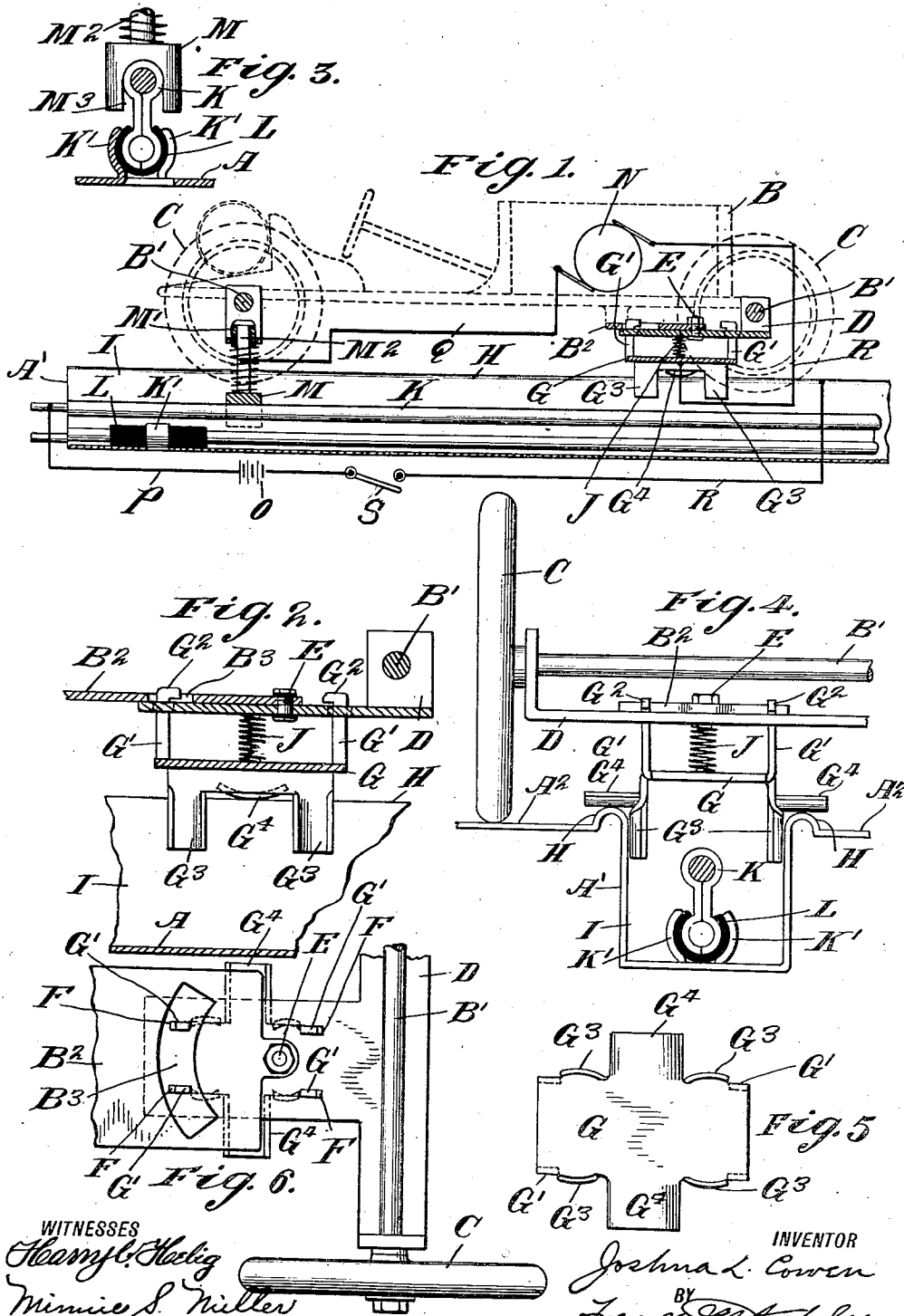


J. L. COWEN.
TOY CONSTRUCTION.
APPLICATION FILED APR. 22, 1913.

1,065,344.

Patented June 24, 1913.



WITNESSES
Henry C. Helig
Minnie S. Miller

INVENTOR
Joshua L. Cowen
BY
Frank W. Ashley
ATTORNEY

UNITED STATES PATENT OFFICE.

JOSHUA L. COWEN, OF NEW YORK, N. Y.

TOY CONSTRUCTION.

1,065,344.

Specification of Letters Patent.

Patented June 24, 1913.

Application filed April 22, 1912. Serial No. 692,337.

To all whom it may concern:

Be it known that I, JOSHUA L. COWEN, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Toy Constructions, of which the following is a specification.

My invention relates to toy constructions and particularly to toy cars and means for propelling and steering them.

The object of my invention is to provide a toy car adapted to be propelled by electricity and suitable means for steering it on a roadway.

A further object is to provide a suitable roadway and electric transmission for the car.

Referring to the drawings forming a part of this specification Figure 1 is a longitudinal sectional view through the means used to steer the car and disclosing a portion of the roadway and conduit and conducting rail in the conduit; the car being indicated in dotted lines. Fig. 2 is a longitudinal sectional view of the steering means, shown on a larger scale than as illustrated in Fig. 1. Fig. 3 is a cross sectional view through a portion of the conduit and disclosing an end view of the rail which also serves as an electrical conductor; and an end view of one of the shoes carried by the car. Fig. 4 is an end view of a portion of the conduit and roadway, and discloses a portion of the front truck of the car and the forward shoe carried thereby and serving as a guide to steer the car. Fig. 5 is an inverted plan view of the shoe shown in Fig. 2. Fig. 6 is a plan view of a portion of the front truck.

I provide a sheet metal construction embodying a conduit A' formed integral with a roadway A², and provided on each side of the conduit with a ribbed portion H which extends above the plane of the roadway A² to form an electrical conductor on which portions of the shoe carried by the car may slide.

B, indicates the car, the body portion of which is indicated in dotted lines and B' indicate the car axles on which are mounted the wheels C which travel on the roadway A². Carried by the forward axle is a frame truck portion D which is held in pivotal re-

lation to the frame plate B² of the car by a pivot pin E. The truck portion D is provided with four slots F respectively, through which the arms G' of the guide shoe G pass, the upper ends of each of which are provided with hook portions G² which extend toward each other and normally extend over the plane surface of the truck, the arms G' being sprung apart in the act of forcing the hook portions through the slots, and being released from the pressure they resume their normal position relative to each other which allows the hooks to overlap far enough to prevent them from dropping through the slots when the car is lifted from the roadway, as will be easily understood. The frame plate B² is also provided with a slot B³ formed in the arc of a circle, the center of which is the pivot pin E and the portions G² of the arms G' located in this slot serve as abutments to prevent the truck D from swinging beyond a predetermined distance. The guide shoe G is also provided with depending side wings G³ respectively and laterally projecting shoes G⁴ respectively, the portions G³ being located on each side of the shoe portions G⁴ and serving to steer the truck by contacting with the inner sides of the conduit, and also serving to carry a part of the current of electricity from the motor to the negative pole when in contact with the conduit. The shoe portions G⁴ rest on the beaded or ribber portions H—H at each side of the conduit I and serve to carry the electricity to the beaded portion H, the spring J serving to hold the shoes G⁴ in firm sliding contact while at the same time permitting automatic adjustment between the car and shoes as the car turns in the curved portions of the roadway. The guide shoe is preferably made in one piece of sheet metal as shown.

K, indicates a sheet metal rail held in the conduit by clips K', and L indicates insulating material to insulate the rail from the conduit.

M, indicates the rear shoe carried by the car and insulated therefrom by material M' in which the shank M² is free to turn. The shoe is bifurcated as shown at M³ and straddles the rail K as shown, and serves to guide the rear end of the car and also to conduct electricity from the rail to the motor N.

O, indicates a source of electrical energy and P a wire leading therefrom to the rail K, the current then flowing to the shoe M and thence to the motor N by wire Q and
 5 from the motor to the shoes G⁴ and G³ respectively, and then through beaded portions H—H to the wire R and to switch S, and through same to the source of supply. The motor N drives the car through suitable
 10 gearing, which forms no part of the present invention and is well known in this art, the present invention residing in the rail and conduit contributing to guide the car, the wheels of which rest on a plane surface and
 15 are directed by the guide shoe G, as will be readily understood.

It is obvious that the conduit and roadway could be made of non-conducting material and the portions H—H be made of conducting material, but I prefer to make the
 20 conduit and roadway of sheet metal which can be formed by a rolling process at a low cost and provides a stiff and durable construction.

Having thus described my invention, I claim as new:—

1. A toy construction consisting of a rail and a roadway at each side thereof and a car having a body portion, a truck pivoted
 30 to said body portion, means depending from said truck and engaging with the roadway for steering the truck, and means comprising electrical conductors for transmitting electricity through said rail to propel said
 35 car.

2. A toy construction consisting of a rail and a roadway at each side thereof and a car having a body portion, a truck pivoted
 40 to said body portion, means depending from said truck and engaging with the roadway for steering the truck, and an electrical conductor carried by the car at its rear end and contacting with said rail.

3. A toy construction consisting of a rail and a roadway at each side thereof and a car
 45 having a body portion, a truck pivoted to said body portion, means depending from said truck and engaging with the roadway for steering the truck, a bifurcated shoe carried by the car at its rear end and straddling the rail, and means comprising electrical
 50 conductors for transmitting electricity through said rail to propel said car.

4. A toy construction comprising a car, an
 55 electric motor mounted thereon, a truck located at the forward end of said car and connected in pivotal relation therewith, a guide shoe having depending side wings and laterally projecting shoes carried by said truck,
 60 and a bifurcated rear shoe carried by said car.

5. A toy construction comprising a car, an electric motor mounted thereon, a truck located at the forward end of said car and connected in pivotal relation therewith, a guide

shoe having depending side wings and laterally projecting shoes carried by said truck, and having upwardly extending arms which loosely engage said truck, a spring interposed between said guide shoe and the under
 70 side of said truck, and a bifurcated rear shoe carried by and depending from said car.

6. A toy construction comprising a car, an electric motor mounted thereon, a truck
 75 located at the forward end of said car and connected in pivotal relation therewith, a guide shoe having depending side wings and laterally projecting shoes carried by said truck, and having upwardly extending arms
 80 which loosely engage said truck, a spring interposed between said guide shoe and the under side of said truck, a bifurcated rear shoe carried by and depending from said motor and mounted in pivotal relation therewith, and means for pressing said rear shoe
 85 against a rail.

7. A toy construction comprising a sheet metal roadway and conduit, a rail mounted
 90 in said conduit, means for insulating said rail from said conduit, a car provided with wheels which rest on said roadway, a motor mounted on said car, a truck pivotally connected with said car, a guide shoe having depending side wings within said conduit and
 95 laterally projecting shoes adapted to slide on the top edges of said conduit, and a bifurcated rear shoe carried by said car and straddling said rail, and means comprising electrical conductors for transmitting electricity to said motor to propel the car.

8. A toy construction comprising a sheet metal roadway and conduit, a rail mounted
 105 in said conduit, means for insulating said rail from said conduit, a car provided with wheels which rest on said roadway, a motor mounted on said car, a truck pivotally connected with said car, a guide shoe having side wings depending within said conduit, laterally projecting shoes adapted to slide
 110 on the top edges of said conduit, and having upwardly extending arms which loosely engage said truck, a spring interposed between said guide shoe and the under side of said truck, a bifurcated rear shoe carried by said
 115 car and straddling said rail, and means comprising electrical conductors for transmitting electricity to said motor to propel the car.

9. A toy construction consisting of a rail
 120 and a roadway at each side thereof and a car having a body portion, a truck pivoted to said body portion, means depending from said truck and engaging with the roadway for steering the truck and conveying electric
 125 current to the motor, and means contacting with said rail for completing the electric circuit.

10. A toy construction consisting of a rail and a roadway, a car having a body portion, 130

a truck pivoted to said body portion, means depending from said truck and engaging with the roadway for steering the truck and also to form electric contact with the roadway, and an electrical conductor carried by
5 the car and contacting with the rail.
Signed at New York city, in the county of

New York and State of New York this 18th day of April, A. D. 1912.

JOSHUA L. COWEN.

Witnesses:

FRANK M. ASHLEY,
MINNIE S. MILLER.