less extent in all of the operators or drivers of such machines. In carrying out my invention I obviate this great loss of life and discomfort by producing a machine having a comfortable room and one that will automatically and positively catch itself in the event that anything goes amiss with the propelling mechanism or the motor.

My machine consists generally of a cylindrical body having compartments for the motive power, operator and passengers. Its rising power is due principally to the lift of propeller blades arranged at the top and bottom, respectively, of the cylindrical body. It is also provided with guiding and anti-rotating rudders. When flying as shown in Figure 1 the forward or lower surfaces of the car body and the rudders act as aeroplanes and thus assist in raising the car in the air.

Attention is called to the fact that a car about six feet in diameter and made according to my invention would provide a comfortable cabin for one or more persons while the machine is flying, resting on the ground or floating on the water.

As the propellers are permanently attached in line with the center of the car steering or directing the machine is accomplished to a large extent by the shifting of the passengers and driver with respect to the center of the car. In using the parachute for landing purposes, the direction of descent may also be controlled by the shifting of the occupants of the car, enabling them to select their landing place.

As shown in the drawing the blades of my propellers are wider at the inner ends

than at their outer ends and are set at the same angle throughout their length.

Another very important feature of the machine is the collapsible parachute which automatically folds itself snugly against the body when my machine is in operation, but which will instantly open itself in case of accident and cause the flying machine as a whole to settle slowly toward the earth.

Another object of my invention is to produce a flying machine having a car divided into compartments one of which compartments is water tight and will float, serving as a safety device in case the machine, due to any cause, should alight upon the water, in which event the aviator and passengers will be saved from injury due to sinking of the flying machine.

My invention is shown in the accompanying drawings which form a part of the specification but I do not limit myself to the exact construction shown as various modifications by those skilled in the mechanical arts may be made without departing from the scope of the claims.

In the drawings: Fig. 1 is a side view of the machine as it occurs in flight. Fig. 2 is a plan view thereof. Fig. 3 is a vertical sectional view on an enlarged scale of my invention. Fig. 4 is a horizontal section on the line 4-4 of Fig. 3. Fig. 5 is a side view showing the parachute as engaging the air. Fig. 6 is a detail of the upper propeller construction. Fig. 7 is a detail sectional view of the parachute construction; and Fig. 8 is a detail view showing the operation of the rudders.

The car of my machine is composed of a cylindrical body 1 the frame work of which is made up of vertical stanchions 2 connected to rings 3 of wood, metal or any suitable material. The outer surface of the car may be composed of any kind of durable water-tight fabric or sheet aluminum 4. Arranged within the car are an upper compartment 5 and a lower compartment 6. The separating floor 7 is water proof and provides floor space for passengers, driver, storage chamber and oil tank. The lower compartment is arranged to receive the motor. Centrally located within the car is a shaft 8, suitably journaled in an upper bearing 9 and lower bearing 10. The shaft 8 terminates at about the center of the lower compartment and directly in line with the

sition shown in dotted lines in the same figure. This is an important feature of the invention and makes the parachute automatic and positive in its operation.

5 I claim:

1. A flying machine comprising a substantially cylindrical body having separate compartments, upper and lower propellers for lifting the cylindrical body, means for operating said propellers at different speeds respectively, an automatically collapsible parachute attached to the upper edge of said body and alining sight openings in the body and parachute.

15 2. In a helicopter, a cylindrical car having a conical shaped head at its upper end attached to the propeller shaft and outwardly extending legs at its lower end, an upper propeller constructed to work against the air on the outer face of the car, a lower propeller to work against the atmosphere immediately in rear of or below the body of the car, means for revolving the lower propeller at a greater speed than the upper propeller and in the opposite direction, and a collapsible parachute attached to the car beneath the upper propeller.

3. A flying machine comprising a substantially cylindrical body having a water tight compartment, upper and lower propellers for lifting the cylindrical body, means for operating said propellers at different speeds respectively, an automatically collapsible parachute attached to the upper edge of said body and alining sight openings in the body and parachute.

4. In a flying machine, a cylindrical car having an upper propeller, a hood attached to said propeller for forcing the air away from the car body and toward the propeller blades, a lower propeller acting against the air immediately below the body of the car, means for driving the lower propeller at a greater speed than the upper propeller and in the opposite direction, and a collapsible parachute attached to the car beneath the upper propeller.

5. A flying machine comprising a cylindrical car, a ring track attached to the upper end of said car, a propeller provided with rollers to ride upon said track, a parachute hinged to the under side of said track, a lower propeller and means for revolving the upper and lower propellers at different speeds and in opposite directions.

6. A flying machine comprising a cylindrical car, a ring track attached to the upper end of said car, a propeller provided with rollers to ride upon said track, and a cone for directing the wind toward the propeller blades, a parachute hinged to the under side of said track, a lower propeller and means for revolving the upper and lower propellers

at different speeds and in opposite directions.

7. A flying machine comprising a substantially cylindrical car, upper and lower propellers for driving the car, a parachute hinged to the upper end of said car, rudders attached to the lower end of said car, and means for revolving the propellers at different speeds and in opposite directions, and means for folding the upper propeller and parachute against the side of the car.

8. A flying machine comprising a substantially cylindrical car, an upper propeller and a lower propeller attached to said car, a parachute hinged to the upper end of said car, and means for folding the parachute and upper propeller blades against the sides of the car.

9. A flying machine comprising a cylindrical car, a collapsible parachute attached to the upper end of said car, rudders attached to the lower end of said car, an upper collapsible propeller and a lower propeller attached to said car, means for operating the upper and lower propellers at different speeds, and means for automatically opening the parachute.

10. A flying machine comprising a substantially cylindrical car, the car having a lower compartment and an upper water tight compartment, upper and lower propellers for driving the car, a cone attached to the upper propeller, a parachute hinged to the upper end of the car, rudders attached to the lower end of said car, and means for revolving the propellers at different speeds and opposite directions.

11. A flying machine having a substantially cylindrical body provided with upper and lower compartments, a parachute hinged to the upper end of said body, a track arranged at the upper end of said body, a propeller provided with a directing cone and having rollers to run upon the track, rudders arranged at the lower end of the cylindrical body, a propeller arranged beneath the cylindrical car, and means for revolving the propellers at different speeds and in opposite directions.

12. A helicopter flying machine comprising a car, an upper propeller attached to said car with the working surfaces of its blades operating entirely outside the path of travel of the car, a lower propeller attached to said car and operating below the machine.

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

MARK A. DEES.

Witnesses:

EDWARD W. HOLMES,
EUGENE W. JOHNSON.