

(No Model.)

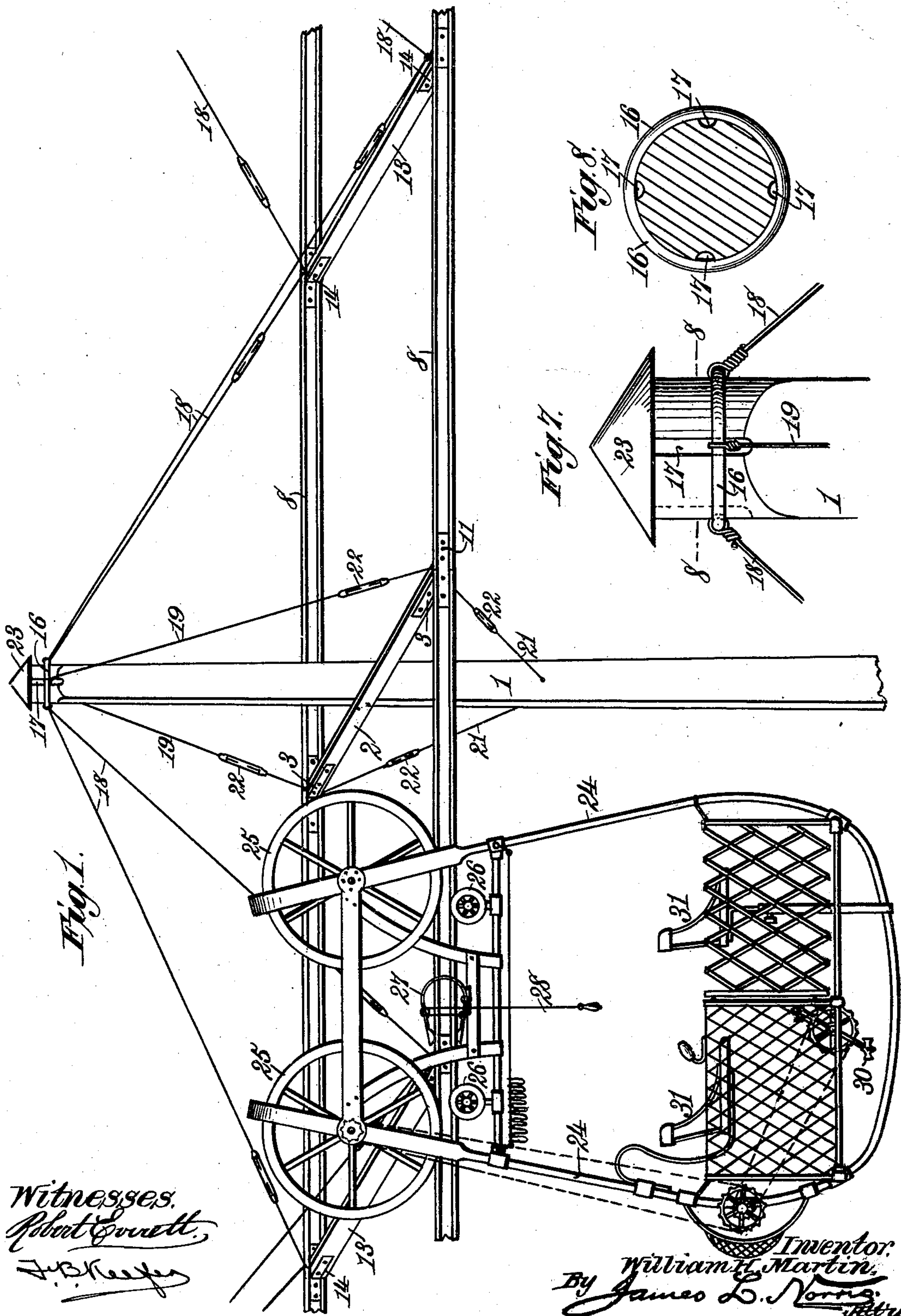
2 Sheets—Sheet 1.

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TRACK AND TRACK SUPPORT FOR ELEVATED CYCLE RAILWAYS.

No. 599,855.

Patented Mar. 1, 1898.



Witnesses.
Robert Everett.
J. B. Keefe.

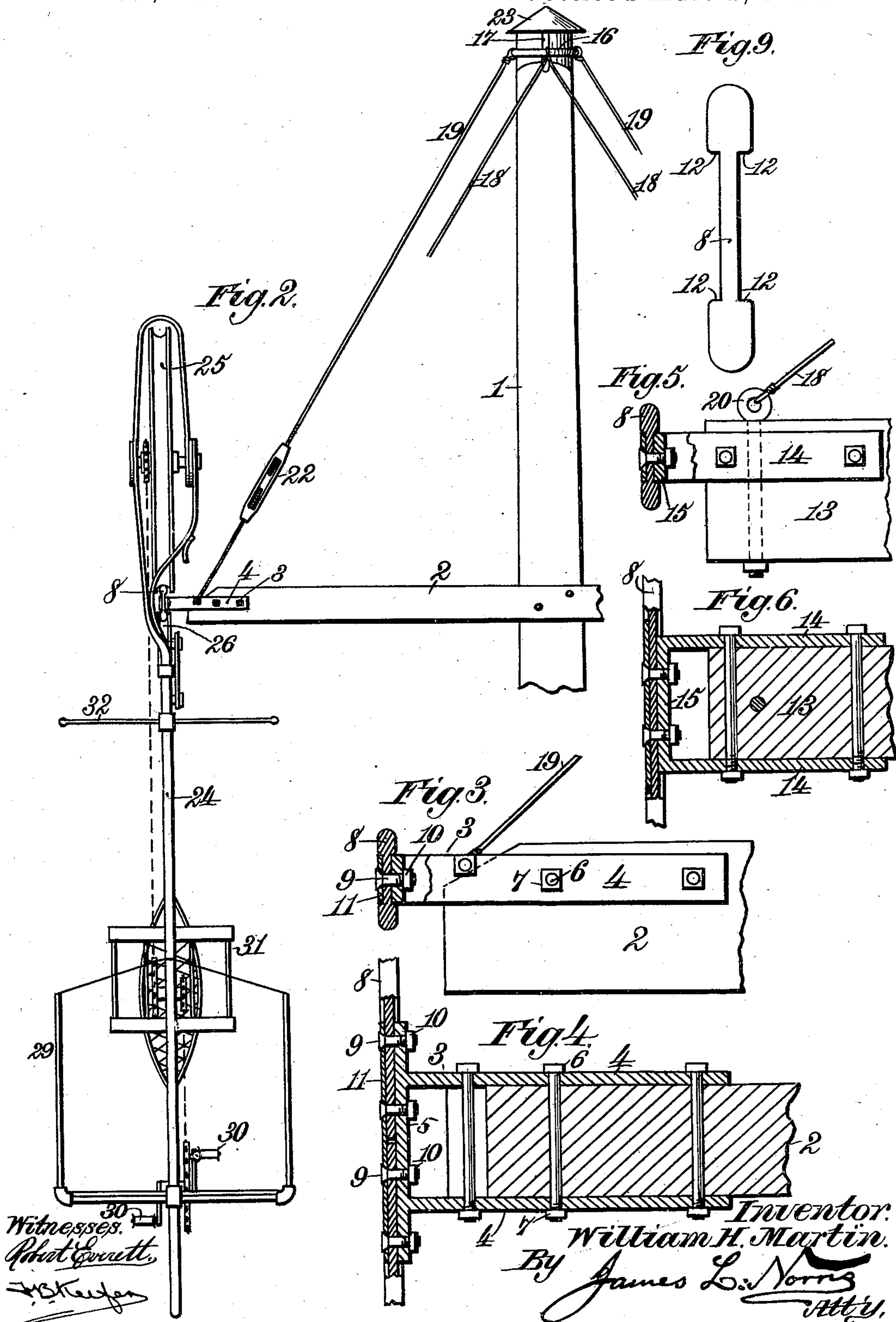
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UNITED STATES PATENT OFFICE.

WILLIAM H. MARTIN, OF MOBILE, ALABAMA.

TRACK AND TRACK-SUPPORT FOR ELEVATED CYCLE-RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 599,855, dated March 1, 1898.

Application filed November 5, 1897. Serial No. 657,546. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. MARTIN, a citizen of the United States, residing at Mobile, in the county of Mobile and State of Alabama, have invented new and useful Improvements in Tracks and Track-Supports for Elevated Cycle-Railways, of which the following is a specification.

This invention relates to tracks and track-supports for elevated cycle-railways, and has for its object to provide an improved securely-stiffened overhead track for cycles from which a carriage is suspended beneath and at one side of the elevated track.

The invention consists in features of construction and novel combinations of parts in an elevated railway for cycle and suspended carriages, as hereinafter more particularly described and claimed.

In the annexed drawings, illustrating the invention, Figure 1 is an isometric perspective of my improved elevated cycle-railway, showing a carriage thereon. Fig. 2 is an end view of the same with one track-rail broken away. Fig. 3 is an enlarged part sectional detail side elevation of one of the rail-supporting brackets and pole cross-arm. Fig. 4 is a horizontal section of the same with the rail in part horizontal section. Fig. 5 is a part sectional side elevation of rail-supporting bracket for spreaders or track-ties. Fig. 6 is a horizontal section of the same. Fig. 7 is an enlarged view of the upper part of one of the track-supporting posts. Fig. 8 is a horizontal section of a post on the line 8 8 of Fig. 7, showing in plan view the ring or collar for attachment of stays. Fig. 9 is an enlarged end view of a track-rail.

By reference to Fig. 1 it will be seen that the elevated railway is primarily supported by means of a series of posts or upright poles 1, firmly planted in the ground at suitable intervals—say thirty feet apart, more or less. These posts may be rectangular in cross-section or of any other convenient form. To an upper portion of each post or upright 1, at a suitable distance from the ground, there is firmly secured a cross-arm 2, which will have a length approximately the required distance between two track-rails to be supported at opposite ends of the several cross-arms.

At their opposite ends each cross-arm 2 has secured thereto a rail-supporting bracket 3, which is constructed to closely embrace the sides of the cross-arm and project horizontally and laterally beyond the same in the longitudinal direction of said cross-arm. As shown in Figs. 3 and 4, each bracket 3 comprises two parallel side-arms 4, between which the end of the cross-arm 2 is received. The outer ends of these parallel bracket-arms 4 project beyond the end of the cross-arm 2 and are formed integral with a bracket cross-bar 5, preferably of such length that its ends will project beyond the said parallel bracket-arms 4 and at right angles therewith, as shown. The bracket-arms 4 are secured to the cross-arm 2 by means of transversely-arranged bolts 6, with nuts 7 thereon, as in Figs. 3 and 4. The cross-bars 5 of the brackets 3 afford supporting attachment for the track-rails 8, which are secured to said brackets by means of bolts 9 and nuts 10, Figs. 3 and 4, in a convenient and durable manner. By extending the bracket-arms beyond the ends of the post cross-arms 2, as shown, sufficient space is afforded for inserting and removing the rail-attaching bolts and nuts without disturbing the brackets.

In attaching the track-rails 8 to the cross-arm brackets 3 it is preferable to have said rails break joints at about the center of each bracket cross-bar 5, and the joint should be braced by a fish-plate 11 on the outer side of the rails. It is preferable to employ double-headed track-rails 8 of the character illustrated in Figs. 3, 5, and 9, the said rails being flanged both at their top and bottom edges. This construction of rail provides facilities for more secure connection with the bracket-bars 5 and fish-plates 11 in smoothly uniting the rail-joints and securing the track to its elevated supports. By reference to Figs. 3, 5, and 9 it will be seen that the web and flanges of a rail 8 form with each other the right-angled shoulders 12, Fig. 9, that firmly brace the fish-bars and bracket cross-bars, which are each of the same width as the rail-webs, and consequently fit closely between the rail flanges or heads.

For the purpose of giving great stiffness to the track and bracing the rails 8 against lat-

eral strain at points equidistant between any two uprights 1 and their attached cross-arms 2 there are provided spreaders or track-ties 13, Fig. 1, having rail-attaching brackets 14, Figs. 5 and 6, secured to their opposite ends. These tie-brackets 14 are similar to the cross-arm brackets 3 hereinbefore described. Each bracket 14 has an integral cross-bar 15, to which a central portion of a track-rail 8 is bolted.

The top of each upright 1 is preferably made cylindrical, as shown in Figs. 7 and 8, the better to have fitted thereon a metallic band or collar 16 of annular form. A number of vertical grooves 17 are formed in the upper cylindrical part of each post or upright 1 immediately within the collar 16 and extending above and below the same. These grooves 17 afford passage for the upper ends of galvanized metallic stay-wires 18 and 19, Figs. 1, 2, and 7, that are thus passed around and secured to the band or collar 16 on each post. The lower ends of the wire stays 18 are secured to eyebolts 20, Fig. 5, fastened in the end portions of the spreaders or cross-ties 13, while the stay-wires 19 have their lower portions secured to the ends of the post cross-arms 2 and may be provided with extensions 21, Fig. 1, leading downward and secured to each post below its cross-arm. In each of these stay-wires there is provided a turnbuckle 22 for straining the wires, and it will be observed that the several turnbuckles are located in such proximity to the track as to permit of ready access from a repair-car, so that there will be no difficulty in lining up the track. The top of each upright 1 is provided with a conical metallic cap 23 to protect the post or upright and its grooves and stay attachments from the weather.

This elevated railway affords two securely-braced track-rails 8 for passage by each other in opposite directions of suspended cycle-carriages having the general construction embraced in my Patents Nos. 559,298 and 575,611 and in my allowed application, Serial No. 642,826.

The cycle-carriage comprises a yoke-frame 24, Figs. 1 and 2, suspended from the axles of traction-wheels 25, that are adapted and arranged to run one after the other on a single track-rail. The cycle-frame carries guide-wheels 26, Fig. 1, engaging the under head or flange of the double-headed track-rail 8 to assist in holding the cycle on the track, and there is also provided a track-brake 27 for controlling the speed of the cycle and to assist in stopping when desired. This brake may be operated by means of a cord 28, suspended in reach of an operator seated in the carriage, which is supported in the lower part of the cycle-frame and beneath the overhead track. A latticed guard 29 may surround the seats for safety of the passengers. Although I have shown the cycle as arranged to be propelled by means of pedals 30, geared with the axle

of a traction-wheel, it will be obvious that some other suitable motive power may be conveniently and economically provided. The suspended cycle-carriage may be furnished with one or more seats 31 and with an awning support or frame 32, if desired, or it may be arranged for carrying freight.

The structure of elevated cycle-railway is simple, durable, and entirely safe and convenient, and it is adapted to a variety of purposes whether for traffic or amusement.

What I claim as my invention is—

1. In an elevated cycle-railway, the combination of a series of uprights or posts each provided with a cross-arm, a bracket bolted to each end of each cross-arm and extended beyond the same in the longitudinal direction of the cross-arm, double-headed track-rails having their ends jointed at and bolted to said brackets, fish-plates for said joints, and wire stays secured to an upper portion of each upright and to the ends of the cross-arms and provided with turnbuckles located in proximity to the track, substantially as described.
2. In an elevated cycle-railway, the combination of a series of uprights or posts each provided with a cross-arm, a bracket bolted to each end of each cross-arm and extended beyond the same in the longitudinal direction of the cross-arm, double-headed track-rails having their ends jointed at and bolted to said brackets, fish-plates for said joints, spreaders or track-ties equidistant between the uprights and having their ends provided with brackets to which the central portions of the track-rails are bolted, wire stays secured to upper portions of the uprights and to the ends of said cross arms or brackets and track-ties, and turnbuckles located in said stays adjacent to the track-rails, substantially as described.

3. In an elevated cycle-railway, the combination of a series of uprights or posts each having its upper end provided with vertical grooves, a band or collar secured to each post over said grooves, the post cross-arms having brackets secured to their opposite ends, the double-headed track-rails jointed at and bolted to said brackets, the track-ties equidistant between said posts and having their ends provided with brackets to which the central portions of the track-rails are bolted, wire stays having their upper ends secured to the band or collar of a post at the vertical grooves in said post and having their lower ends secured to the ends of the cross arms or brackets and track-ties, respectively, and turnbuckles located in said stays adjacent to the track-rails, substantially as described.

4. In an elevated cycle-railway, the combination of a series of uprights or posts each having its upper end provided with vertical grooves, a band or collar secured to each post over said grooves, a metallic cap for the top of each post, the post cross-arms having brackets secured to their opposite ends, the double-

headed track-rails jointed at and bolted to
said brackets, the track-ties, and wire stays
connecting the ends of the post cross arms or
brackets and the ends of the track-ties with
5 the collars on said posts, each stay being pro-
vided with a turnbuckle located adjacent to
the track, substantially as described.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

WILLIAM H. MARTIN.

Witnesses:

WM. L. BAKER, Jr.,
WM. P. BURGETT.