

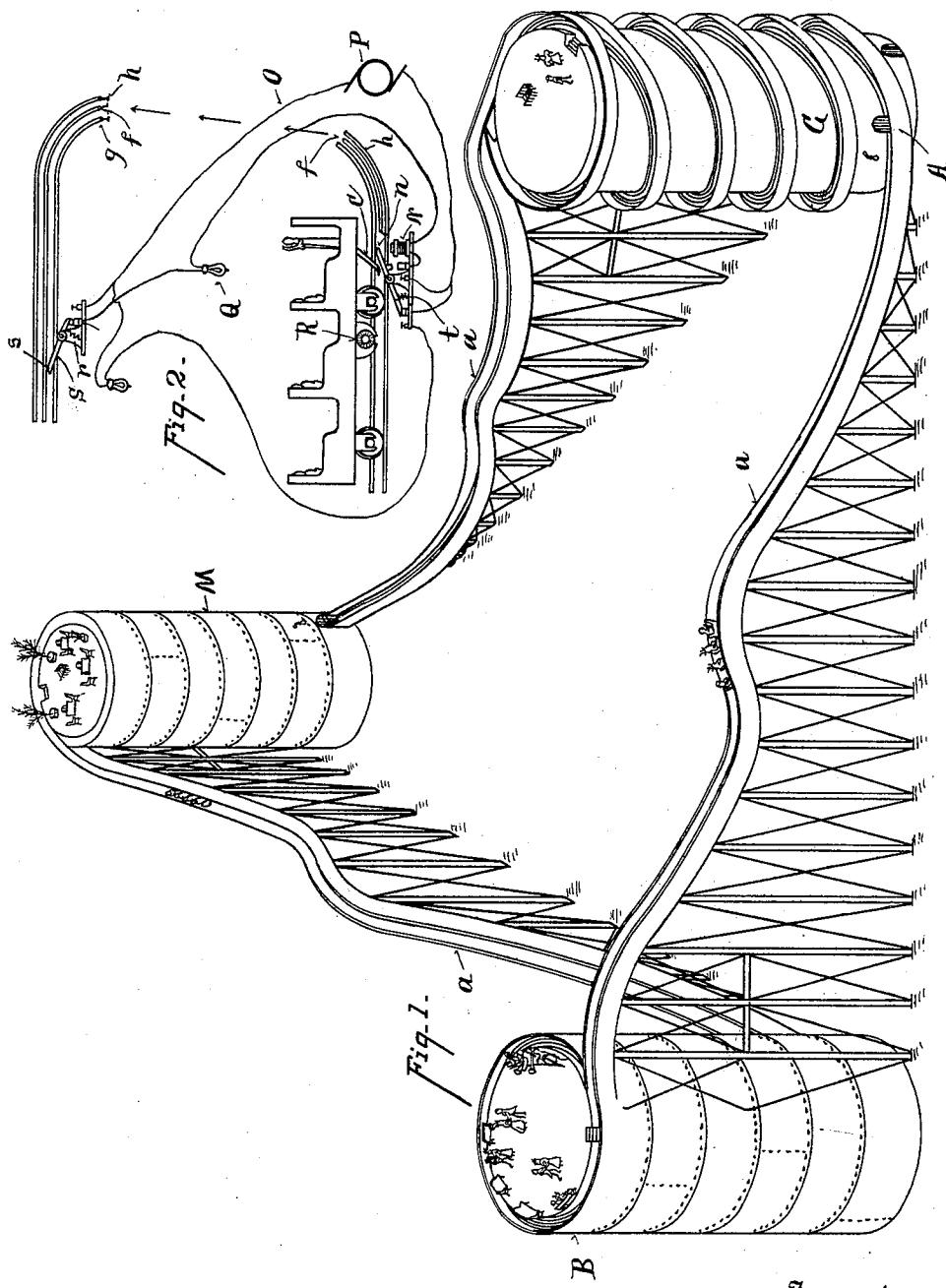
(No Model.)

2 Sheets—Sheet 1.

L. LILLEY.
ELECTRIC PLEASURE RAILWAY.

No. 594,700.

Patented Nov. 30, 1897.



Inventor

Lule Lilley
by Wood Lloyd
Attorney S.

Witnesses

C. W. Miles

Oliver G. T. Kaiser

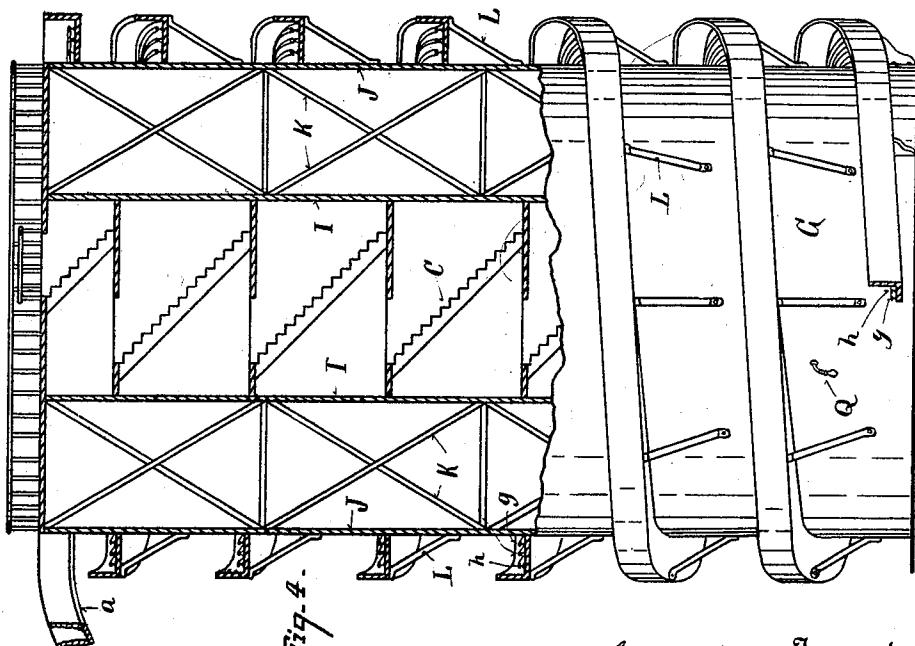
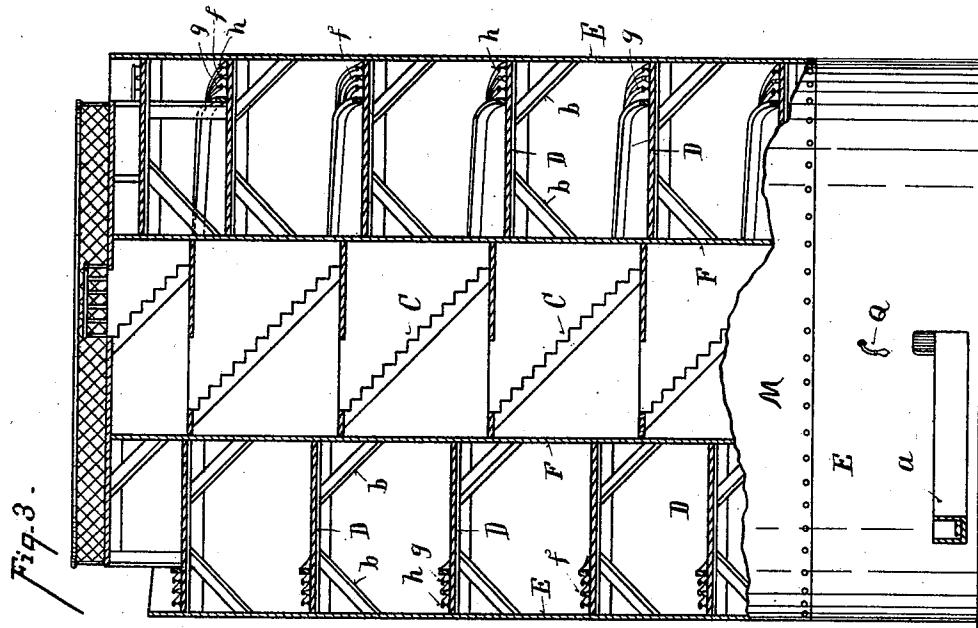
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C. W. Miles

Oliver B. T. Paine

Inventor

Luke Lilley

By Woodruff

Attorneys

UNITED STATES PATENT OFFICE.

LUKE LILLEY, OF CINCINNATI, OHIO.

ELECTRIC PLEASURE-RAILWAY.

SPECIFICATION forming part of Letters Patent No. 594,700, dated November 30, 1897.

Application filed February 4, 1896. Serial No. 578,023. (No model.)

To all whom it may concern:

Be it known that I, LUKE LILLEY, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and 5 useful Improvements in Electric Pleasure-Railways, of which the following is a specification.

My invention relates to an electric pleasure-railway which consists, in the preferred 10 form of construction, in an undulatory curved railway connected with towers, around which on a suitable incline the cars ascend to the top thereof and thence pass over an undulatory curved railway to a second tower, around 15 the outside of which the railway passes in a spiral incline. In the construction shown in the drawings I have shown a dark tower, a scenic tower, and an observation-tower; but the scenic tower may be omitted, if desired. 20 The incline of the railway leading to the towers or around the towers should not be over a five or six per cent. grade. With this ascent the car may be propelled with electricity with safety.

25 The features of my invention will be more fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my improved railway in the preferred form of construction. Fig. 2 is a perspective view of the car and signal apparatus, shown in diagram. Fig. 3 is an elevation, partly in section, of one of my improved forms of railway-towers. Fig. 4 is an elevation, partly in section, of the observation-tower, with the track around the outside.

30 A represents, say, the station or starting-point of the car.

40 a represents an undulatory declining electric-railway track, which terminates at the base of the dark tower B. Said tower has a center compartment C, with stairs located therein, as shown in Fig. 3. Said tower may 45 be constructed of sheet metal riveted together in the form shown. Within this tower is arranged a continuous spiral roadway-bed D. This bed is supported by braces b, which spring from the bed and are secured to the 50 vertical circular walls E F, as shown in Fig. 3.

The inner walls F and the outer walls E,

being cylindrical and continuous, form a circular abutment, and the two circular abutments or walls E F are tied together by means of the circular roadway D and braces b b, 55 whereby I am enabled to obtain a solid durable structural support for the spirally-inclined railway with a small expenditure of metal.

From the tower B the railway-track de- 60 scends, preferably, by an undulatory curved incline connecting with the base of tower G, around the outside of which the railway-tracks wind in an easy spiral gradual ascent until it reaches the top thereof. In construc- 65 tion of this tower I have availed myself of two vertical circular walls I J in the manner shown in Fig. 4; and in the interior or central space between the walls I I a stairway may be built, as shown in Figs. 2 and 4. The 70 roadway around the tower is supported by vertical braces L, reaching from the exterior of the roadway, inclining inwardly, and being rigidly connected to the outer vertical wall J, whereby I obtain a strong structural 75 support for the railway traversing around and extending to the top of the tower. By its structure it forms an observation-ascent from the base to the top.

I have shown my railway continuing from 80 the tower G to another tower M by an undulatory incline; but any form of incline of the desired grade may be employed. This tower M may be used for a scenic tower and lighted by any appropriate means, as desired. 85

In order to guard against accidents and to prevent one car from entering or ascending the tower until the car preceding has left the same, I provide the following instrumentalities:

90 At the base or near the entrance of the tower inclination I place a magnet N, the armature n of which projects upward and in the path of the circuit-closer c, attached to the car, as shown in Fig. 2. When the circuit-closer c engages with the armature of the magnet, it depresses the same and the armature is held in a horizontal position by the magnet, and this closes the electric circuit O, in which is placed the dynamo P, 95 which operates a series of lights Q, connected up in said circuit for signal purposes. At or

near the exit of the tower-incline I place a circuit-breaker S.

5 *s* represents a lever of the circuit-breaker, which projects up and lies in the path of the travel of the arm *c*, attached to the car, depressing the circuit-breaking lever *s*, which breaks the contact and opens the circuit. This opening of the circuit demagnetizes the magnet N, and the armature-lever *n* is drawn 10 up into the normal position shown in Fig. 2 by the spring *t*.

15 *r* represents a spring for holding the circuit-breaking lever *s* normally in contact with the circuit-terminals, so that the circuit at this point is closed. While the circuit is closed at this point, it is open at the magnet end, so that no current is on the circuit O, and hence the lights Q are out when the car is not passing through the dark tower. 20 When, however, the car enters the tower, it closes the circuit by striking the magnet-lever *n*, the magnet holding the circuit closed until the car leaves the tower. Thus the circuit is automatically closed at the base of the tower 25 and automatically opened at the departing point at the top of the tower by the car traveling over the railroad-track. I have not

deemed it necessary to show in detail the method of operating the car.

30 R represents a motor attached to the car in the usual manner. It has its circuit connection through a central rail *f* between the track-rails *g* *h*, so that the circuit may be utilized by a trolley run upon the rail underneath the car.

35 I do not wish to limit myself to this precise form of construction except where the same is made a specific element of the claim.

I claim—

40 In an electric pleasure-railway consisting of inclined railway-tracks leading to the base of a dark tower and thence spirally around the inside of the outer wall of said tower to the top thereof, said track leading to the base of an observation-tower G, with a spiral 45 railway arranged around the outside thereof and leading to the top forming an observation-tower, substantially as specified.

In testimony whereof I have hereunto set my hand.

LUKE LILLEY.

Witnesses:

W. R. WOOD,
OLIVER B. T. KAISER.