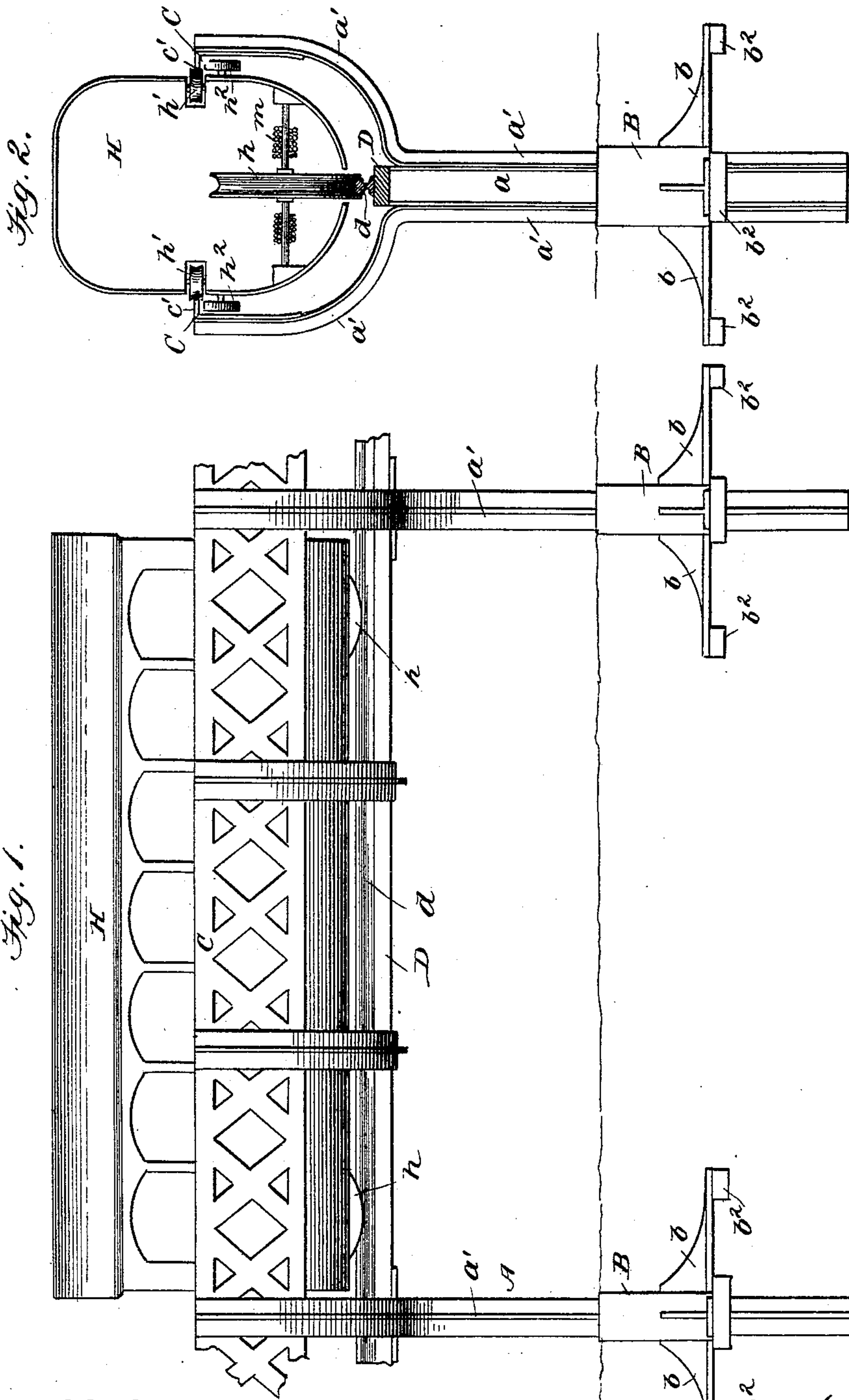


G. F. BROTT.
ELEVATED BICYCLE RAILROAD.

No. 495,927.

Patented Apr. 18, 1893.



Witnesses
Edwin L Bradford
A. H. Randall

Inventor
George F. Brott
by V. D. Stockbridge & Son
Attorneys.

(No Model.)

2 Sheets—Sheet 2.

G. F. BROTT.
ELEVATED BICYCLE RAILROAD.

No. 495,927.

Patented Apr. 18, 1893.

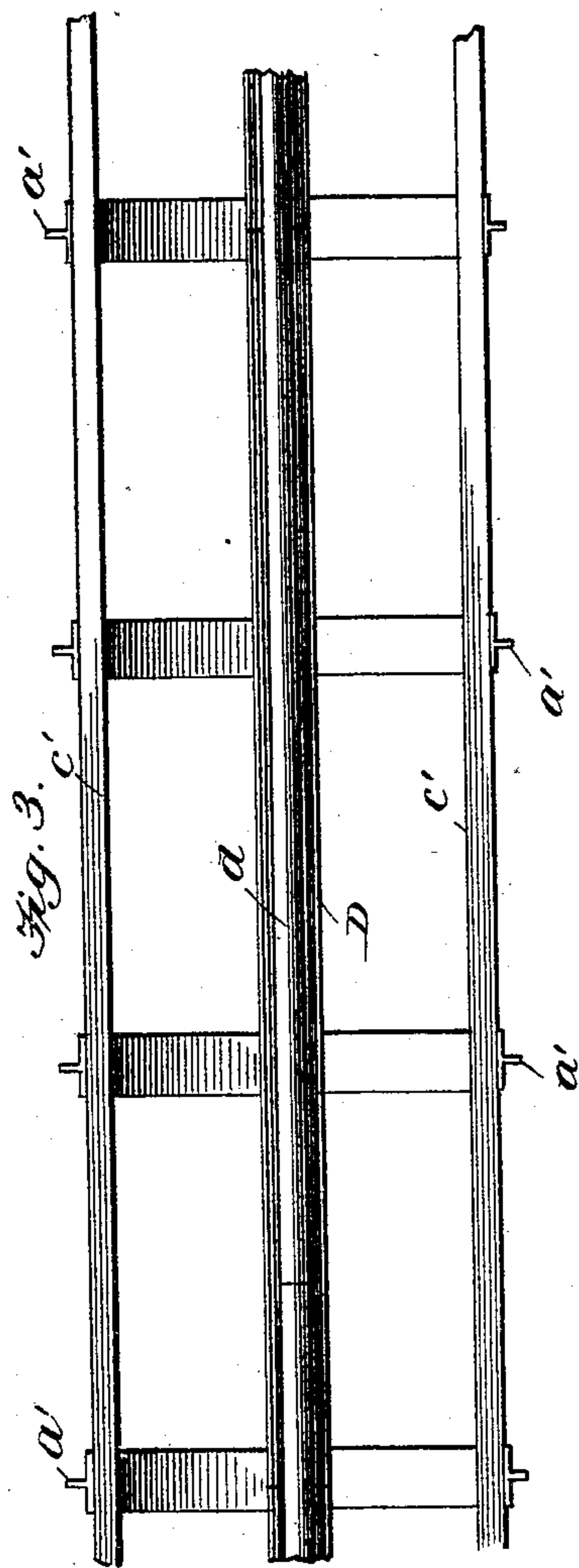


Fig. 3.

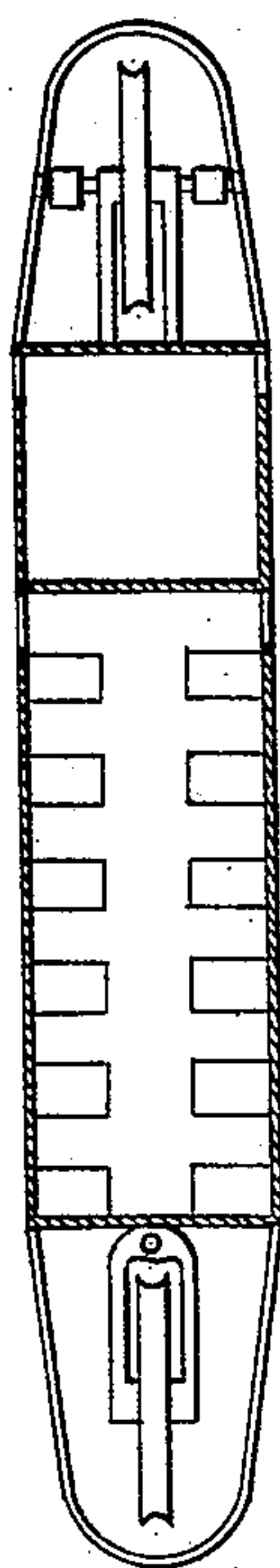
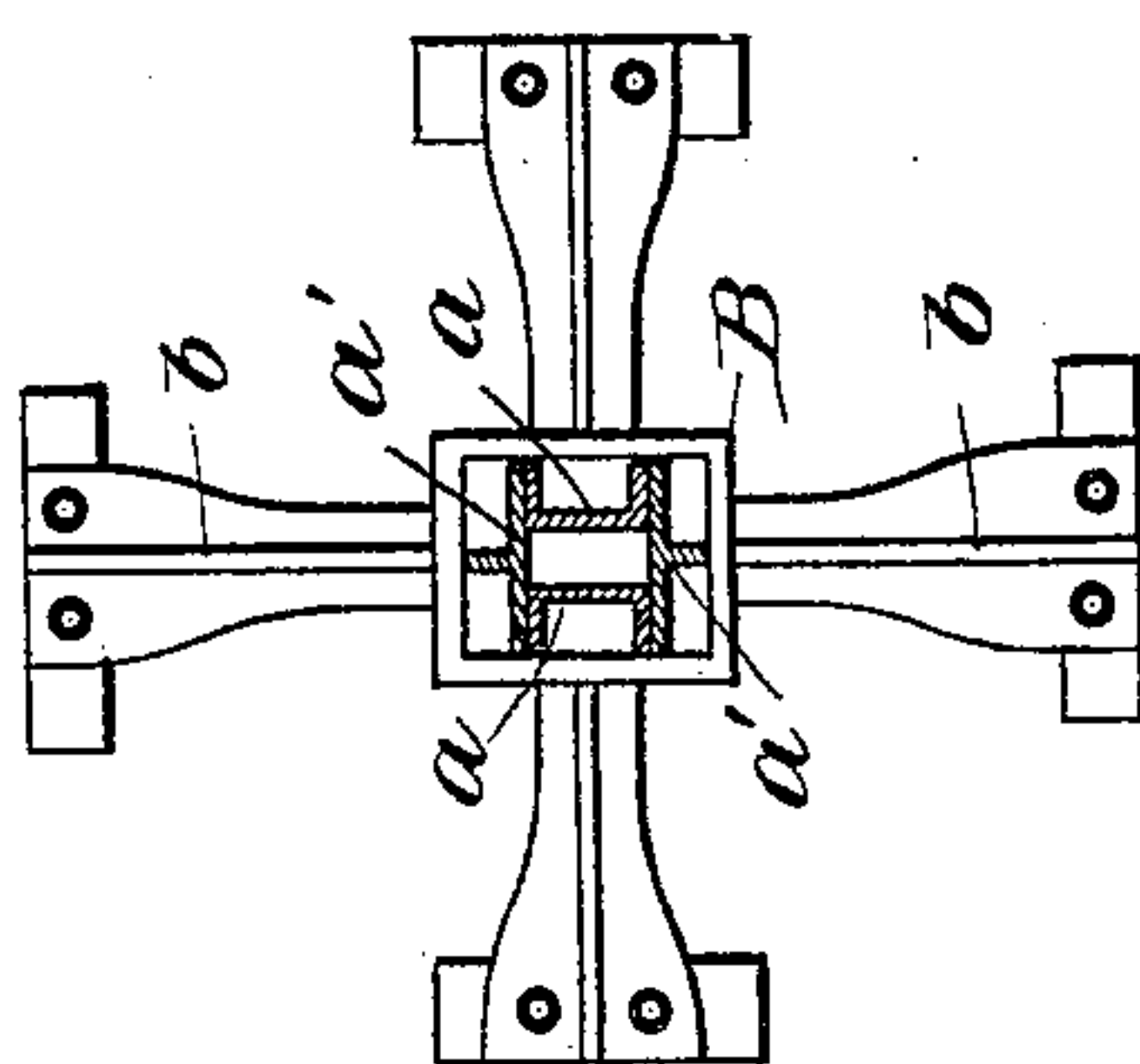


Fig. 5.



Witnesses
Edwin L Bradford
A F Randall

Inventor
George F Brott
by U.D. Starkbridge
Attorneys

UNITED STATES PATENT OFFICE.

GEORGE F. BROTT, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO
THE BROTT ELECTRIC RAPID TRANSIT BICYCLE RAILWAY COMPANY,
OF VIRGINIA.

ELEVATED BICYCLE-RAILROAD.

SPECIFICATION forming part of Letters Patent No. 495,927, dated April 18, 1893.

Application filed May 20, 1892. Serial No. 433,681. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. BROTT, a citizen of the United States, residing in the city of Washington, District of Columbia, have invented certain new and useful Improvements in Bicycle-Railroads; and I do hereby declare that the following is 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 relates to improvements in elevated bicycle railroads.

The object of the invention is to make a way for fore-and-aft two-wheel carriages or bicycles which shall be substantial and free from objections incident to other roads of this class.

The invention consists in certain combinations hereinafter described and claimed.

In the drawings, Figure 1, is a side elevation of my improvement, showing a car in position on the track. Fig. 2, is a transverse section of the same showing one of the supporting wheels of the car in elevation. Fig. 3, is a plan of the way. Fig. 4, is a view showing one of the parts in section, and its lateral braces or pedestal in elevation, and Fig. 5, is a horizontal longitudinal section through a car, showing the supporting wheels and their supports in elevation.

A is a post, fashioned or built up of angle iron, as shown, two of the members *a a* being by preference channel iron, and the other two *a' a'* being by preference T-iron. These members are riveted or bolted together in the usual way.

B is a socketed casting to embrace the post or pillar provided with radial arms *b*, which serve as the lateral support for the pillars. The arms *b b* are preferably widened at their outer extremities. This casting is secured in any suitable way, as by keys from two to three feet more or less from the lower end of the posts and when erected, they are to be from two to three feet below ground, thus making the depth of the bottom of the post from four to six feet, more or less.

For great rigidity and strength in soft or relatively soft soil, the post and the feet may be placed at greater depth, and sleepers or blocks of wood, stone or other suitable mate-

rial *b² b²* may be arranged athwart the outer extremities of the arms, and in some cases it may be desirable to adjust two of these castings arranged at different depths in the ground or to set the posts in a bed of concrete but in ordinary soil. The first mentioned depth of post and a single set of arms will furnish sufficient lateral support for the posts which are intended to be about seven feet above the level of the ground. These members extend outward beyond the path of the car and upwardly to about the middle of the car so as to have the guide rails as far from the main rail as possible without having them or their supports interfere with or obstruct the view from the windows. The T-formed members *a' a'* extend above the top of the members *a a* and are bent outward from each other to form a fork, as shown in Fig. 2.

C C are parallel plate girders or truss frames connected with and supported by the arms of the fork formed by the bent ends of the members *a' a'*. These supporting frames are preferably plate girders formed by punching or cutting out the surplus metal from a rolled plate so that all members of the truss will be integral with each other. The parallel girders or trusses are coupled together by means of members *c c* which consist of T-iron bent into the form of bows corresponding in shape and dimensions with the forks formed by the members *a' a'*. The upper edges of the plates are bent to form flanges *c' c'* which serve to stiffen the trusses laterally and as guides or stays for holding a car in upright position on the single track. The girders C, C, connected with the fork arms are main supporting parts of the structure, serving to sustain, between the posts, the main rail through the medium of the members *c c* attached to and suspended from said girders.

Mounted upon the top of the members *a a*, and supported between the posts by the bowed members *c c* are wooden stringers D to which the track rail *d* is secured.

H is a car adapted for use with my improved way. This car is provided with two wheels *h h* arranged fore and aft between the ends of the same, substantially as shown in Fig. 1, or arranged outside the car proper, as shown in Fig. 5. As shown in the latter fig-

ure, the rear wheel is mounted in a yoke or frame swiveled to the car in the nature of a caster. The car is also provided along its side with guiderollers $h'h'$ or h^2h^2 , or both, to hold the car upright on its track.

In motion, the car will balance on the carrying wheels in the manner of an ordinary bicycle or a hoop, and thereby largely eliminate friction and resistance to very rapid movement. The ends of the car are preferably tapered or sharpened, as shown in Fig. 5, to avoid, as far as practicable, the resistance of the air upon the car in rapid movement.

My invention contemplates the use of electricity as the motive power for propelling the cars although any other power may be used, if desired. As constructed and arranged, the rail d is intended as the electric conductor and one of the supporting wheels serves as the collector and conductor to transmit the current to and through a suitable motor as m preferably mounted on the axle of one of the supporting wheels as shown in Fig. 2, the current being taken off and grounded by means of a brush in contact with some part of one of the side trusses. A convenient way of accomplishing this is to have electrical connection with one of the guide wheels at the side of the car and have it and its opposite mounted in spring-operated bearings to provide for constant contact with the flange c' of the truss. The rail d being a massive conductor, ample power can be readily transmitted by it with electricity of very low tension, making it entirely safe and unobjectionable for use anywhere. The wooden stringer serves to electrically insulate the rail from the posts and other parts of the structure.

Having now described my invention, what I claim is—

1. In a bicycle railroad structure the combination of a single main rail or track and guide rails, the latter arranged outside the path of the vertical walls of a car and above the plane of the floor about opposite the bottom of the windows of said car.

2. In an elevated bicycle railroad structure, the combination of a series of posts or pillars carrying arms extending outwardly beyond the path of the vertical walls of a car and upwardly to about the lower edge of the windows of said car, girder or truss frames mounted

on said arms, a single main rail or track supported by the posts and girders, and guide rails along the upper margin of the girders.

3. In a bicycle elevated railroad structure, the combination of a series of posts or pillars having arms extending outwardly beyond the path of a car and extending upwardly to the bottom of the windows of a car, a single main rail or track and elevated guide rails mounted on the upper ends of the arms.

4. In a bicycle elevated railroad structure the combination of a series of posts or pillars provided with arms extending outwardly beyond the path of a car and upwardly to about the middle of the height of the car, girders supported by said arms, a single main rail or track, bows for connecting the trusses and supporting the track between the posts and elevated guide rails along the upper margin of the girders.

5. In bicycle railroads the combination of a bicycle car or vehicle, a single main track or rail and guide rails arranged along opposite sides of the car above the floor and below the windows of said car.

6. In elevated bicycle railroad structures, a compound post or pillar consisting of channel irons and T irons, the latter extending outward and upward from the top of the former to form a yoke or fork to support parallel trusses, substantially as described.

7. The combination of a post or pillar having arms extending outwardly and upwardly, as described, main supporting girders or trusses mounted on the vertical part of the arms, a single main rail or track arranged below and between the girders and bows for connecting the girders together and for sustaining the main rail or track between the posts, substantially as described.

8. The combination of a suitable support, parallel main girders or trusses, guide rails or flanges connected with the girders, a single main rail or track below and between the girder bows for connecting the girders and sustaining the main rail or track between the posts.

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

GEORGE F. BROTT.

Witnesses:

WM. M. STOCKBRIDGE,
A. F. RANDALL.