(No Model.) 2 Sheets—Sheet 1.

J. T. LOMAX.

CABLE AIR SHIP.

No. 541,102. Patented June 18, 1895.

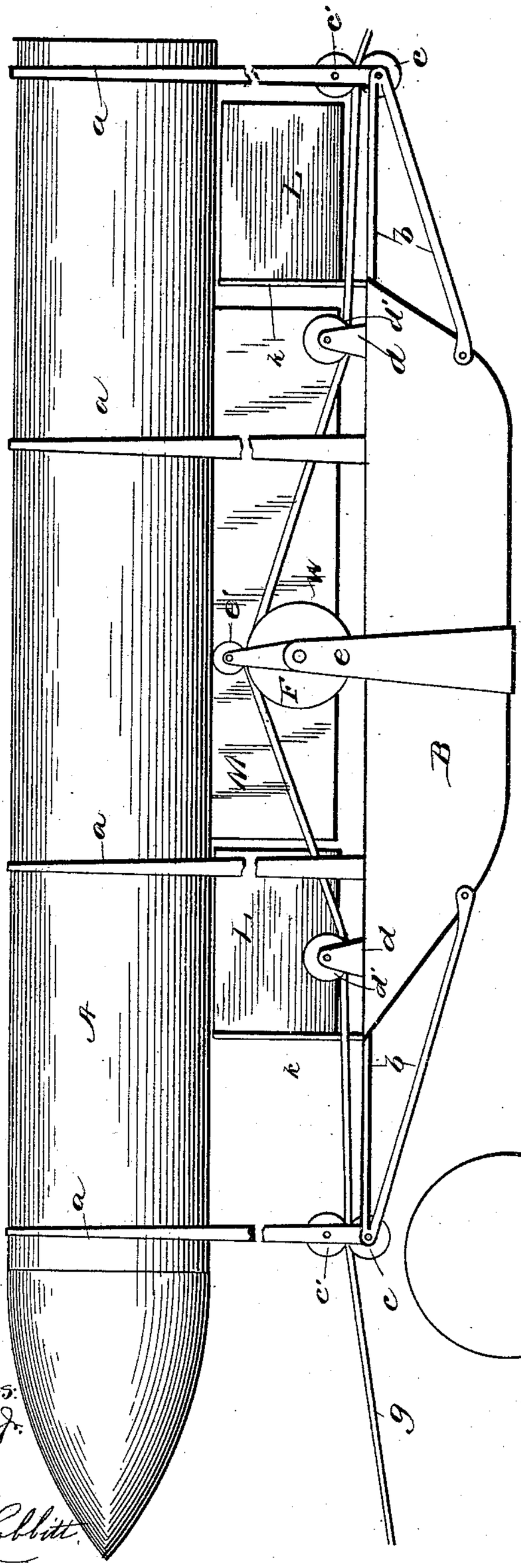

Fig. 1.

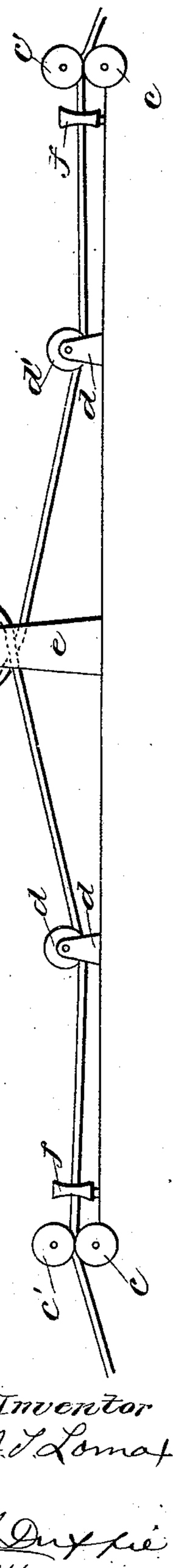

Fig. 2.

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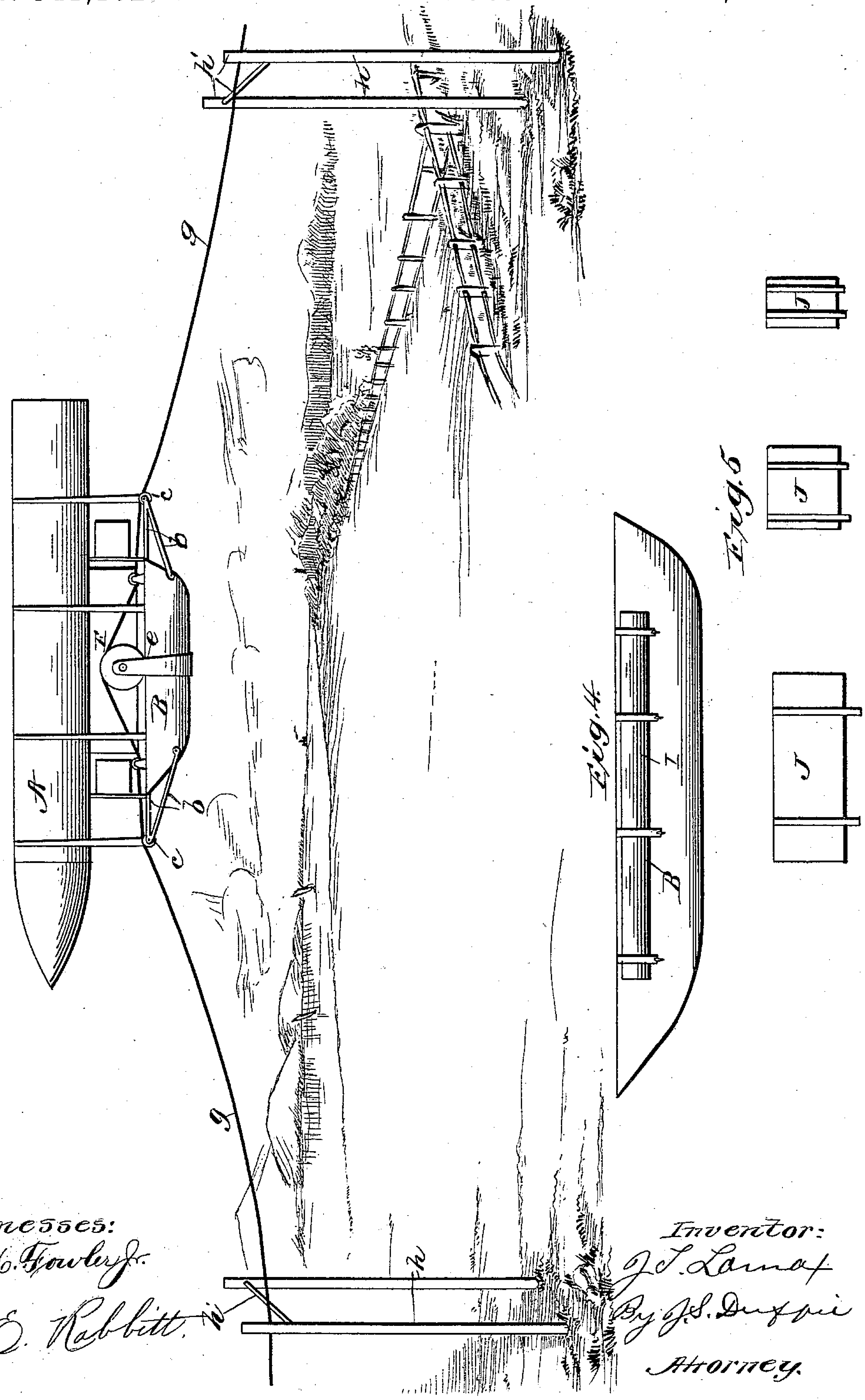

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UNITED STATES PATENT OFFICE.

JOHN THOMAS LOMAX, OF POCAHONTAS, ARKANSAS.

CABLE AIR-SHIP.

SPECIFICATION forming part of Letters Patent No. 541,102, dated June 18, 1895.

Application filed November 13, 1894. Serial No. 528,659. (No model.)

To all whom it may concern:

Be it known that I, JOHN THOMAS LOMAX, a citizen of the United States, residing at Pocahontas, in the county of Randolph and State of Arkansas, have invented certain new and useful Improvements in Cable Air-Ships; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is a "cable air ship," and consists in the novel construction and arrangement of its parts, hereinafter set out in this specification and the claims hereto attached.

In the accompanying drawings, Figure 1 is a perspective view of my invention. Fig. 2 is a diagrammatic view showing another manner of contacting the cable with the motor-wheel. Fig. 3 is a view showing my ship in flight through the air passing along the cable mounted upon beams between uprights. Fig. 4 is a side elevation of the car having inflated buoyancy chambers attached to its sides. Fig. 5 shows short inflated buoyancy chambers. Fig. 6 is an end view of the inflated buoyancy chamber and of the adjustable plane.

My air ship is pulled along a cable by applying power to rotate a motor wheel in the center of the car. The cable may be any length extending from city to city. It may lie on the ground, fences, houses, trees, or other elevations, as it will always be lifted above the objects by the flying ship as it passes along the cable. The cable is supported by posts on either bank of a stream, across roads, through forests, over marshes, lagoons, &c. A T-post is sufficient, or two posts with a cross beam between them may be used, using as many in a row as is necessary. The arms of the T-post are ten or twenty feet long, and when necessary to use posts opposite each other, they may be ten, twenty or fifty feet apart, with cross beams extending from one to the other, the cable resting on the arms or cross pieces. The cable is made of wire, but may be made of any other suitable material.

Fig. 1, represents my ship having a lifting capacity of eleven hundred pounds, carrying a load of one thousand pounds exclusive of the cable. Released from the ground, the ship rises upward until it lifts one hundred pounds of cable which fills its capacity. Now, therefore, it is apparent that the altitude of the ship is determined by the load and the size of the cable. If one hundred yards of cable would weigh one hundred pounds the altitude would be low. If the cable be light and require half a mile of it to weigh one hundred pounds, the altitude of the ship would be correspondingly higher. So we see that the capacity of the ship, the amount of freight carried, and the weight of the cable all go to determine the altitude of the ship.

If perchance the air ship cable breaks or comes loose from any of its moorings, I prevent the ship from rising by letting a sufficient amount of gas escape from the inflated buoyancy chamber by opening a valve therein, or I may carry a small anchor rope sufficiently long to anchor the ship.

My invention is described as follows:

A, represents the inflated buoyancy chamber which may be pointed at its front end for the purpose of piercing or separating the air. This chamber may be made of silk, aluminum, or any other suitable material, and may be strengthened by rods or other means.

Other means may be employed for elevating the car. For instance, a vacuum chamber might be used.

a, represents supporting bands to which is attached the car B. These bands, as will be seen, are broken and are much longer than they seem to be in the drawings (Fig. 1) for the buoyancy chamber must be much farther from the car than is here represented in the drawings. These bands turn over the top of the chamber, and the two center ones are secured to the ship while the two end ones are secured to the extreme ends of the projecting arms *b*, *b*. These arms project forwardly and rearwardly, and in the extreme ends of these arms are journaled grooved pulleys *c*.

The lower ends of the end bands *a*, *a*, are slotted or bifurcated, and in such slots or bifurcations are journaled grooved pulleys *c'*, the flanges of which touch or nearly touch the flanges of the pulleys *c*.

Near each end of the car are secured bearings *d*, in which are secured grooved pulleys *d'*.

In the middle of the car longitudinally con-

sidered are secured bearings *e*, between which is journaled my grooved motor wheel F. In the top of the bearings is journaled a grooved pulley *e'*, the flanges of which touch or nearly touch the flanges of the motor wheel F.

Running over the pulleys *c*, and under the pulleys *c'*, under the pulleys *d'*, and up at an angle of nearly forty-five degrees over the motor wheel F, and under the pulley *e'*, runs the cable G.

The upper pulleys *c'*, and *e'*, are for the purpose of keeping the cable from jumping out of the grooves of the pulleys *c*, and the motor wheel F, in case of high winds or storms.

Another means of securing the cable in position to be the means of propelling the ship, is to wind it once or more around the motor wheel F, carrying it under and over pulleys as above described, and it may also be run between trunnion guides *f*. (See Fig. 2.)

h, (Fig. 3) represents posts, and *h'*, cross beams. These posts and cross beams are for the purpose of bearing up the cable when deemed necessary and may be put along the track as thickly as need be.

I may use proper brakes in connection with my ship, with proper mechanism for operating the same.

When my inflated buoyancy chamber has a capacity of only eleven hundred pounds as above mentioned, and I have already a thousand pounds of freight and wish to take on one or more passengers or additional freight at one of my depots, I add additional buoyancy chambers I, (Fig. 4.) These chambers may be secured to the sides of the car or they may be secured to the bands *a*, immediately under the buoyancy chamber. Should I desire to take on still more freight, I add still more small buoyancy chambers *j*, (Fig. 5.) I may run the motor wheel by any proper motive power.

My ship, as I have illustrated it in Figs. 1 and 3, may be properly designated a motor ship, because I purpose when necessary to attach to its rear, passenger ships which will be without motor wheels.

As will be observed the rear end of my chamber is square, and the rear and front ends of the chambers of my passenger ships are also square, the reason for which is apparent.

Rising from the front and rear ends of my car are stanchions *k*, to which are secured sails L. Between these stanchions and secured to the lower part of the chamber is an adjustable plane M. The sails L, are for the purpose of guiding the ship, directing it to the right or the left as it proceeds forward.

Adjustable plane M, is placed on the under side of the chamber, the upper edge of which is fastened to the under side of the cylinder and extends out on the side of the ship like a wing, and when adjusted to the desired angle, the under side of said plane forms a floor against which the wind plays, and in this way rests on the wind coming laterally against and through the ship. The same plane is made to do service at either side of the ship, always on the opposite side from the wind. The object is, when a strong lateral wind, carrying the ship and cable to the right or left and downward to counteract the downward tendency and cause the ship to remain and rise still higher, depending upon the amount of surface of the plane.

These ships will be run from point to point very much like railways. I may have double tracks, depots, switches and branch roads. The branch roads may start from any depot and may be moored at the stations by buckles or hooks.

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

1. In a "cable air ship," substantially as shown and described, the combination of the buoyancy chamber A, car B, secured to said chamber; motor wheel F, journaled in said car and adapted to be contacted with a cable G, in such manner as to move the ship backward or forward when said wheel is rotated; stanchions *k*, rising from the front and rear ends of said car; sails L, secured to said stanchions, substantially as shown and described and for the purposes set forth.

2. In a "cable air ship," substantially as shown and described, the combination of the buoyancy chamber A, car B, secured to said chamber; motor wheel F, journaled in said car and adapted to be contacted with a cable G, in such manner as to move the ship backward or forward when said wheel is rotated; stanchions *k*, rising from the front and rear ends of said car; sails L, secured to said stanchions; adjustable plane M, having its upper edge secured to the lower part of the chamber A, substantially as shown and described and for the purposes set forth.

3. A "cable air ship," consisting of a buoyancy chamber A, secured to a car B; car B, provided with a motor wheel F, adapted to carry a cable G, said motor wheel being in such contact with said cable as to move the ship forward or backward when said wheel is rotated; pulleys *c*, *c'*, bearings *d*, and pulleys *d'*, substantially as shown and described and for the purposes set forth.

4. A "cable air ship," consisting of a buoyancy chamber A, secured to a car B; car B, provided with a motor wheel F, adapted to carry a cable G, said motor wheel being in such contact with said cable as to move the ship forward or backward when said wheel is rotated; pulleys *c*, *c'*, bearings *d*, and pulleys *d'*, and trunnion guides *f*, substantially as shown and described and for the purposes set forth.

5. In a "cable air ship," substantially as shown and described, the combination of the buoyancy chamber A, car B, secured to said chamber; motor wheel F, journaled in said car and adapted to be contacted with a cable G, in such manner as to move the ship back-

ward or forward when said wheel is rotated; stanchions *k*, rising from the front and rear ends of said car; sails L, secured to said stanchions; adjustable plane M, having its upper edge secured to the lower part of the chamber A; cable G, passing through said ship over and under pulleys, and in contact with motor wheel F, substantially as shown and described and for the purposes set forth.

6. In a "cable air ship," substantially as shown and described, the combination of the buoyancy chamber A, car B, secured to said chamber; motor wheel F, journaled in said car and adapted to be contacted with a cable G, in such manner as to move the ship backward or forward when said wheel is rotated; stanchions *k*, rising from the front and rear ends of said car; sails L, secured to said stanchions; adjustable plane M, having its upper edge secured to the lower part of the chamber A; cable G, passing through said ship over and under pulleys, and in contact with motor wheel F, said cable extending from point to point and resting on supports, substantially as shown and described and for the purposes set forth.

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

JOHN THOMAS LOMAX.

Witnesses:

M. R. ARMSTRONG,

BEN A. BROWN.