

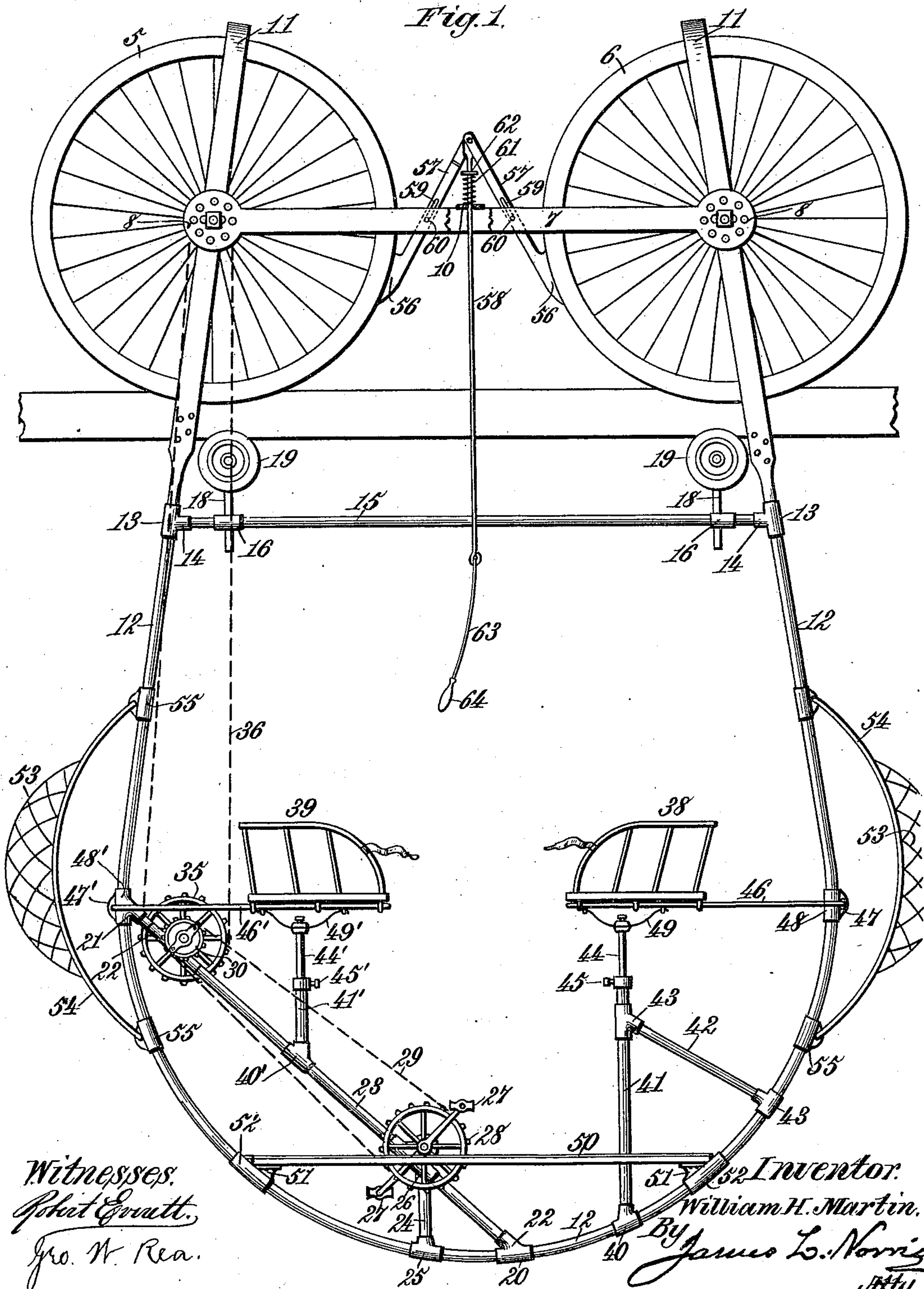
(No Model.)

3 Sheets—Sheet 1.

W. H. MARTIN.
ELEVATED TRACK CYCLE.

No. 575,611.

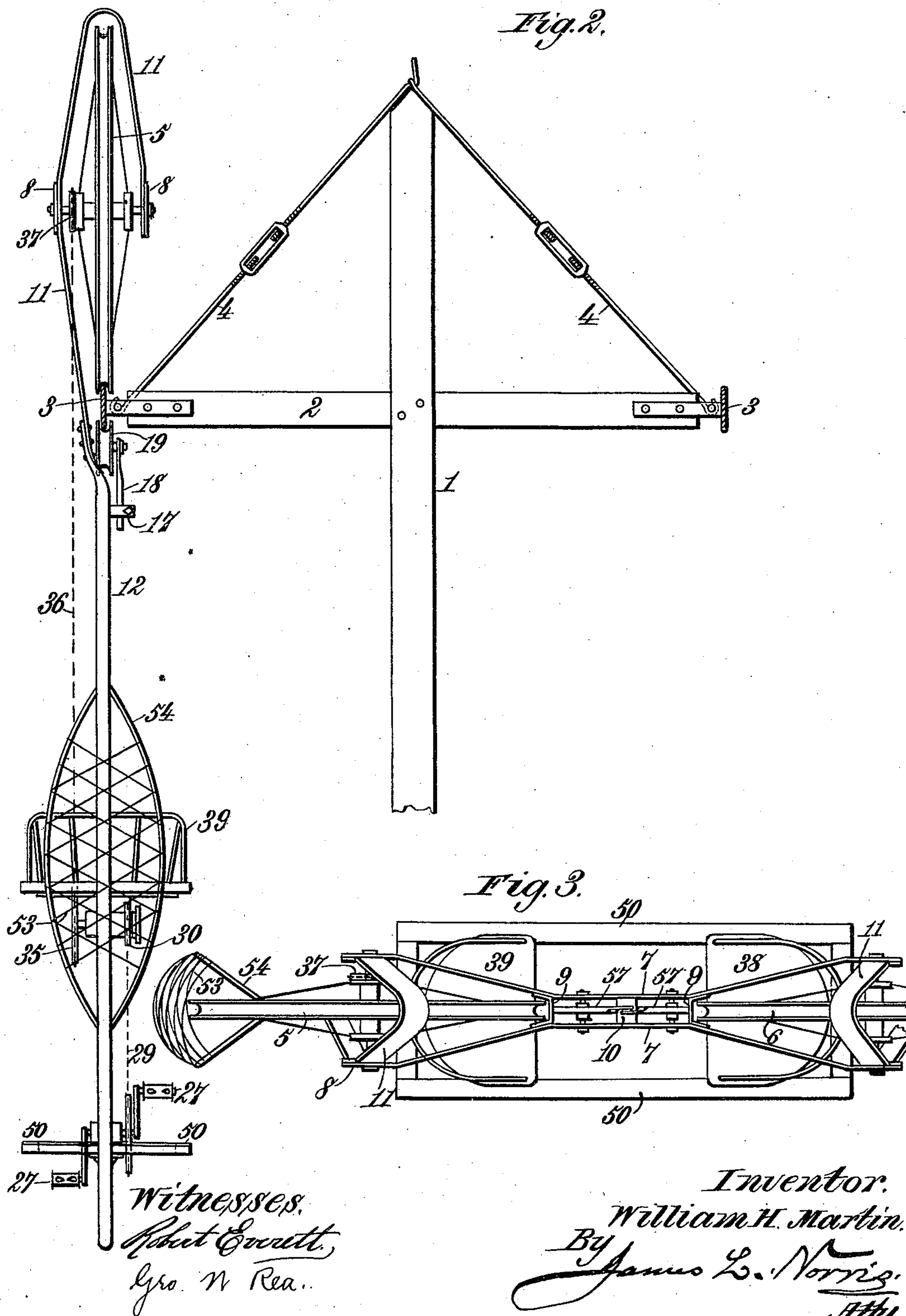
Patented Jan. 19, 1897.



3 Sheets—Sheet 2.

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(No Model.)

3 Sheets—Sheet 3.

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Fig. 4.

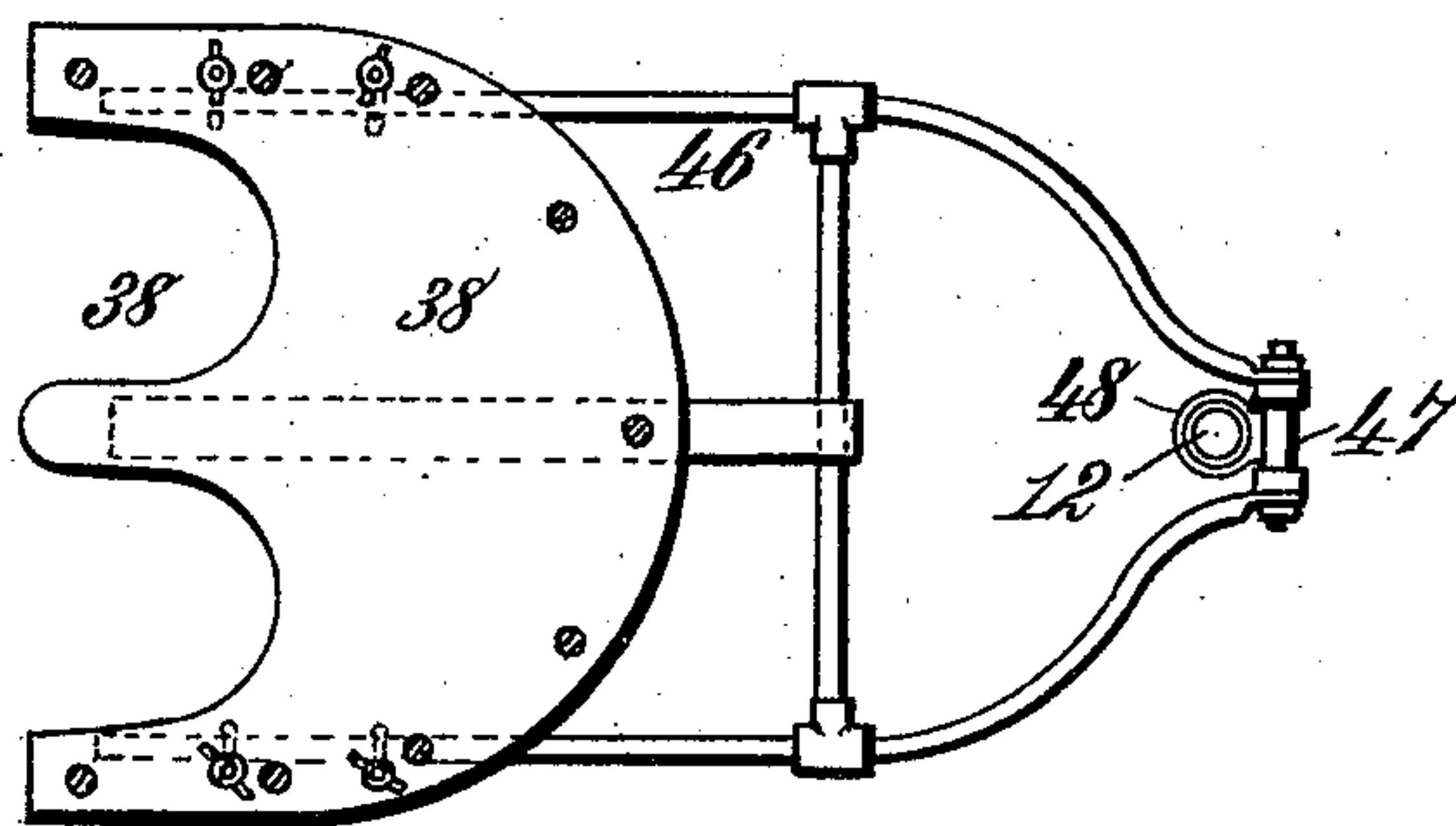
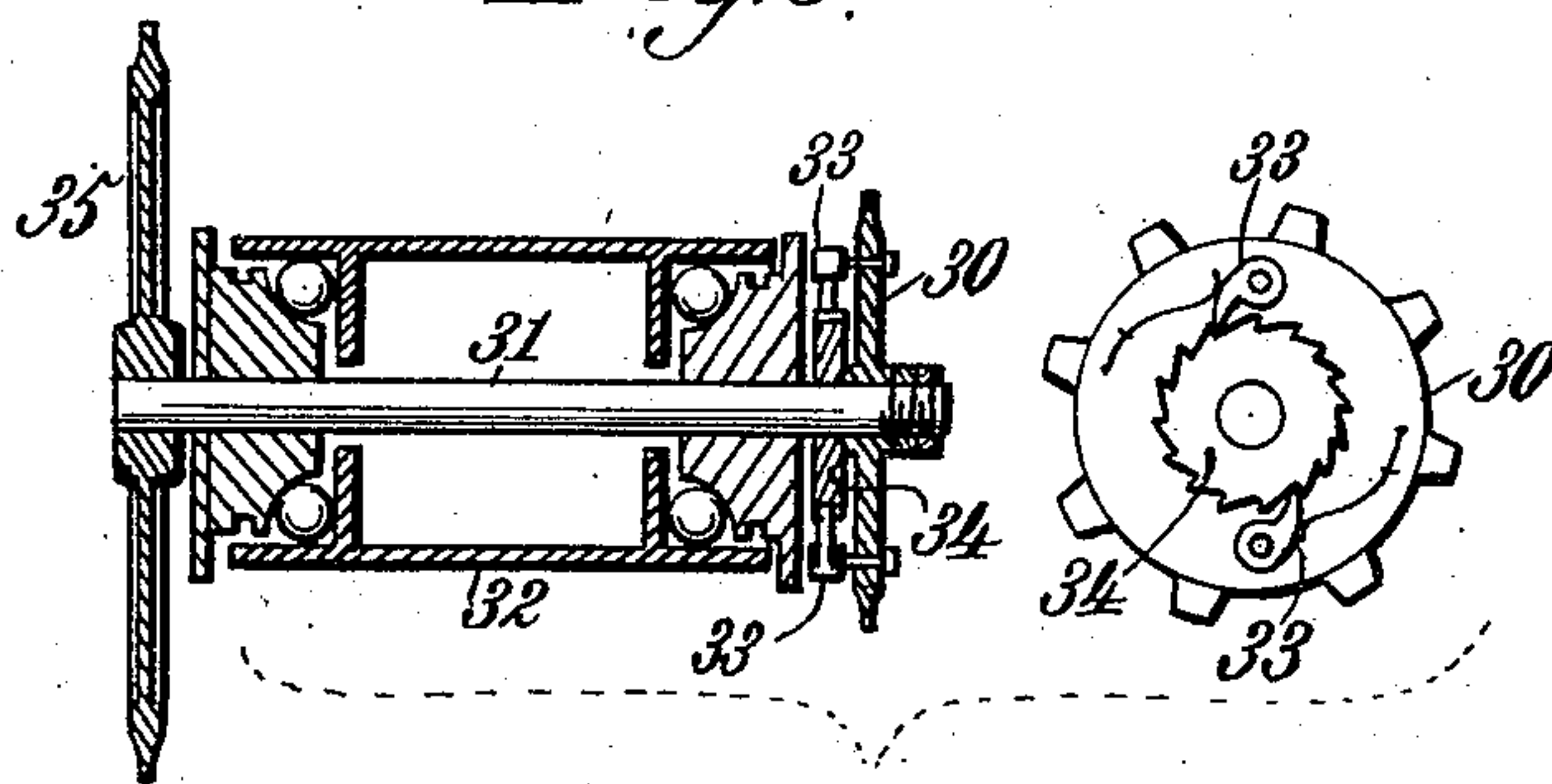


Fig. 5.



Witnesses:
Robert Everett.
Geo. W. Rea.

Inventor.
William H. Martin.
By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM H. MARTIN, OF MOBILE, ALABAMA.

ELEVATED-TRACK CYCLE.

SPECIFICATION forming part of Letters Patent No. 575,611, dated January 19, 1897.

Application filed May 5, 1896. Serial No. 590,363. (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 Elevated-Track Cycles, of which the following is a specification.

This invention relates to elevated-track cycles adapted to be propelled upon an elevated track as a means of rapid transit for business purposes; also for furnishing amusement and recreation to the riders; and the invention consists in features of construction and novel combinations of parts hereinafter described and claimed.

In the annexed drawings, illustrating the invention, Figure 1 is a side elevation of my improved cycle supported upon its track. Fig. 2 is an end view of the cycle and elevated track. Fig. 3 is a plan of the wheel-frame. Fig. 4 is a plan of seat and seat-frame. Fig. 5 is a view of sprocket-gear and ratchet.

Referring to the drawings, the numeral 1 designates one of a series of posts, to each of which, near the top, is securely fastened a cross-beam 2, having a track 3 at each end. The beam 2 is braced from the top of the post by guy-rods 4, provided with suitable tightening devices. The track-rails are preferably endless, so that the cycle may be continuously propelled in a forward direction.

The cycle comprises a front wheel 5 and a rear wheel 6, each of which is provided with a peripherally-grooved rim to engage with and travel on the track-rail. For the purpose of connecting the traction-wheels 5 and 6 there is provided a yoke-frame composed of horizontally-arranged bars 7, bent inwardly toward each other at the center and having disks 8 on their ends. Between the inwardly-bent portions of the bars 7, near the wheel-rims, are secured braces 9, and a central bridge-piece 10 is attached to or supported by these bars at a point intermediate said braces. Extended over each wheel 5 and 6 is an arch-shaped strap 11, secured by rivets, bolts, or otherwise to the disks 8 and forming therewith supports for the wheel-axes, which may be provided with ball-bearings for the wheel-hubs, as usual.

Each arched strap 11 has one portion or

arm extended down on one side of the wheel and inwardly beneath the track-rail, where it connects with a depending U-shaped frame 12, each end of which is twisted to one side and bolted to the depending end of one of said arched straps.

At a suitable distance below the track 3 each arm of the U-shaped frame 12 has secured thereon a sleeve 13, provided with a socket 14 to receive one end of a horizontally-arranged brace-rod 15, extended longitudinally beneath the track-rail. On the rod 15, near each of its ends, is carried a sleeve 16, provided with laterally-extended clamping-jaws 17 to receive and hold a vertically-adjustable standard 18, to the upper end of which is journaled a peripherally-grooved guide-wheel 19, adapted, with its fellow, to engage the under side or edge of the track-rail and brace the cycle against derailment.

As a means for supporting the driving-gears the depending U-shaped frame 12 has secured thereto sleeves 20 and 21, each provided with a diagonally-arranged socket 22, in which a diagonally-placed rod 23 is supported. Near its lower end the rod 23 is braced by a vertical strut 24, seated in socketed sleeves 25 and 26 on the frame 12 and rod 23, respectively. The sleeve 26 supports the bearings for the shaft or axle of the pedal-cranks 27 and sprocket-wheel 28, the said shaft or axle being preferably mounted in ball-bearings of any suitable or usual character and which it is not deemed necessary to describe. The sprocket-wheel 28 is connected by a driving-chain 29 with a smaller sprocket-wheel 30 on one end of a shaft or axle 31, mounted on ball-bearings in a bracket or boxing 32, sleeved to the upper portion of the diagonally-placed rod 23 hereinbefore mentioned. This sprocket-wheel 30 is loose on the shaft 31, but carries driving-pawls 33, adapted to engage and drive a ratchet-wheel 34, that is fast on said shaft, provision thus being made to prevent a reverse rotation of said shaft by back action of the pedals. On the other end of the shaft 31 is secured a sprocket-wheel 35, which is connected by a driving-chain 36 with a sprocket-wheel 37 on the hub of the front traction-wheel.

The arrangement of the frame 12 and gears 28 35 therein is such as to afford ample space

for the seats for two or more riders. The two seats 38 and 39 may face each other, as shown, and one is supported from the frame 12 and the other from the diagonally-placed rod 23, 5 that also supports the driving-gears.

To support the seat 38, a socketed sleeve 40 is secured to the lower portion of the frame 12 and receives a tubular standard 41, braced by a stay-rod 42, secured to said frame and 10 standard by means of socketed sleeves 43 thereon. In the upper end of the tubular standard 41 is received a seat-support 44, which, by means of a set-screw 45, may be held at any required vertical adjustment.

15 To the under side of the seat is secured a rearward-projecting frame 46, that is flexibly connected by a hinge-joint 47 to a sleeve 48, secured on the depending U-shaped frame 12 of the machine. A spring 49 is arranged be- 20 tween the rod or support 44 and frame 46 to give elasticity to the seat. The devices for supporting the seat 39 from the rod 23 are of the same character as just described for the other seat and are designated by the same 25 numerals, primed. By means of the hinged frames 46 and 46' the seats 38 and 39 are effectively braced without obstructing a free vertically-elastic movement.

To assist in mounting the machine, there 30 are provided two parallel foot-bars 50, one on each side, supported from brackets 51, secured by sleeves 52 to the lower portion of the depending U-shaped frame.

On the front and rear of the frame 12 are 35 carried cushions 53, of any suitable construction, designed to absorb the shock of impact in case of a collision. These cushions 53 are supported by bowed rods or tubes 54, connected by sleeves 55 to said frame 12 at points 40 intermediate the attachments of the brace-rod 15 and foot-bars 50.

The brake appliances consist of shoes 56 on the lower ends of arms 57, that have their up- 45 per ends pivotally connected to the upper end of a brake-rod 58, passed vertically through a perforation in the bridge 10, between the yoke-bars 7, that connect the traction-wheels. Each brake-arm 57 is provided with a longitudinal slot 59, through which the arm may 50 have a sliding and pivotal action on a pin 60, supported between the bars of the yoke-frame. The brakes are normally held away from the wheels 5 and 6 by means of a spiral spring 61, surrounding the upper portion of the brake- 55 rod 58, between a collar 62 thereon and the bridge-piece 10, so that the normal expansion of said spring will serve to force the rod 58 upward.

To the lower end of the vertically-movable 60 rod 58 is attached a cord or chain 63, provided with a handle 64, hanging within convenient reach of the cycle operator, so that by pulling on said cord or chain the rod will be drawn down against the expansive force of its spring 65 61, thereby forcing the arms 57 and attached brake-shoes 56 outward to bring the latter in frictional contact with the wheel-rims, and

thus retard or arrest the movement of the machine.

It will be apparent that instead of the crank- 70 pedals for operating the cycle there might be provided an electric motor; or any suitable mechanical power may be utilized for propulsion of the machine. In order to afford a slight play for the traction-wheels in turning 75 short curves of the track 3, their axles may be mounted in elongated bearings, as shown. These cycle cars or carriages will also be provided with connecting links or couplings, so that a number may go as a train and be run 80 by electricity, petroleum, or steam.

What I claim as my invention is—

1. In an elevated-track cycle, the combination with the traction-wheels, a frame connecting the axles of said wheels, and arched 85 straps extended over said wheels and downward on one side thereof and mounted on the wheel-axles, of a depending U-shaped frame fastened to the depending arms of said arched straps, vertically-adjustable guide-wheels 90 adapted to engage the under side of a track-rail and supported from a brace-rod extended between the upper arms of said depending frame, a diagonally-placed rod supported on sleeves secured to the lower portion of the de- 95 pending frame, sprocket-gearing mounted on said rod and connected with sprocket-gearing on the hub of a traction-wheel, and one or more seats supported from said depending frame, substantially as described. 100

2. In an elevated-track cycle, the combination with the traction-wheels, a frame connecting the axles of said wheels, and a depending U-shaped frame carried by said axles, of a vertically-adjustable seat supported in said 105 depending frame, and a seat-frame secured to the under side of the seat and having a hinged connection with a vertical arm of the U-shaped depending frame, substantially as described. 110

3. In an elevated-track cycle, the combination with the traction-wheels, a frame connecting the axles of said wheels, and a depending U-shaped frame carried by said axles, of a diagonally-placed rod supported in the lower 115 portion of said depending frame, gearing supported from said diagonally-placed rod and connected with gearing on the hub of a traction-wheel, one or more vertically-adjustable seats, one of which is supported from said rod 120 and the others from the frame that carries said rod, and hinge-supported frames connected with said seats to brace the same, substantially as described.

4. In an elevated-track cycle, the combination 125 with the traction-wheels, of a yoke-frame connecting the axles of said wheels and composed of two horizontal bars bent toward each other at the center and there connected by a bridge-piece having a vertical perforation, a 130 brake-rod extended through said perforation and having a pull-cord on its lower end, brake-arms pivoted to the upper end of said rod and each provided with a slot, pins supported by

the yoke-frame and engaged in the slots of the brake-arms, and a spring normally supporting the brake-rod to hold the brakes away from the traction-wheels, substantially as described.

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5. In an elevated-track cycle, the combination of the traction-wheels, a yoke-frame connecting the axles of said wheels, a depending U-shaped frame carried by said axles, the seats and driving-gearing supported in said depending frame, foot-bars supported horizontally at the lower part of said frame, a horizontal brace-rod between the upper portions of the said depending frame, vertically-adjustable guide-wheels adapted to engage

the under side of a track-rail and supported from said brace-rod, and cushions provided with curved supports attached to the depending U-shaped frame at points intermediate the attachment of the foot-bars and the brace-rod that supports the guide-wheels, substantially as described. 20

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM H. MARTIN.

Witnesses:

R. C. REEDER,

WM. L. BAKER, Jr.