

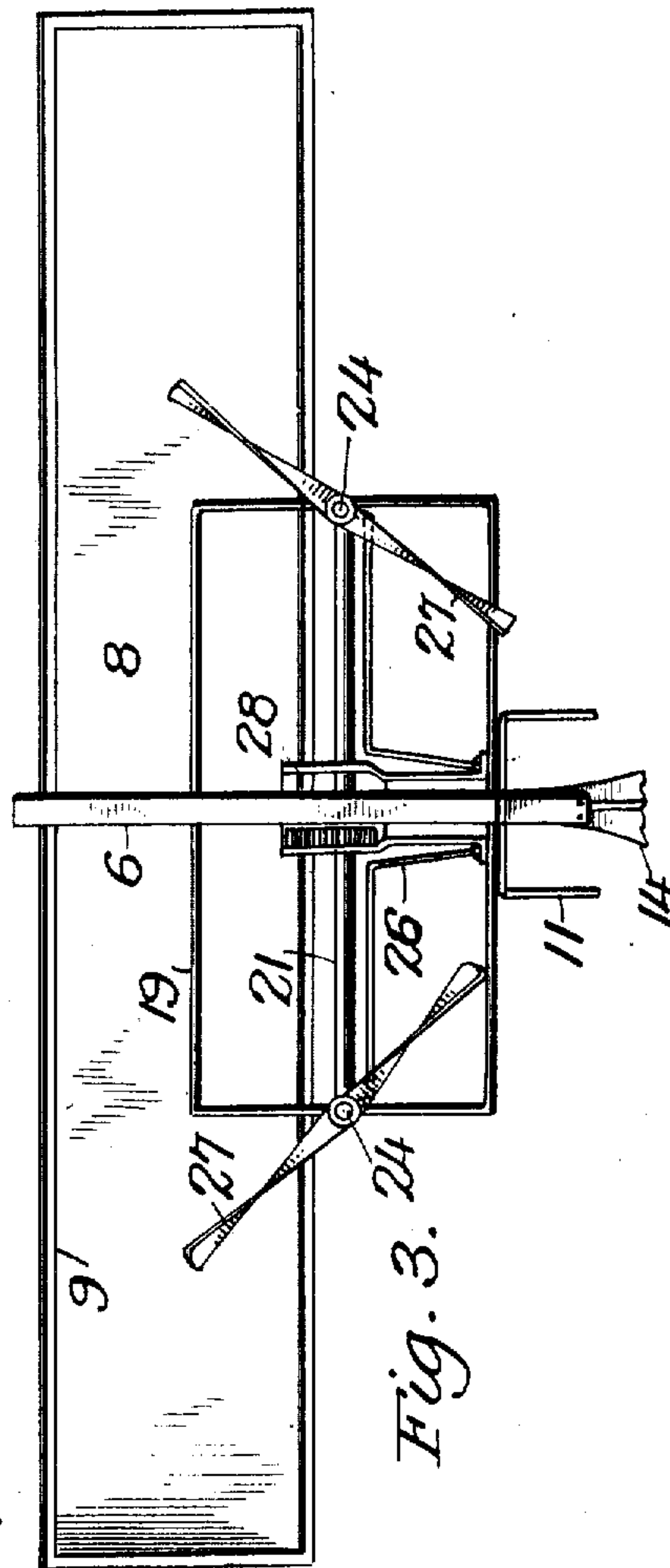
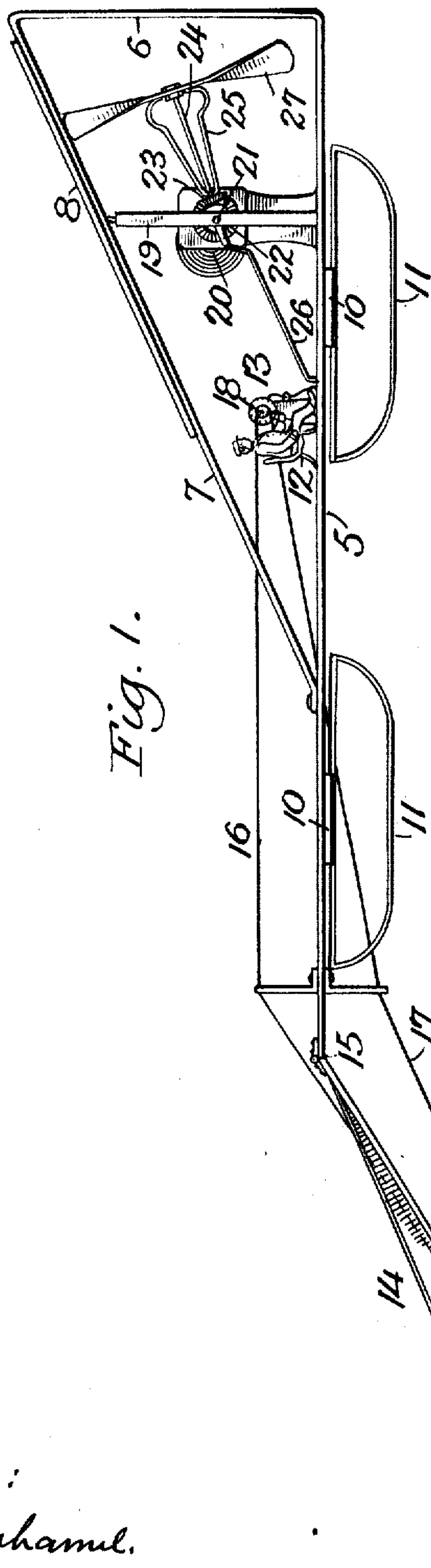
No. 843,476.

PATENTED FEB. 5, 1907.

W. MORGAN.
FLYING MACHINE.

APPLICATION FILED MAR. 31, 1906.

2 SHEETS—SHEET 1.



Witnesses:

James F. Duhamel.

H. Allen

Inventor
William Morgan,

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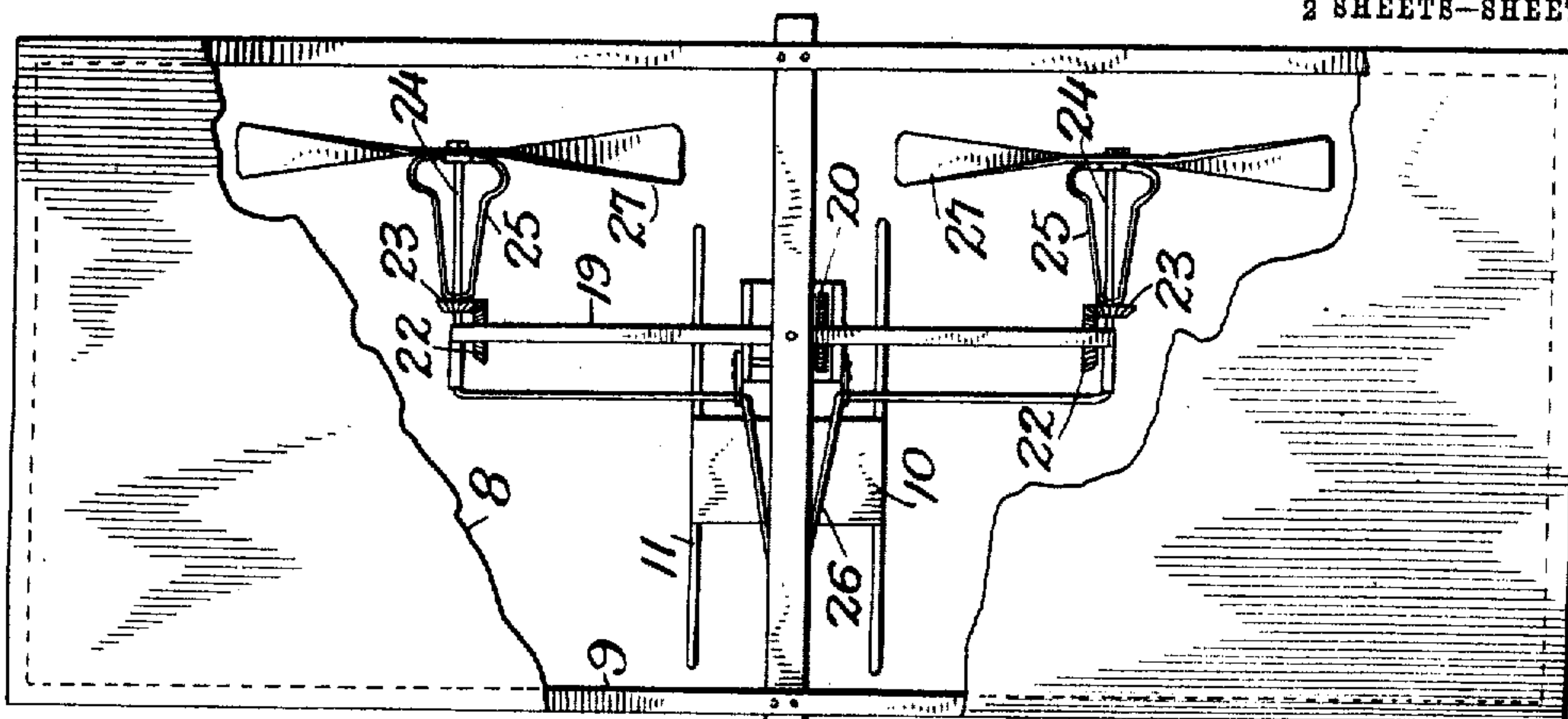
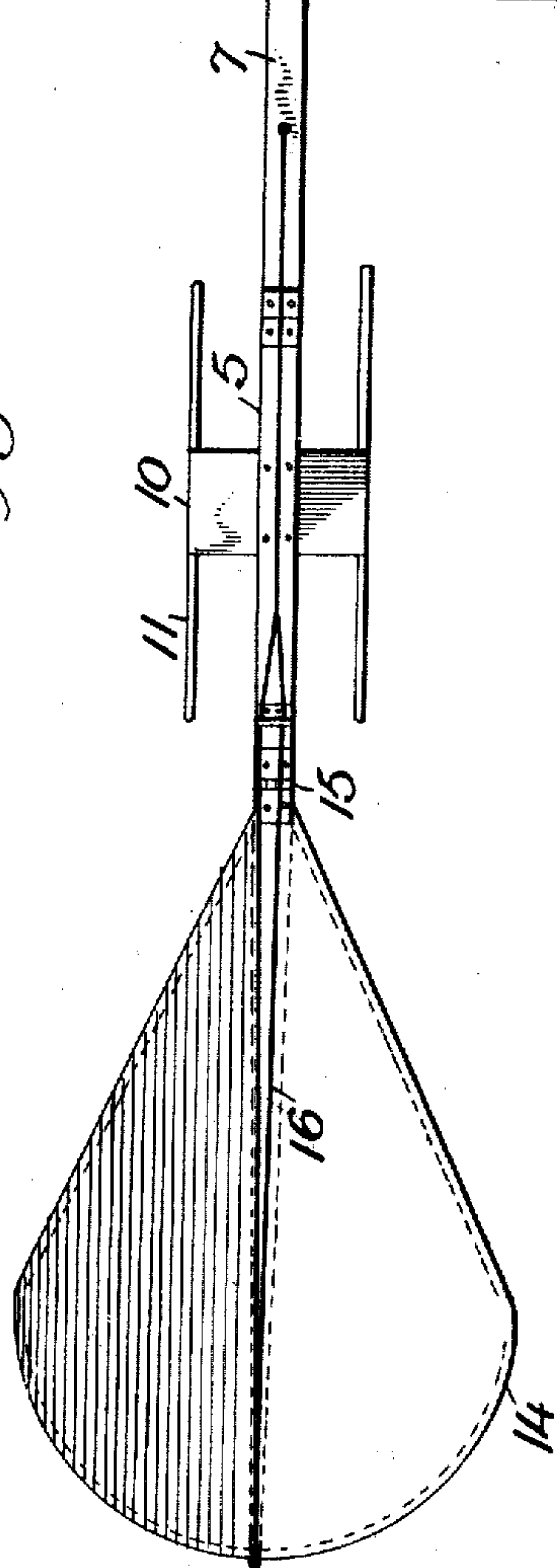


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM MORGAN, OF FORT PLAIN, NEW YORK.

FLYING-MACHINE.

No. 843,476.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed March 31, 1906. Serial No. 309,156.

To all whom it may concern:

Be it known that I, WILLIAM MORGAN, a subject of the King of Great Britain, residing at Fort Plain, in the county of Montgomery and State of New York, have invented new and useful Improvements in Flying-Machines, of which the following is a specification.

My invention relates to flying-machines, and has for its objects the novel arrangement of planes which are adapted to float the machine upon the air while propellers move the same forward, one of the planes being so arranged as to be capable of having its angle varied so that the course of the machine may be varied so as to ascend or descend. These and other objects and details of my invention are more fully described in the following specification and set forth in the appended claims.

In the drawings forming a part of this application and accompanying same like reference characters are used to designate the same parts in the various figures.

Figure 1 is a side elevation of my improved flying-machine. Fig. 2 is a plan view of the same, with one of the planes broken away to show certain details. Fig. 3 is a front view of the machine.

The machine is provided with a horizontal backbone 5 of the shape shown in Fig. 1, where it will be seen that a vertical member 6 rises from the outer end of this member 5 and an angular member 7 returns to the horizontal part 5 and is secured thereto, the whole forming a triangular frame. The angular piece 7 carries an aeroplane 8 of any desired size and construction, but which is preferably made of a light frame 9, of wood or light metal, and covered with silk, the whole being securely attached to the member 7. The horizontal section of the frame carries cross members 10, whose under sides are provided with runners 11, which are useful in starting the machine or effecting a landing of the same, as they not only permit the machine to slide along the ground, but they also afford a cushioning effect when it drops and break the force of the fall. The upper face of this horizontal member carries a seat 12 for the operator and steering mechanism 13 for manipulating the rear plane or tail 14, which is hinged to the member 5 at the point 15 and

has ropes or cords 16 and 17, which pass around the pulley 18 of the steering mechanism, and when it is desired to descend the rope 17 is drawn in and 16 is released; but when it is desired to permit the machine to ascend an opposite operation is resorted to, so that the tail will take a position above the line of the horizontal member 5.

Pivoted between the members 5 and 7 of the frame is a rectangular frame 19, which carries suitable motive power—such as a spring-motor 20, with a shaft 21, passing from side to side of the frame 19 and having its bearings therein, and this shaft carries at each end the bevel gear-wheels 22, meshing with the bevel-pinions 23 on shafts 24, which shafts are carried by the frames 25, pivoted at the outer end of the motive-shaft 21, and the ends 26 of the frames 25 terminating near the operator's seat, so that they may be grasped by him, and the whole of the frame 19 turned on its pivots so that the direction of the propellers 27 at the outer ends of the shafts 24 may be varied or established at the will of the operator. The tailpiece 14 is similar in its construction to the aeroplane 8 and is of the same material.

Various modifications may be resorted to in the construction and arrangements of the various parts of this device without departing from the essential features set forth in the claims.

Having thus described the invention, what I claim as new is—

1. A flying-machine comprising a horizontal backbone, a vertical member secured to the front end of said backbone, an inclined member extending from the upper end of said vertical member back to the backbone, an aeroplane secured to said inclined member and extending upon opposite sides of the same, a tail pivoted to the rear end of the backbone and flexible connections extending from said tail to a steering-wheel, a motor, supported upon said backbone, propellers actuated by said motor, and means for moving said propellers in different directions, substantially as described.

2. A flying-machine provided with a frame comprising a horizontal backbone, a vertical member extending upward from the front end of said backbone, an inclined member extending backward from the upper end of said

vertical member, and secured at its rear end to
said backbone, an aeroplane secured to said
inclined member, a pivoted steering-tail, a
motor supported upon the backbone, pro-
5 peller-wheels operatively connected to said
motor, means for moving said propellers in
various directions, and runners secured in
parallel relation to opposite sides of the back-

bone near the front and rear of the machine,
substantially as described. 10

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

WILLIAM MORGAN.

Witnesses:

HARRY A. BROWN,
CORA MORGAN.