R. G. DRESSLER.

AMUSEMENT FLYING MACHINE.

APPLICATION FILED SEPT. 17, 1909.

952,886. Patented Mar. 22, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

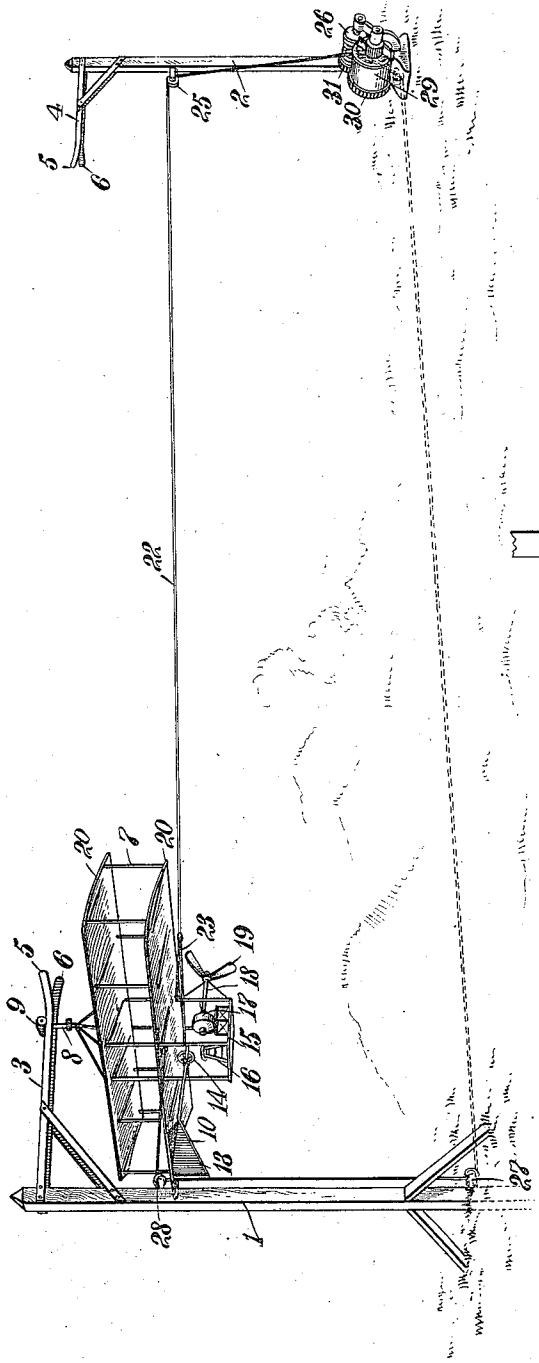
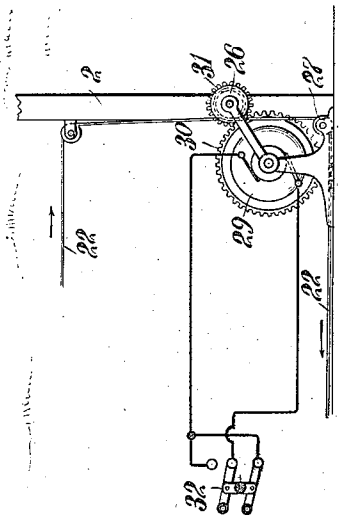


Fig. 4.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 2.

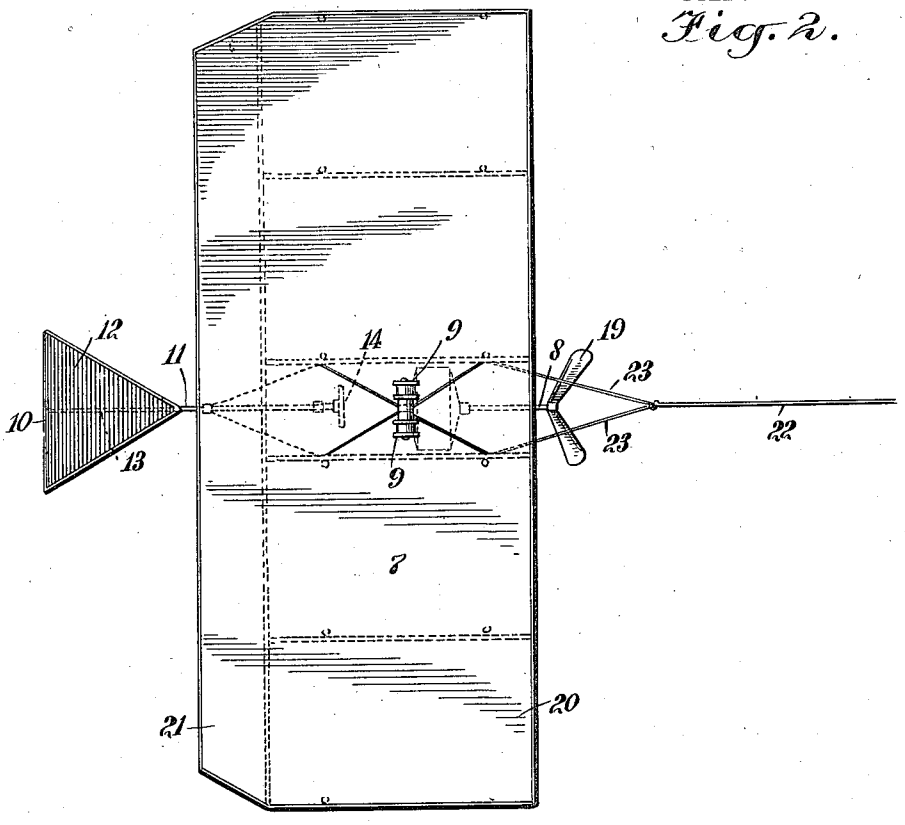
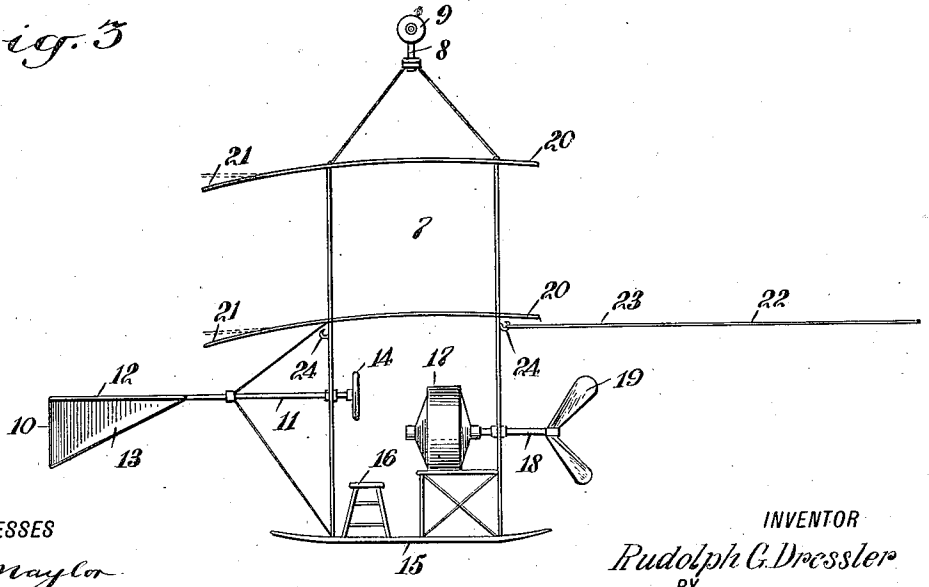


Fig. 3



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RUDOLPH G. DRESSLER, OF NEW YORK, N. Y.

AMUSEMENT FLYING-MACHINE.

952,886. Specification of Letters Patent. Patented Mar. 22, 1910.

Application filed September 17, 1909. Serial No. 518,138.

To all whom it may concern:

Be it known that I, RUDOLPH G. DRESSLER, a citizen of the United States, and a resident of the city of New York, Coney Island, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Amusement Flying-Machine, of which the following is a full, clear, and exact description.

This invention relates to an amusement device, and is of that type in which a suitable flying machine containing pleasure seekers is traversed between a starting and a receiving station, being suspended by its own sustaining power intermediate the stations.

An object of this invention is to provide a device which will be simple in construction, strong and durable, and steady and safe in its operation.

A further object of this invention is to provide means for movably supporting a flying machine at a starting or receiving station, in such a manner that said flying machine may be reversed.

A further object of this invention is to provide a starting rail for a flying machine with means for giving an upward throw to said flying machine as it leaves said starting rail.

A still further object of this invention is to provide a starting station and a receiving station, and a flying machine with means for traversing it between said stations in either direction.

These and further objects, together with the construction and combination of parts, will be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a perspective view showing the flying machine suspended from the starting rail; Fig. 2 is an enlarged top plan view of the flying machine; Fig. 3 is an enlarged side view in elevation, of the flying machine, showing its connection to the traversing rope; and Fig. 4 is an enlarged side view in elevation, showing the means for reversing the direction of the traversing rope.

Referring more particularly to the separate parts of the device, 1 and 2 indicate suitable supports for supporting rails 3 and 4, either of which may act as a starting or a receiving station. These rails 3 and 4 are each preferably composed of two individual rails 5 and 6 spaced apart from each other and flaring outwardly and upwardly at their ends.

My device also includes a flying machine 7, which is adapted to be supported on either of the rails 3 or 4 by means of a hanger 8, which is swivelly connected to the frame of the flying machine 7, and is provided with a plurality of rollers 9, which are adapted to engage each of the rails 5 and 6. The flying machine 7 is adapted to fly between the stations 3 and 4, and at the ends of its flight, its supporting hanger 8 is directed between the outwardly flaring ends of the rails 5 and 6. The outwardly flaring ends of the rails 5 and 6 thereby form guides which direct the hanger 8 to a position in between the rails 5 and 6. The upwardly turned ends of the rails 5 and 6 serve the purpose of shooting the flying machine in an upward direction as it leaves the rail on the start of a flight.

The flying machine may be of any suitable form, but preferably is of the bi-plane type, and has a pair of supporting planes 20 which are secured to the framework of the flying machine in any well known manner and are provided with flexible rear sections 21, which add greatly to the soaring power and forward propulsion of the flying machine. The flying machine is provided with a suitable rudder 10, which preferably consists of a shaft 11, journaled in any well-known manner to the frame of the flying machine 7 and having secured to its outer ends a horizontal triangular plane 12 and a vertical triangular plane 13 extending below the surface of the triangular plane 12, the shaft 11 also having at its inner end a suitable wheel 14 whereby the rudder, as a whole, may be manipulated. The framework of the flying machine preferably extends down below the surface of the planes, to form a supporting platform 15 for the operator and the operating parts, so that the center of gravity will be below and suspended from the planes of the flying machine. Supported on the platform 15, there are provided any number of seats 16 for the occupants of the flying machine. The flying machine may be provided with a motor 17, which is adapted to rotate a shaft

18, on which is secured a propeller 19, the blades of which are preferably diverged from each other at an angle to the shaft 18, so that they will direct the backward current of air up and down and to the sides, and thus prevent the air being blown on the operator and the other occupants of the flying machine.

In order to traverse the flying machine between the starting and the receiving stations, there is provided a traversing rope 22, which is provided at each end with branch lines 23, which are adapted to be detachably connected to hooks 24 spaced apart on each end of the flying machine. The branch lines 23 thus form a V-shaped connection, which will keep the flying machine steady and prevent it from swerving from one side to the other during its flight. The traversing rope 22 passes over a suitable guide pulley 25 at one side to a drum 26, around which it is wound for a number of turns. The traversing rope 22 extends from the drum 26 over guide pulleys 27, and thence to a guide pulley 28, from whence it extends to the flying machine 7, to which it is detachably connected, as previously explained. The drum 26 is adapted to be rotated by means of a motor 29, and is operatively connected thereto in any well known manner, as by means of gears 30 and 31. The motor 29 may be of any suitable form, but is preferably a reversible electric motor, and is provided with a reversing switch 32, whereby the current may be reversed through the motor, in order to reverse the direction of rotation of the motor.

In the operation of the device, the flying machine is suspended from one of the starting rail stations 3 or 4 and directed with its front toward the opposite station by turning the flying machine about its swiveled support. The propeller on the flying machine may then be started, but the main force of the flight is obtained through the pull on the traversing rope 22, which hauls the flying machine at a rapid rate along the starting rail until it reaches the end thereof, when the flying machine is directed in an upward arc, and flies from one station to the other. During its flight, the flying machine may be guided by the rudder to a certain extent, but is held in a straight path by the traversing rope 22, which is attached at each end of the flying machine in a manner which has been described, which will keep the same perfectly steady. When the flying machine approaches the end of its flight, the power may be shut off, and the machine will gradually settle, having its suspended hanger guided between the rails 5 and 6 by the converging ends thereof. By disconnecting both ends of the traversing rope 22 and swinging the flying machine around on its swivel support, the flying machine may be directed toward its original starting point and hauled back in a similar manner. In order to do this, the motor 29 is reversed by means of the reversing switch 32. The peculiar type of propeller on the flying machine deflects the air sucked in from the front, in the form of a hollow cone, thereby shunting it away from the operator and occupants of the flying machine. The use of flexible rear ends on the bi-planes forms an additional means for forcing the flying machine in a forward direction, and also enables the flying machine to keep afloat after the power has been shut off, by translating its vertical motion into a horizontal motion.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. In an amusement device, the combination with a starting station, of a receiving station, a flying machine adapted to travel between said stations, and means for towing said flying machine.

2. In an amusement device, the combination with a starting rail, of a receiving rail spaced from said starting rail, a flying machine adapted to be movably supported on said rails, and means for propelling said flying machine from one rail to the other rail.

3. In an amusement device, the combination with a starting rail, of a receiving rail spaced from said starting rail, a flying machine adapted to be movably supported on said rails, and means for towing said flying machine from one rail to the other rail.

4. In an amusement device, the combination with a starting station, of a receiving station spaced from said starting station, a flying machine adapted to fly from said starting station to said receiving station, and a rope attached to either end of said flying machine adapted to tow and guide said flying machine from one station to the other.

5. In an amusement device, the combination with a starting station, of a receiving station, a flexible connection attached to each end of said flying machine, a drum for operating said flexible connection, and means for rotating said drum.

6. In an amusement device, the combination with a starting station, of a receiving station spaced from said starting station, a flying machine adapted to fly from one station to the other, a flexible connection connected to said flying machine, a drum adapted to operate said flexible connection, and means for rotating said drum in either direction.

7. In an amusement device, the combination with a starting station, of a receiving station, a flying machine adapted to fly between said stations, a flexible connection detachably connected at each end of said fly-

ing machine, means for operating said flexible connection in either direction, and means for steering said flying machine.

8. In an amusement device, the combination with a flying machine, of a rope detachably connected to said flying machine at each end, and means for traversing said rope in either direction.

9. In an amusement device, the combination with a starting rail, of a receiving rail spaced from said starting rail, a flying machine adapted to fly between said rails, and means for traversing said flying machine.

10. In an amusement device, the combination with a supporting rail, of a flying machine, and a swivel support for said flying machine on said rail.

11. In an amusement device, the combination with a receiving rail having converging guides, of a flying machine, and a roller support for said flying machine adapted to engage between said guides and support said flying machine on said rail.

12. In an amusement device, the combination with a starting rail having an upturned end, of a flying machine rotatably supported on said starting rail, and means for propelling said flying machine on said rail.

13. In an amusement device, the combination with a starting station, of a receiving station, a flying machine adapted to fly between said stations, a traversing rope connected to said flying machine, means for hauling said rope, and a reversible motor for driving said means.

14. In an amusement device, the combination with a starting station, of a receiving station spaced from said starting station, a flying machine adapted to fly between said stations, means for traversing said flying machine, a propeller on said flying machine, and a rudder on said flying machine.

15. In an amusement device, the combination with a starting rail, of a receiving rail, a flying machine adapted to fly between said rails, a swivel support for said flying machine adapted to suspend said flying machine from said rails, a rope detachably connected to each end of said flying machine, a drum for swinging said rope in either direction, a reversible motor for rotating said drum in either direction, a propeller on said flying machine, having diverging blades, and a rudder on said flying machine.

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

RUDOLPH G. DRESSLER.

Witnesses:

HORATIO WHITING,

PHILIP D. ROLLHAUS.