J. L. COWEN.

TOY CAR.

APPLICATION FILED MAY 31, 1913.

1,113,312.

Patented Oct. 13, 1914.

2 SHEETS—SHEET 1.

Fig. 1

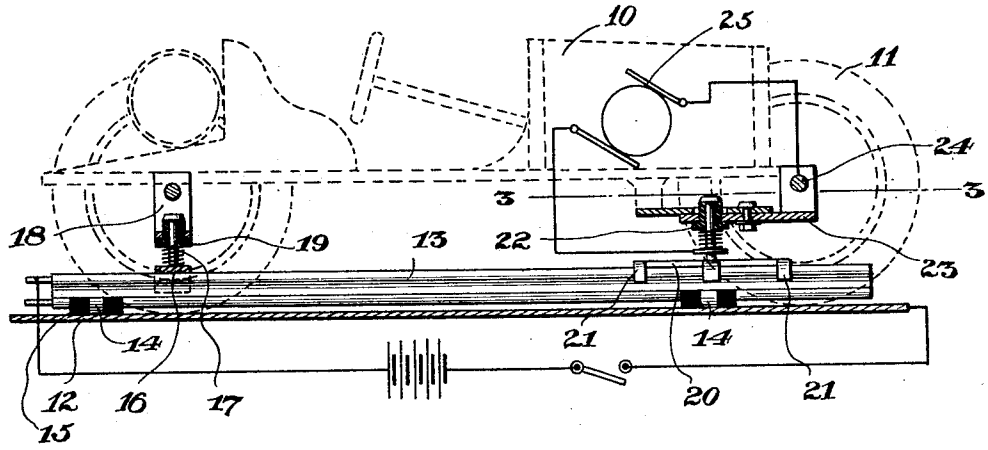


Fig. 2.

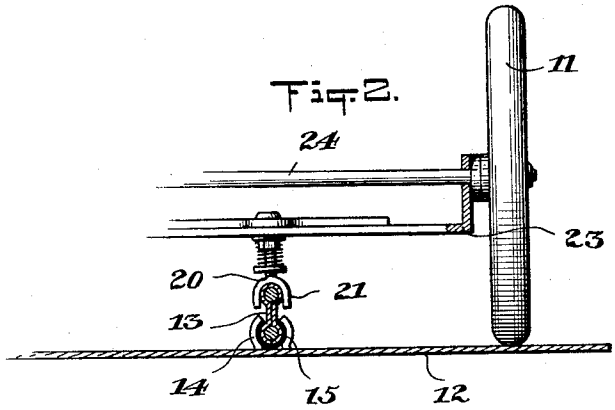
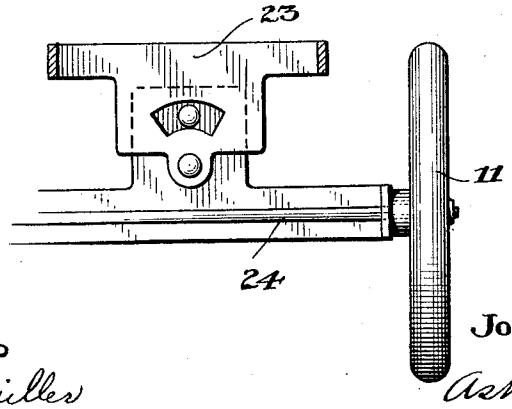


Fig. 3.



WITNESSES

J. W. Wells

Minnie S. Miller

INVENTOR

Joshua L. Cowen

BY

Ashley & Cohen

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C

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2 SHEETS—SHEET 2.

Fig. 4.

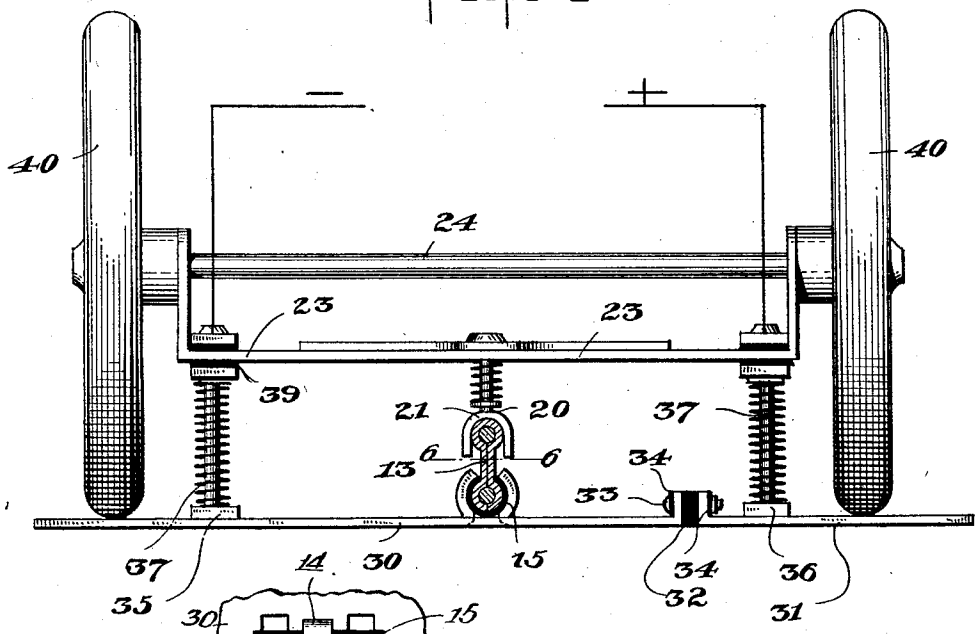


Fig. 6.

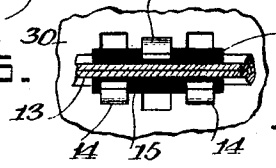
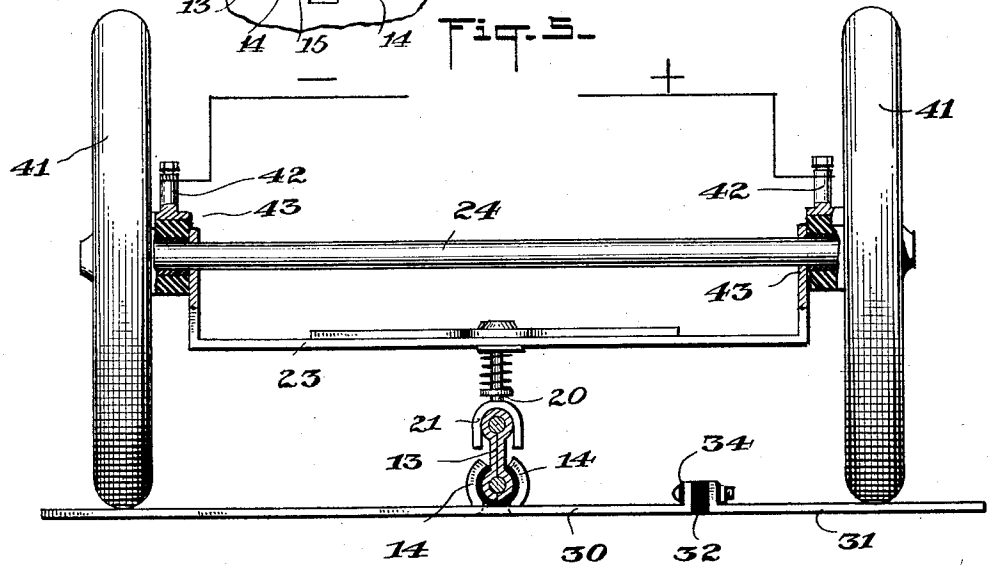


Fig. 5.



WITNESSES:

J. W. Wiles

Minnie S. Miller

INVENTOR

Joshua L. Cowen

BY

Ashley & Cohen

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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

TOY CAR.

1,113,312. Specification of Letters Patent. Patented Oct. 13, 1914.

Application filed May 31, 1913. Serial No. 770,895.

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 Cars, of which the following is a specification.

This invention relates to toy cars and has for its principal object to provide a toy car having wheels directly engaging the roadbed which may be operated by an electric current.

A further object is to provide current supplying means which also serves to steer the car.

Still further objects and advantages will appear more fully from the detailed description and the features of novelty will be particularly pointed out in the claims.

In the drawing illustrating this invention Figure 1 is a sectional diagrammatic elevation of a toy car and roadway embodying my invention. Fig. 2 is a fragmental sectional front view, particularly illustrating the current supplying rail and the contact shoe which serves also as a steering means. Fig. 3 is a fragmental detail sectional view taken along lines 3—3 of Fig. 1. Figs. 4 and 5 are fragmental front views illustrating modifications. Fig. 6 is a fragmental detailed view partly in section, taken along line 6—6 of Fig. 4, showing the manner in which the rail is held by tongues struck up from the roadway.

The toy car has preferably the appearance of a miniature automobile 10 (Fig. 1), having ground wheels 11 directly engaging the flat surface of the roadway 12. Mounted upon the roadway and insulated therefrom is a rail 13, held preferably by tongues 14, struck up from the roadway and separated from the conducting surface of the rail by insulation 15. Adjacent to the rear of the car a shoe 16 straddles the rail and is fastened to a pin 17 insulated from the frame 18 by a suitable bushing 19. At the front end of the vehicle another shoe 20, having an extended bearing surface and formed preferably with a plurality of inverted U-shaped portions 21 straddling the rail, extends from a pin 22 which is fastened to and insulated from the truck 23, on which are mounted the forward ground wheels 11.

In the preferred form illustrated in Figs. 1, 2 and 3, the roadway itself which is formed of a suitable conductor, may constitute one pole transmitting current to the ground wheels, which may be formed of some suitable conducting material, the current being then transmitted from the axle 24 or some other suitable portion of the vehicle to one brush 25 of the motor. The other pole is formed by the rail 13 which transmits the current through the shoe 20 to the other brush 25 of the motor. The shoe 20 not only serves to transmit the current from the charged rail, but also serves to steer the vehicle and together with the rear shoe 16, serves as both a guiding and steering means. Thus the miniature automobile can run along the roadway without necessitating the use of tracks as is usual in toy car construction.

In the modified form illustrated in Fig. 4, the roadway itself may form both of the poles for transmitting the current to the motor and the rail may simply serve as the guiding and steering means. Thus the roadway is formed of two sections, 30 and 31, insulated from each other by suitable insulation 32 and united by suitable means, such as bolts 33, insulated by washers 34, and suitable bushings from both of the sections. The roadway is engaged by two shoes 35 and 36 extending from any suitable support such as pins 37 connected to the truck 23, or to some other suitable point on the frame of the vehicle and insulated therefrom by suitable insulation 39. The ground wheels 41 may in this case be formed of some insulating material instead of conducting material as in the preferred form.

In the second modified form illustrated in Fig. 5, the roadway is formed of two sections 30 and 31, insulated from each other by insulation 32 as in the construction illustrated in Fig. 4, and current supplied to these insulated sections. The ground wheels 41 are formed of conducting material and are suitably insulated from the frame of the vehicle. The current may be taken off by means of brushes 42 from the hub portions 43 of the wheels and thence conveyed to the motor.

It will thus be seen that I have provided a novel toy having the appearance of a vehicle which does not run on tracks, such as an automobile, and still provided with suitable guiding and current conveying means, which may be readily constructed at comparatively low cost.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent

1. In a toy car construction, a substantially flat roadway, a rail mounted thereon and insulated therefrom, means extending from the car engaging the rail for guiding and steering the same, a car, and means for conveying current from said roadway through the wheels of the car to the motor.

2. In a toy car construction, a substantially flat roadway of conducting material, a rail mounted on the roadway and insulated therefrom, a car, and means extending from the car engaging the rail for guiding and steering the same and also for conveying current of one polarity to the motor, and ground wheels on the car formed of conducting material adapted to engage the roadway and convey current of opposite polarity to the motor.

3. In a toy car construction, a substantially flat metallic roadway, a rail mounted on the roadway and insulated therefrom, a car having a frame, ground wheels engaging the roadway, a truck pivoted to the frame of the car and having the front wheels mounted thereon, a shoe extending from the rear portion of the frame of the car engaging the rail, said roadway and rail being adapted to be connected to opposite poles of a source of electric current, and a shoe extending from the truck engaging the rail and serving to steer the car, one of said shoes serving to convey current of one polarity to the motor and the ground wheels conveying the current of another polarity to the motor.

Signed at New York city, in the county of New York, and State of New York, this 24th day of May A. D. 1913.

JOSHUA L. COWEN.

Witnesses:
FRANK M. ASHLEY,
MINNIE S. MILLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."