

J. C. SCHLEICHER.

AIRSHIP.

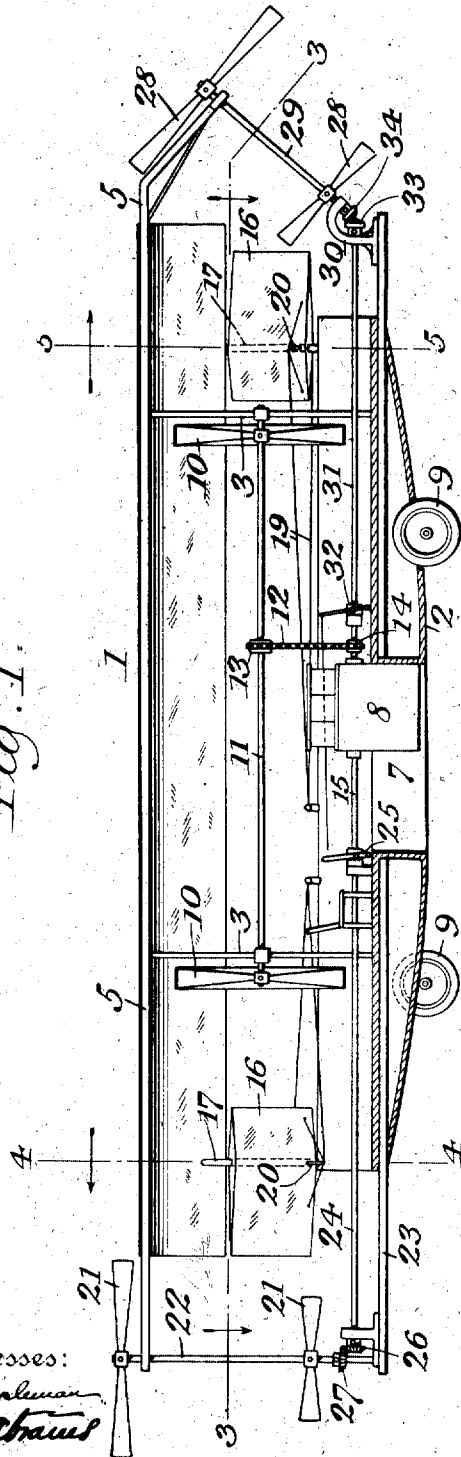
APPLICATION FILED JUNE 22, 1910.

1,002,323.

Patented Sept. 5, 1911.

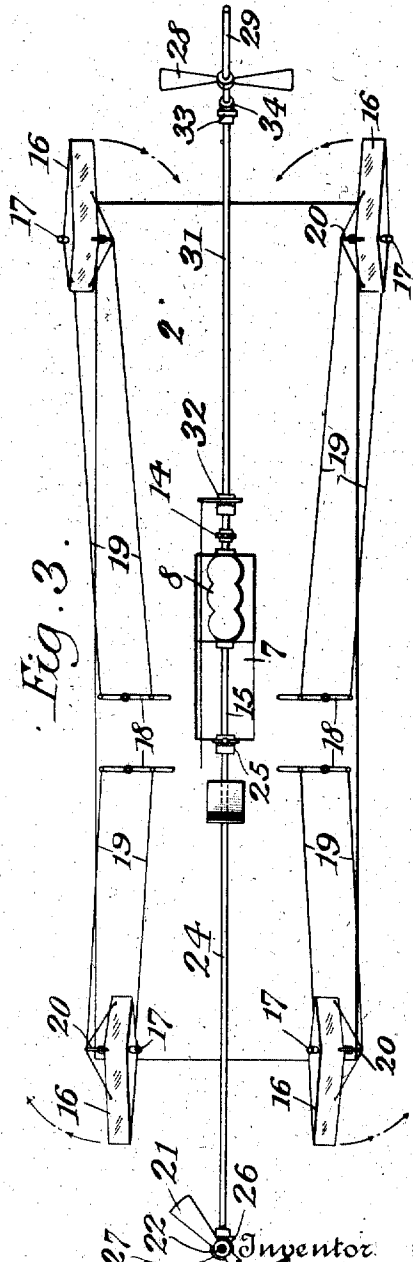
2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
A. R. Appleman
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Fig. 3.



Inventor:
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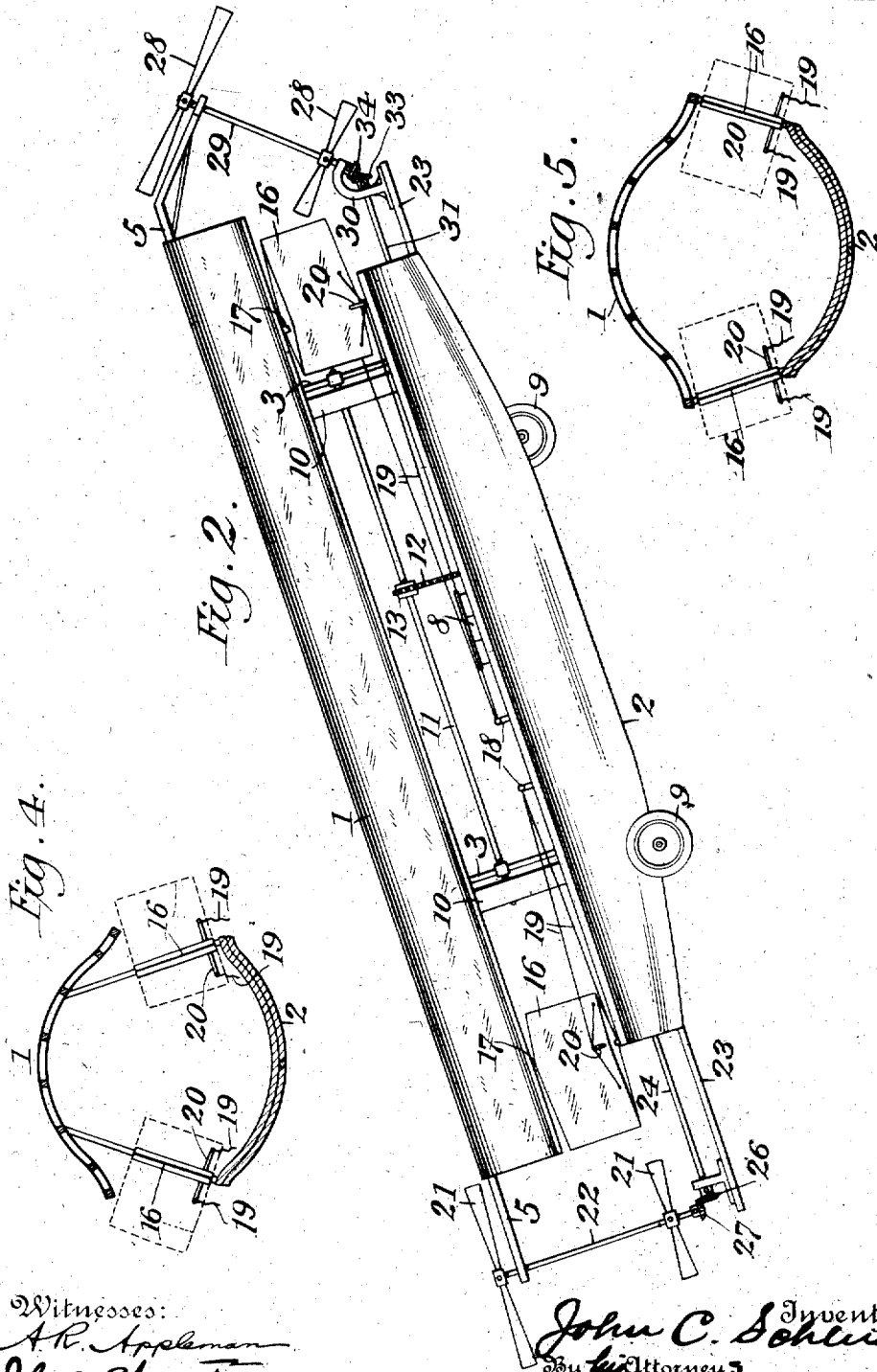
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UNITED STATES PATENT OFFICE.

JOHN C. SCHLEICHER, OF MOUNT VERNON, NEW YORK.

AIRSHIP.

1,002,323.

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To all whom it may concern:

Be it known that I, JOHN C. SCHLEICHER, a citizen of the United States, residing at Mount Vernon, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Airships, of which the following is a specification.

My invention relates to airships.

It has for its object to provide pairs of rudders pivoted off center and at an angle at the front and rear of an airship and adapted for steering, turning, elevating, lowering, stopping and preventing the falling of the ship and to cause it when turning to tilt to that side to which it is turning so as to make it turn quickly and easily, said rudders being manually operated to steer, turn, elevate, lower and prevent the falling of the ship and also automatically operated to prevent the falling of the ship.

It has for a further object to provide propellers at the front and rear of an airship adapted to elevate, stop and support the ship at rest in the air.

It has for a further object to provide a device of the character above set forth embodying advantages in point of perfect operation and simple, strong, light and inexpensive construction.

In the drawings: Figure 1 is a central longitudinal sectional view of my airship. Fig. 2, a side elevation, showing the airship in the position it assumes when rising from the ground and when at rest in the air. Fig. 3, a partial horizontal sectional view taken on the line 3-3 of Fig. 1, parts being omitted. Fig. 4, a partial transverse sectional view, taken on the line 4-4 of Fig. 1, parts being omitted, and Fig. 5, a partial transverse sectional view, taken on the line 5-5 of Fig. 1, parts being omitted.

Referring to the drawings illustrating my invention and in which like reference characters designate corresponding parts, 1 and 2 designate the upper and lower planes respectively of my airship which are connected in spaced relation by standards 3. The upper plane is formed by two walls of light strong material for instance canvas, having strips 5 interposed between and bracing them, the ends of the central longitudinal strip projecting beyond the canvas and the front end thereof being bent downward at an angle. The lower plane is formed by

two spaced walls, of light strong material for instance wood, the space between said walls forming an air chamber adapted to float the plane in the water. A recess 7 is provided through the lower plane and an engine 8 is mounted therein so that it will be as low and as little exposed as possible, thereby adapting it to serve to steady the ship and offer the least possible resistance to the passage of air through the passage between the planes and consequently it will retard the ship as little as possible.

Wheels 9 are journaled upon the under side of the lower plane so as to provide means for allowing the ship to be moved easily over the ground in starting and also to protect the lower plane from injury when landing.

The propellers 10 for driving the ship are secured on the ends of a shaft 11 mounted in journals on the standards 3. The shaft 11 is driven by the engine 8, being operatively connected therewith by a sprocket chain 12 engaging a sprocket wheel 13 on said shaft and a sprocket wheel 14 on the drive shaft 15 of the engine.

Rudders 16 are pivoted on shafts 17 at each corner of the ship, off center and on an incline or at an angle and are adapted for steering, turning, elevating, lowering, stopping and preventing the falling of the ship and to cause it when turning to tilt to that side to which it is turning so as to enable it to turn quickly and easily. The rudders operate automatically to prevent the falling of the ship, when it plunges, forward or rearward for the reason that the greater part of each front rudder extends forward of its pivot and the greater part of each rear rudder extends rearward of its pivot, thereby offering a greater surface for the air to bear against forward of the pivot of the front rudders and consequently causing their forward ends to move outwardly and their rear ends to move inwardly, and offering a greater surface for the air to bear against rearward of the pivot of the rear rudders and consequently causing their rearward ends to move outwardly and their forward ends to move inwardly.

The rudders are manually operatable singly or in pairs, to steer, turn, elevate, lower, stop, prevent the falling of the ship and cause it when turning to tilt to that side to which it is turning, by means of levers 18

pivoted on the lower plane and having ropes 19 operatively connecting the rudders thereto, the ropes passing through the rudders and being connected to the arms 20 extending laterally from said rudders and their ends being connected to the levers.

At the rear of the ship propellers 21 are secured on a vertical shaft 22 journaled at its upper end in the rear end of one of the strips 5 and at its lower end in the rear end of a strip 23 extending rearwardly from the lower plane and said shaft is operatively connected with the drive shaft of the engine by means of a shaft 24, one end of which is connected by a clutch 25 to the drive shaft of the engine and the other end having a gear 26 thereon meshing with a gear 27 on the shaft 22.

At the front of the ship propellers 28 are secured on an inclined shaft 29 journaled at its upper end in the forward end of the strip 5, in which the upper end of the rear propeller shaft 22 is journaled, and at its lower end in a bracket 30 secured to the front end of the strip 23 and said shaft is operatively connected with the drive shaft of the engine by means of a shaft 31, one end of which is connected by a clutch 32 to the drive shaft of the engine and the other end having a gear 33 thereon meshing with a gear 34 on the shaft 29.

When the ship is afloat in the air and it is desired to stop and hold it at rest, by means of the propellers 28, the front propellers are started, which raises the front end of the ship and places it on an incline, as shown in Fig. 2 of the drawings, the rear propellers are then started and finally the engine slowed down sufficiently so as not to

overcome the retarding effect of the front and rear propellers 28.

If desired, the ship may be attached to a gas envelop by means of cables 35.

I claim:—

1. In an airship, planes spaced apart, a pair of rudders fulcrumed between said planes at each end and inclined laterally from the vertical, said rudders being normally parallel to the line of flight and the rudders of each pair being operatable toward and from each other, substantially as described.

2. In an airship, planes spaced apart, a pair of rudders between said planes at each end and inclined laterally from the vertical, the rudders of each pair being operatable toward and from each other and the front pair of rudders being inclined in the opposite direction to the rear pair of rudders, substantially as described.

3. In an airship, planes spaced apart, a pair of rudders fulcrumed between the front ends of said planes and inclined outwardly from the vertical, and a pair of rudders fulcrumed between the rear ends of said planes and inclined inwardly from the vertical, said rudders being normally parallel to the line of flight and the rudders of each pair being operatable toward and from each other, substantially as described.

In testimony whereof I have signed my name in the presence of two subscribing witnesses.

JOHN C. SCHLEICHER.

Witnesses:

JOS. T. MULLIGAN,
MARGARET BLANCO.