

(No Model.)

J. S. LAKE.
REVOLVING GRAVITY RAILWAY.

No. 546,386.

Patented Sept. 17, 1895.

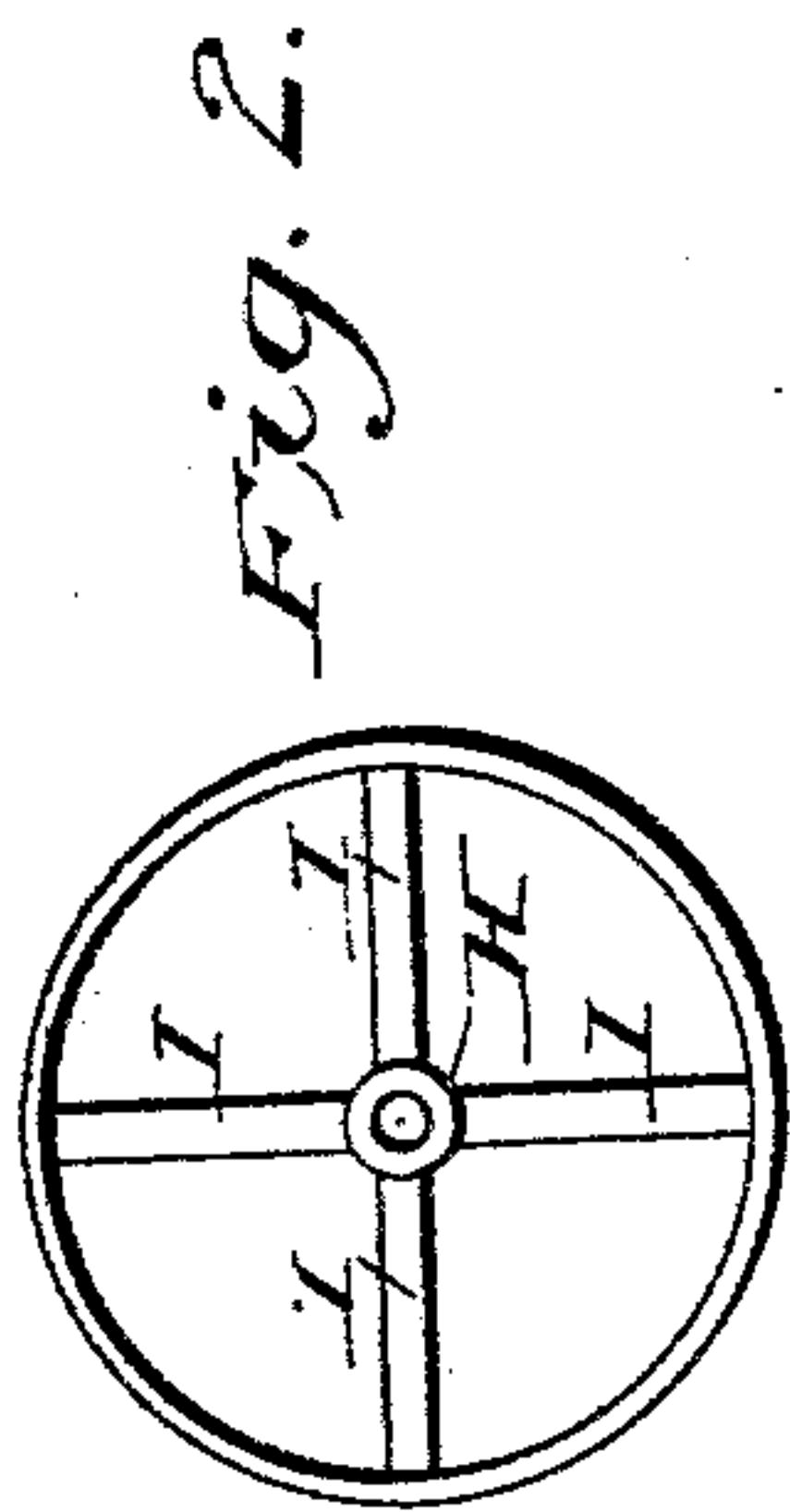
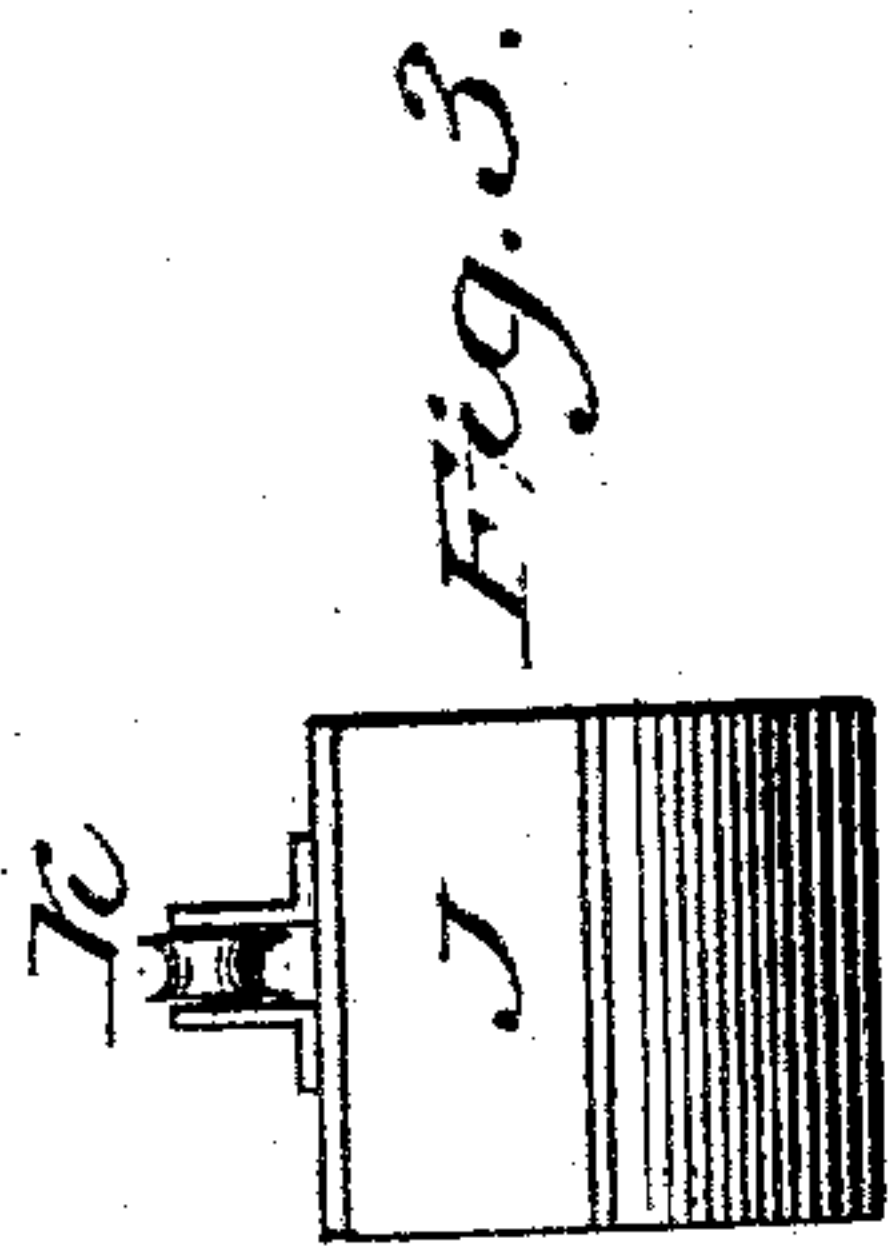
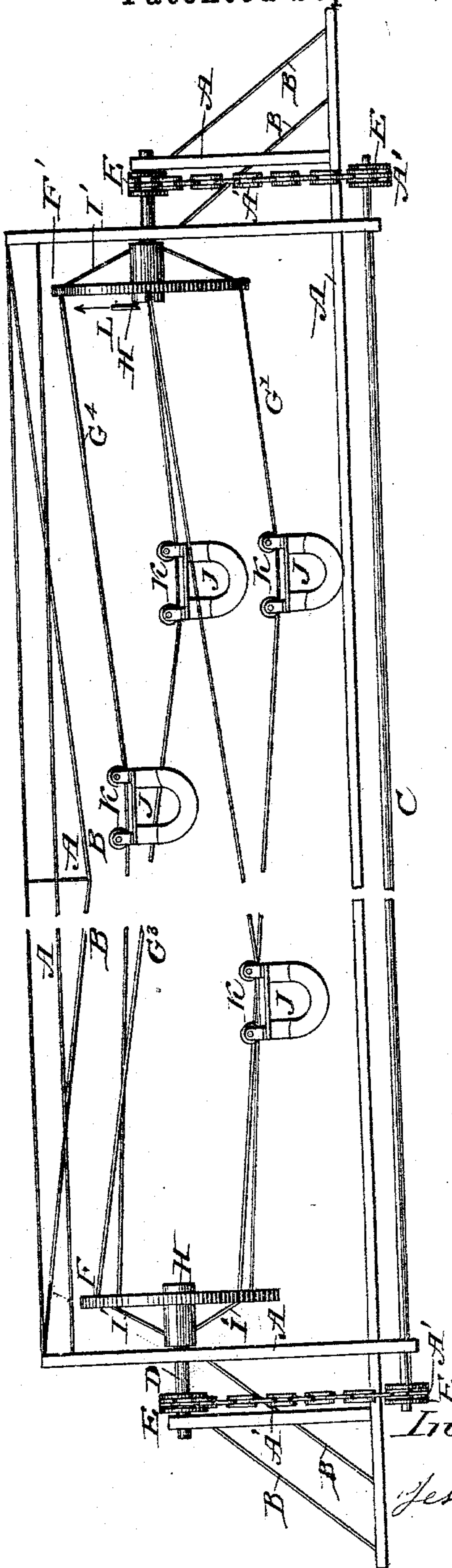


Fig. 1.



Witnesses.

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JESSE S. LAKE, OF PLEASANTVILLE, NEW JERSEY.

REVOLVING GRAVITY-RAILWAY.

SPECIFICATION forming part of Letters Patent No. 546,386, dated September 17, 1895.

Application filed January 4, 1895. Serial No. 533,868. (No model.)

To all whom it may concern:

Be it known that I, JESSE S. LAKE, a citizen of the United States, residing at Pleasantville, in the county of Atlantic and State of New Jersey, have invented a new and useful Revolving Gravity-Railway as a Pleasure Device, of which the following is a specification.

My invention relates to a revolving gravity-railway in which any desired number of wire ropes or their equivalents may be used in conjunction with two large wheels made alike and preferably with as many spokes in each wheel as it is desired to use cars on the machine, said wheels to be set up any desired distance apart and facing each other, with wire ropes from one wheel to the other, one rope for each car to be used.

The objects of my improvements are, first, to provide a series of wire ropes for trackway for cars running from one wheel to the other, on which a hanging car travels back and forth; second, the adjusting of the large wheels so that the track-ropes will have grade enough to cause the cars to travel from one wheel to the other as they are revolved; third, providing a device whereby the cars are prevented from bumping against the spokes to which the ends of the wire-rope track are fastened; fourth, the arrangement of wheels F F' whereby they have to revolve in their proper relation to each other. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation. Fig. 2 is an inside view of one of the wheels F. Fig. 3 is an enlarged end view of one of the cars.

Similar letters refer to similar parts throughout the several views.

The pieces marked A, with stay-bolts, (marked B,) constitute the framework of the machine.

F F' are two wheels fastened rigidly on their shafts D D.

H H are their hubs.

I represents the spokes, and they may be of any desired number. I' represents stays to said spokes, all as shown in Figs. 1 and 2.

G represents wire ropes or any other known suitable material leading from wheel F to wheel F', and should be one for each set or pair of spokes I and fastened to the out ends of said spokes, so as to allow a little slack to

said ropes G to form an upgrade at their ends enough to prevent the cars J from bumping against the spokes I. Said ropes G act as rails for the wheels K of the hanging cars J to travel on. It is easily to be seen that the two sets of sprocket-wheels E E, (or lengthen the shafts D D until they meet and fasten together will do the same,) the two belts A', and the shaft C form a connecting-gearing that connects the two wheels F and F' and causes them to revolve in their proper relation one with the other, which is, the wheel F' should be about one-eighth to one-fourth turn in advance of the wheel F, (in the direction of the arrow L,) according to the speed the cars J are to be driven, for the more the wheel F' is ahead of the wheel F the steeper is the grade on the wire-rope tracks G, and, of course, the faster the cars J will travel, and the wheels F F' will have to be driven faster to keep the cars at a steady motion. It will be observed that the shaft C may be driven by any of the known suitable forms of gearing.

Operation: In the drawings, Fig. 1, one of the cars J is at the loading-station, and the wire-rope tracks G' and G³ have downgrade to the right and the wire-rope tracks G² and G⁴ have downgrade to the left. Revolve the machine one-half turn and the grade will be reversed, and of course the cars J will be carried by their own weight down the grades, and by revolving the machine with a slow steady motion, giving the cars J time to travel from end to end of the tracks G, it imparts a very pleasurable motion to the cars.

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

1. The combination with two wheels, so mounted that their sides face each other, of a cable secured to the said wheels at or near their margins, one end of said cables being maintained in the substantially equal rotation of the wheels, at a point in said rotation in advance of the other end, substantially as described and set forth.

2. The combination with the wheels mounted with their sides facing each other, of two or more cables secured to said wheels at or near the margins, thereof, said cables being at one end secured to one wheel in advance of the point of attachment of said cables at

the other to the other wheel, said cables mounted with such proportionate tension, and advance of one point of attachment, beyond the other, as to provide for the car traveling thereon, slight upward grade near the end of its course, substantially as described.

3. In a revolving gravity railway, the revolving wheels F F', wire rope tracks G, cars J, whereby the cars J are caused to run over

said tracks by their own gravity back, and forth, from wheel, to wheel, as said wheels F F' are being revolved, substantially as described and set forth.

JESSE S. LAKE.

Witnesses:

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