

C. F. McBEE.
AERIAL TRANSPORTATION SYSTEM.
APPLICATION FILED FEB. 1, 1912.

1,063,458.

Patented June 3, 1913.

2 SHEETS—SHEET 1.

Fig. I.

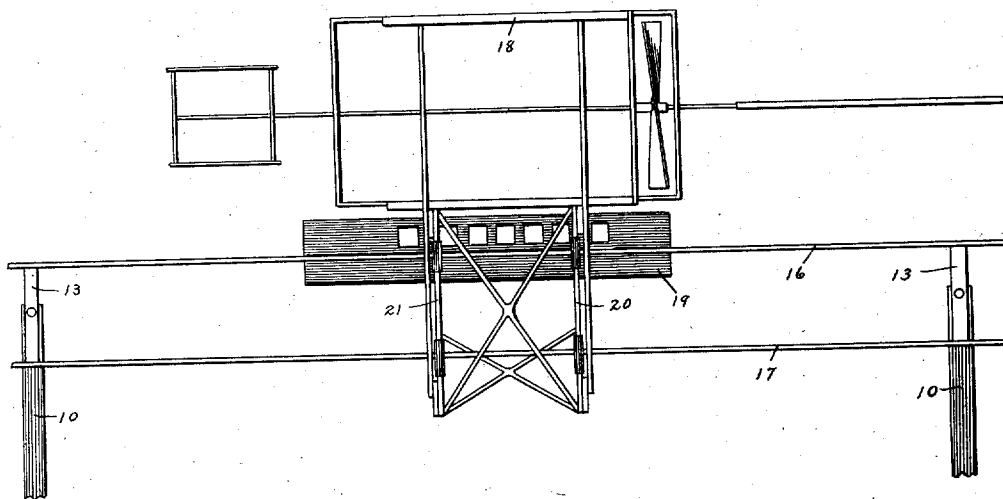
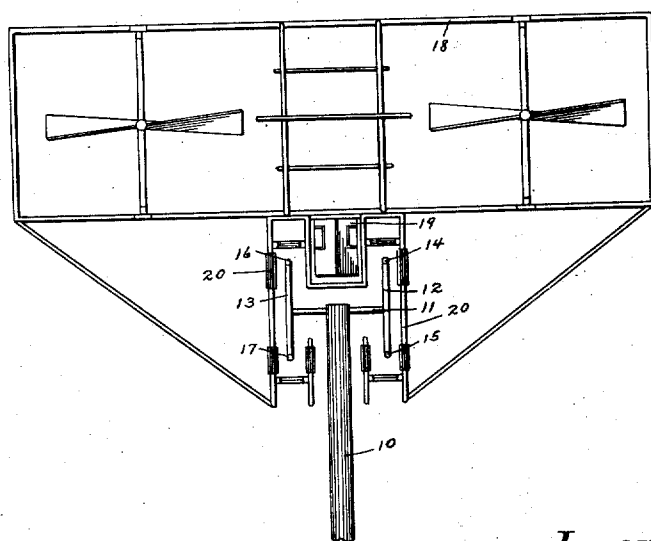


Fig. II.



Witnesses.

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By Zell G. Roe, Atty.

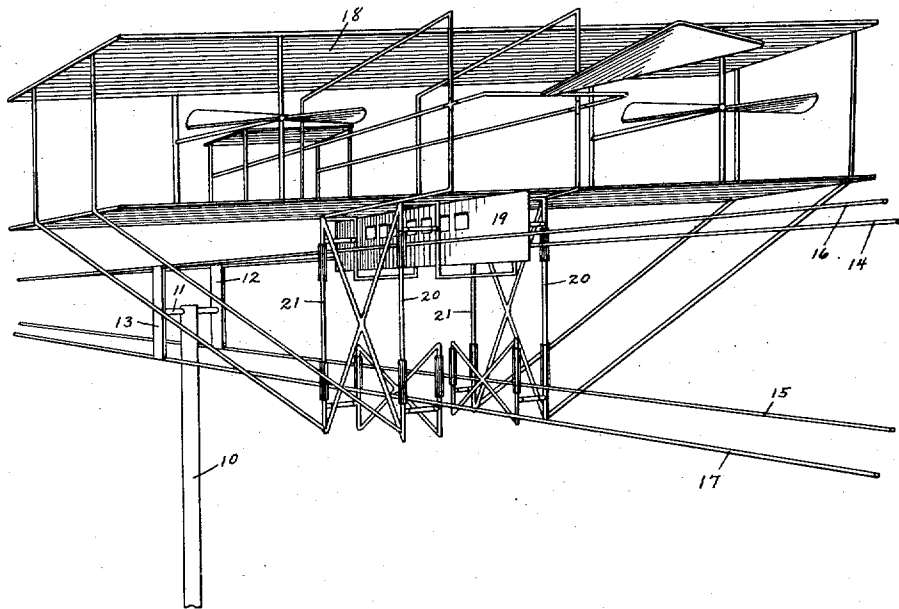
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2 SHEETS-SHEET 2.

Fig. III.



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UNITED STATES PATENT OFFICE.

CHARLES F. MCBEE, OF ATHENS, OHIO.

AERIAL TRANSPORTATION SYSTEM.

1,063,458.

Specification of Letters Patent.

Patented June 3, 1913.

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To all whom it may concern:

Be it known that I, CHARLES F. MCBEE, a citizen of the United States, residing in Athens, county of Athens, and State of Ohio, have invented a new and useful Improvement in Aerial Transportation Systems, of which the following is a specification.

My invention relates to aerial navigation and has for its object the providing of certain construction which will permit the air body to operate independently yet to be surrounded with such safeguards as to adapt aeroplanes, air ships, flying machines, and the like, to practical purposes for conveying passengers, freight, etc.

I attain my object by the construction of an elevated wire guide way, stationary with the ground, in combination with guide arms which extend from, and are stationary with, the aerial device, the relation between the guide arms and guide way being such that during the flight of the aerial device it runs over the guide way but the guide arms do not come in contact with the guide way unless the aerial device swerves too far to one side or in some other manner endeavors to go too far in any direction from the guide way. The construction is also such that the aerial device cannot, unless the operator so desires, leave the guide way thus making it practically impossible for the aerial device to turn turtle or become wrecked by falling to the ground. The relation between the guide way and the guide arms is such as to provide a limitation for the free movement of the aerial device, upward, downward, sidewise, or in any direction at any angle.

My invention consists of certain details of construction hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure I shows a side elevation of my improved aerial device and the wire guide way I employ; Fig. II shows a rear elevation view of the same; and Fig. III shows a perspective view of the same.

Referring to the accompanying drawings the reference numeral 10 is used to indicate the post or standard I employ to support my wire guide way, a series of said posts being rigidly set into the ground, preferably in cement or concrete bases, along the right of way. At or near the upper extremity of each post I have secured a cross arm 11, extending equal distances from each side of the

post at right angles to right of way. On each end of the cross arm I have mounted, vertically, a cross piece, 12 and 13 respectively, the ends of the same extending, preferably, equal distances, upward and downward, from their respective ends of the cross arm.

My wire guide way is, preferably, composed of four wires 14, 15, 16 and 17, respectively, which are secured to their respective ends of the cross pieces 12 and 13, at each post. Obviously this construction will produce a guide way of four parallel wires arranged in rectangular form.

The numeral 18 is used to indicate my aerial device, which may be an aeroplane, air ship, motor or air driven machine, or any heavier than air machine designed for aerial navigation. Depending centrally from the aerial device is a car, or body of any desired construction, 19, designed for seating passengers, storing freight, express packages, mail, or the like. The said car body may be loosely suspended, for independent movement, or rigidly secured to the aerial device, as desired.

Rigidly secured to the aerial device, and depending therefrom, are two brackets, 20 and 21 respectively, one near the forward part of the aerial device and the other near the rear thereof, said brackets being exactly similar in every respect. In cross section the brackets have the appearance of an H, executed in double lines the lower part of the cross bar being omitted, as is clearly shown in Fig. II.

The two brackets are rigidly secured to each other by crossing securing rods, or in any other desired manner, and are also braced so as to make their positions fixed and permanent not only with relation to each other but with relation to the aerial device.

The brackets, constructed as shown, are designed to encircle, or fit over, the four guide wires, but, by construction the brackets are so much larger than would be required to embrace within them the guide wires, much play and freedom of the aerial device will be permitted. The construction is also such that the cross bar, or wire, between the vertical members forming the bracket cannot possibly come into contact with the upper extremity of the posts by reason of the fact that the upper wires of the guide way would first engage the upper

surfaces of the vertical members of the brackets and operate as a track on which the aerial device would travel, or rest. The object of omitting the lower cross wire, or bar, between the vertical members of the brackets is to remove obstructions so the aerial device may travel past the cross arms of the posts. I have also provided my brackets with rollers at all points which might, at times, come into contact with the guide wires, the object of this being obvious, but these rollers may be omitted if desired.

By the construction hereinbefore set forth it is obvious that the guide way I employ is not designed as a track over which the aerial device is designed to travel, but is simply designed as a guide and safety device which is necessary, and comes into use only at such times as the aerial device may attempt to fly too high, too low, or to swerve to one side or the other, and at such times as the device may be brought to a stop. It is equally obvious that an aerial device fitted out in the above manner cannot become wrecked by failure of power, turning turtle or the like.

The construction of the brackets or the mounting thereof, or the construction of the posts and guide wires, may be changed, or the number of guide wires I employ may be reduced or increased, without changing my invention which has for its object the constructing of a guide wire way and safety guards, to encircle same, which will permit of free and uninterrupted passage of an aerial device traveling in the air and not on a track but which cannot leave the guide wire way and fall to the ground.

Having thus described my invention what I claim and desire to secure by Letters Patent of the United States is:

1. An aerial transportation system comprising an elevated wire guide way; a free moving self propelled aerial device; guards rigidly secured to the aerial device, said guards extending outside the wire guide way and extending inwardly around same but not coming into contact therewith except at intervals, substantially as shown and described.

2. An aerial transportation system comprising an elevated wire guide way constructed of a pair of upper and a pair of lower, parallel wires, mounted on standards set in the ground; an aerial device; guards secured to the aerial device depending therefrom outside the two sets of wires the upper and lower portions of said guards extending inwardly and toward each other so as to partially encircle their respective wires but not to come into contact therewith except at intervals, substantially as shown and described.

3. In an aerial transportation system comprising a free moving aerial device and wire guide way, guards depending from the

aerial device, said guards so constructed as to resemble a double lined letter H the lower cross bar being omitted, substantially as shown and described.

4. In an aerial transportation system an elevated wire guide way constructed of four parallel wires, two above and two below, mounted on cross arms of centrally located standards set in the ground; an aerial device provided with guards designed to depend outside their respective wires the upper part of the guards being projected inwardly and thence downwardly to partially surround their respective upper wires and the lower portions of said guards projecting inwardly and thence upwardly to partially surround their respective lower wires, the distance between the inner ends of each guard being less than the distance between the upper and lower wires of their respective sides of the guide way, substantially as shown and described.

5. An aerial transportation system comprising an elevated guide way constructed of a plurality of parallel strips, some above and some below; an aerial device; guards depending from the aerial device and designed to partially surround the guide way but not to come into contact therewith except at intervals; rollers mounted on the guards at all points thereon which may come into contact with the guide way, substantially as shown and described.

6. In an aerial railway, a track, an airship adapted for travel on said track and in elevated relation thereto, said air ship being provided with bearing members arranged for engagement with said track to support said air ship for travel thereon, a plane on said air ship for effecting the elevation of the latter from said track, and a retaining means on said air ship permitting of a limited vertical movement of the same with respect to said track.

7. In an aerial railway, a track, an airship, provided with bearing members arranged for engagement with said track to support said airship for travel thereon, and means for guiding said air ship vertically with respect to said track.

8. In an aerial railway, a track, an airship, provided with bearing members arranged for engagement with said track to support said airship for travel thereon, means for guiding said airship vertically with respect to said track, and means for limiting vertical movement of said airship.

9. In an aerial railway, a track, an airship, bearing members on said ship for travel on said track, guides depending from said airship on opposite sides of said track, and bearing members on said guides projecting beneath said track for engagement therewith, said last named bearing members being spaced from said first named bearing

members to permit of the latter traveling in an elevated position with respect to said track.

5 10. In an aerial railway, a track, an airship provided with upper and lower bearing members arranged for engagement with said track to thereby limit vertical movement of the airship, and depending rigid guides on said airship projecting on opposite sides of said track.

0 11. In an aerial railway, a track comprising a pair of rails and underlying guides, an airship, depending rigid guide

members on said airship projecting on opposite sides of and below said track, and 15 upper and lower bearing members on said guide members arranged respectively above and below said track with the said lower bearing members spaced from the guides of said track to engage the same when the air- 20 ship is in flight.

CHARLES F. McBEE.

Witnesses:

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HARRY B. McBEE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."