

Nov. 9, 1926.

1,606,691

I. H. BOYER

MOBILE TOY

Filed June 15, 1926

3 Sheets-Sheet 1

Fig. 1.

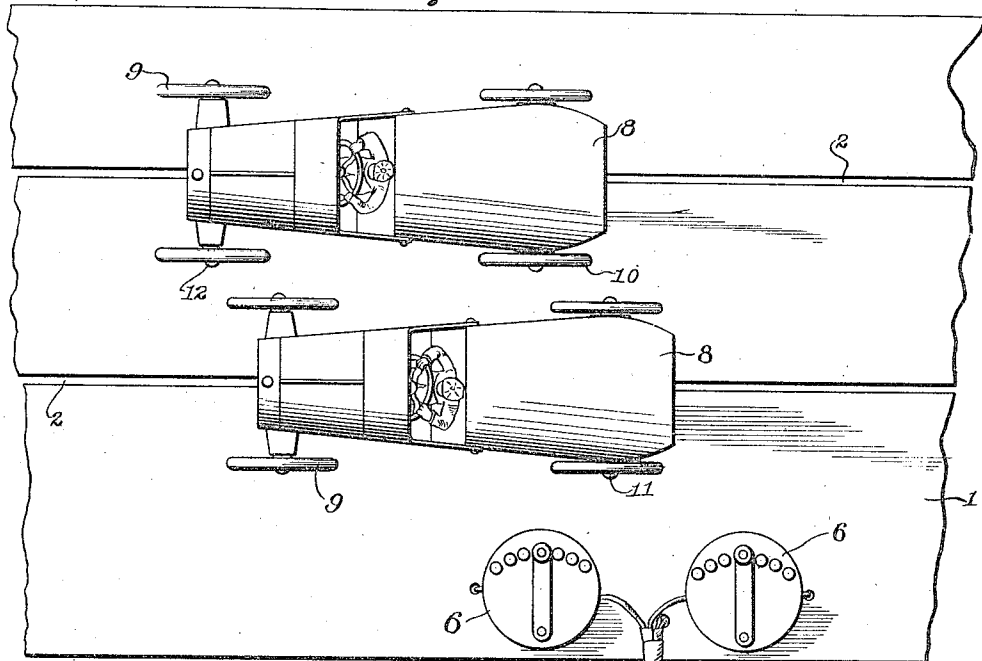
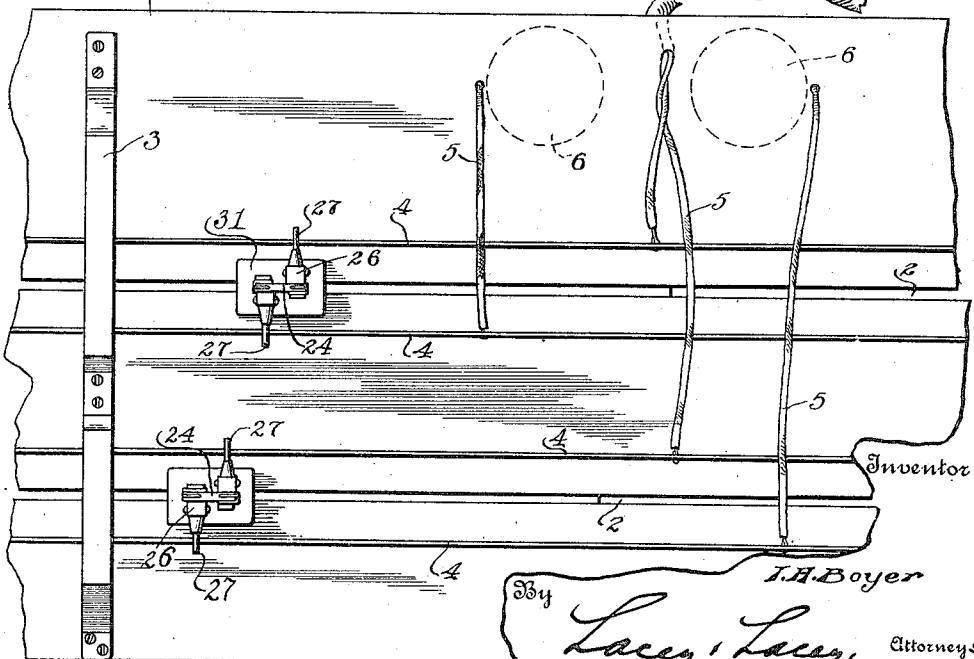


Fig. 2.



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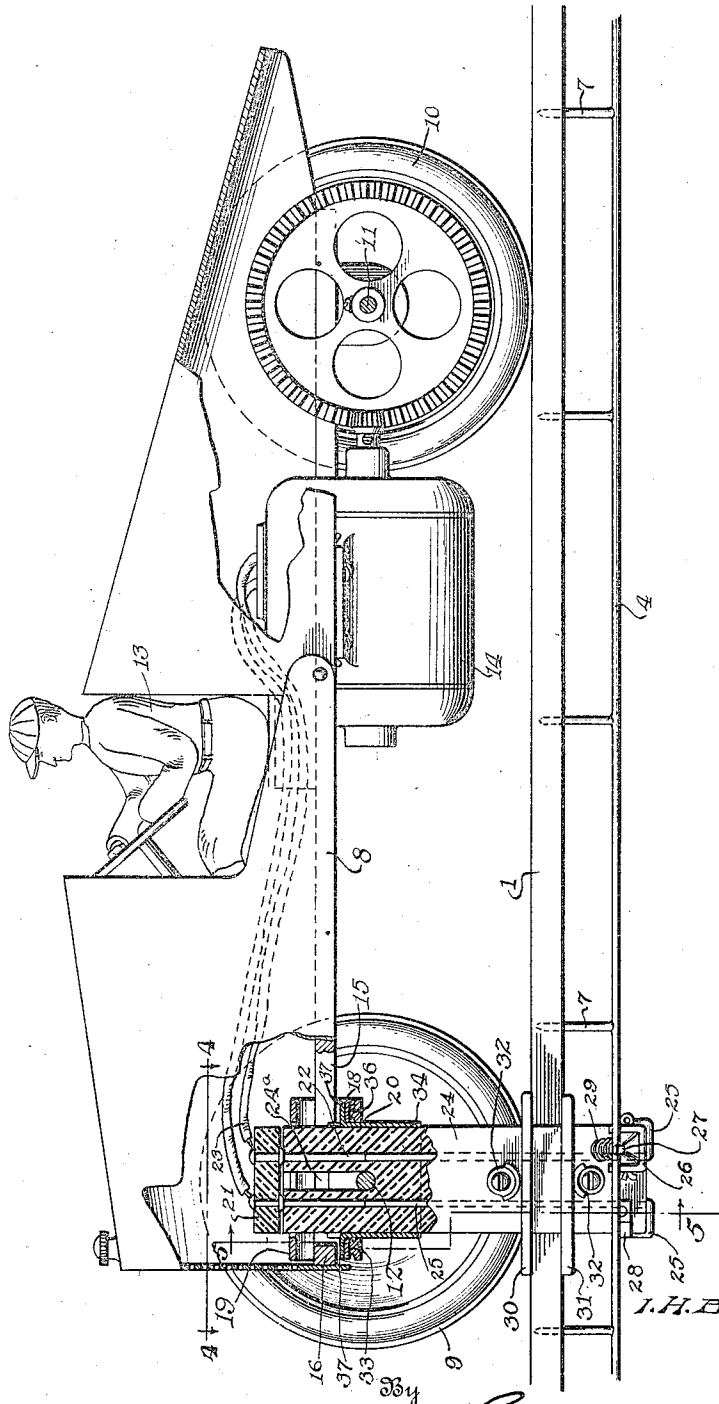
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Fig. 3.



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Fig. 4.

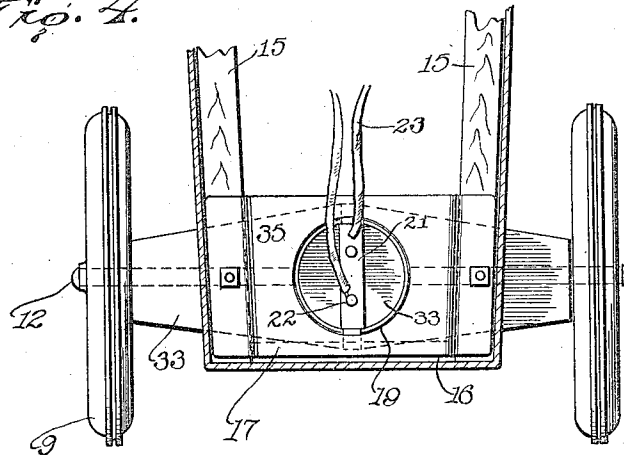
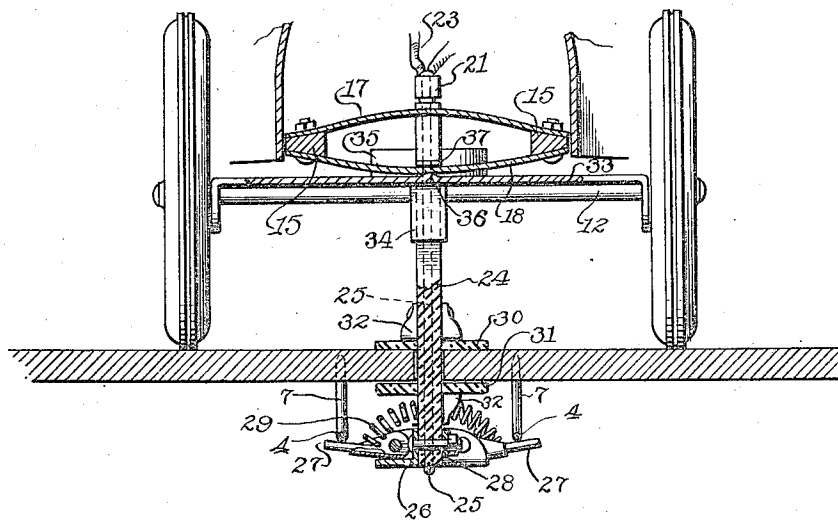


Fig. 5.



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UNITED STATES PATENT OFFICE.

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MOBILE TOY.

Application filed June 15, 1926. Serial No. 116,185.

The invention relates to an amusement device which not only entertains but which appeals to the excitable emotions, thereby creating and maintaining an intense interest so long as the article is in action.

The invention consists of a speedway, one or more vehicles thereon and controllable propelling means, whereby the speed of the vehicles may be regulated, so that a race may be established with the excitement, interest and moments of suspense incident to an event of this nature.

While the drawings illustrate a preferred embodiment of the invention, it is to be understood that in adapting the means to meet specific needs and requirements, the design may be varied and such other changes in the minor details of construction may be resorted to within the scope of the invention as claimed, without departing from the spirit thereof.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and the drawings hereto attached, in which,—

Figure 1 is a diagrammatic view illustrative of the invention,

Figure 2 is a reverse or bottom view of the speedway,

Figure 3 is an enlarged side view of the device, parts being broken away,

Figure 4 is a fragmentary sectional view on the line 4—4— of Figure 3, and

Figure 5 is a detail sectional view on the line 5—5 of Figure 3, looking in the direction of the arrows.

Corresponding and like parts are referred to in the following description and designated in the several views of the drawings by like reference characters.

The numeral 1 designates the speedway, which in the present instance consists of a board or other flat surface, of any preferred dimensions and construction. The speedway is provided with any desired number of slots 2 which provide guide means for directing the vehicle when in motion. The slots 2 preferably extend in parallel relation so that when two or more vehicles are racing interest may be centered in the outcome and the relative speed be determined. Cross ties 3 connect the several parts of the speedway 1 separated by means of the slots 2. This is indicated most clearly in Figure 2 of the drawings.

Electric conductors 4 are located beneath

the speedway and upon opposite sides of the respective slots 2 and are connected by means of wires 5 with a suitable source of current supply, it being understood that the vehicle is adapted to be electrically propelled. A variable resistance switch 6 controls the supply of current to the conductors 4 so that the speed of the vehicle may be varied and controlled as required. The switch 6 may be of any type so long as it serves to regulate the current supplied to the vehicles. The conductors 4 may be of any construction and, as shown, consist of stout wire, supported beneath the speedway by means of pins 7 which are driven into the speedway and have the conductors soldered, or otherwise secured to their lower ends.

The toy comprises a body 8 and supporting wheels 9 and 10, the latter being mounted upon a fixed axle 11 and the front wheels mounted upon a pivoted axle 12. The vehicle may be of any design and, as shown, represents an automobile of the racing type to which is applied a figure 13 representing a driver at the wheel. The vehicle is equipped with an electric motor 14 which, as shown in Figure 3, is geared to one of the rear wheels 10 which acts as a driver. The manner of connecting the drive shaft of the motor to the rear axle or drive wheel of the vehicle is non-essential and will depend upon the design of the vehicle and the type and location of the motor.

The frame of the vehicle includes side bars 15 and a cross bar 16 connecting the front ends of the side bars. Plates 17 and 18 extend transversely of the frame and are connected at their ends to the side bars 15. The plate 17 curves upwardly intermediate its ends and is formed with a central opening 19. The plate 18 curves downwardly intermediate its ends and is formed centrally with an opening 20 corresponding with the opening 19, both openings being of circular outline. A block 21 of insulating material receives pins 22 to which conducting wires 23 are electrically connected, said wires leading from the electric motor 14 and serving to supply current thereto. The block 21 is detachably fitted to a post 24 in which are formed openings to receive the pins 22.

The post 24 is of suitable insulating material and is flat and of a thickness corresponding to the width of the slots 2 in which it is free to move without any binding action, the width of the post coinciding

with the direction of the slots 2. Brackets 26 are secured to opposite sides of the lower end of the post 24 and are electrically insulated from one another. Contacts 27 are pivoted at their inner ends to the brackets 26 and are adapted to bear against and run upon the conductors 4. The lower ends of the conductors 25 are electrically connected to the respective brackets 26, as shown most clearly in Figures 3 and 5. A metal strip 28 connects each of the conductors 25 with the bolt holding the brackets 26 to the post 24. A spring 29 connects each of the contacts 27 with the post 24 and normally exerts an upward pull upon the contact to hold it in engagement with the conductor 4. Plates 30 and 31 are loosely mounted upon the lower portion of the post 24 and are located above and below the speedway and extend across the slots 2 through which the post 24 passes. Lugs 32 are secured to opposite sides of the post 24 above and below the respective plates 30 and 31 and serve to hold the parts in place. These lugs 32 are disposed midway between the front and rear edges of the post 24 and the sides in contact with the plates are made rounding, as shown most clearly in Figure 3, to admit of the post having a rocking movement relatively to the plates 30 and 31, whereby binding is obviated and vertical displacement of the post prevented, it being understood that the opening in each of the plates through which the post 24 passes is of a size to admit of a rocking movement of the post with reference to the plates.

The numeral 33 designates a support for the front axle 12, the same consisting of a strip having its end portions bent downwardly and apertured to receive the axle 12. A cuff 34 depends centrally from the axle support 33 and snugly receives the post 24 in the upper end of which is formed a slot 24^a through which the axle 12 passes. This admits of the ready detachment of the vehicle from the post when desired. A collar 35 projects from the axle support 33 and obtains a snug fit in the opening 19 of the plate 18, in which it is free to turn. A hump, or rounded protuberance 35 is provided upon the axle support 33 directly in front and in the rear of the collar 35 and engages the lower side of the plate 18 in line with the post and provides for a rocking between the parts 18 and 33 to accommodate any swaying movement of the vehicle body so as to obviate any binding action. Portions are partly cut from the upper edge of the collar 35 and are bent so as to overhang the humps or protuberances 36 and confine the plate 18. These overhanging portions are designated by the numeral 37 and constitute ears which are in line with the respective humps 36.

It is observed that the upper surface of

the speedway 1 is unobstructed and the vehicles are retained in place thereon and directed in their movements by the slots 2 and posts 24. The current from a suitable source of supply is transmitted to the electric motor 14 by means of the conductors 4, contacts 27, conductors 25, pins 22 and conductors 23, the amount of the current being regulated by the variable switches 6 so that the relative speed of different vehicles may be controlled to add interest and excitement to the race when two or more vehicles are in competition.

Having thus described the invention, I claim:

1. An electrically propelled toy vehicle, comprising a flat-surfaced speedway, such as a board, having a slot, electric conductors beneath the speedway adjacent the slot thereof, a vehicle upon the speedway, an electric motor carried by the vehicle for propelling the same, a post depending from the vehicle and passing through the slot of the speedway, means on the post in contact with the top and the bottom of the speedway at opposite sides of the slot, electric conductors within the post, contacts at the lower end of the post adapted to run upon and derive current from the conductors beneath the speedway and conductors between the electric motor and the conductors of the post.

2. A toy of the character specified comprising a speedway having a guide slot, an electric conductor upon the under side of the speedway adjacent the slot, of a vehicle mounted upon the speedway, an electric motor on the vehicle, a post depending from the vehicle and passing through the slot of the speedway, conductors within the post connected with the motor for supplying current thereto, contacts at the lower end of the post adapted to travel upon the conductors upon the under side of the speedway, plates loosely mounted upon the post and disposed the one above and the other below the speedway and extending across the slot thereof.

3. In a toy of the character specified, the combination of a speedway provided with a slot, a motor vehicle mounted upon the speedway, a post depending from the vehicle and passing through the slot of the speedway, plates loosely mounted upon the post, the one above and the other below the speedway, extending across the slot thereof and projections at opposite sides of the post extending across the plates to hold them in place, the sides of the projections facing the plates being rounded.

4. In a toy of the character specified, the combination of a speedway, an electric conductor and a vehicle adapted to travel upon the speedway and provided with an electric motor, a post having contacts to run upon

the said electric conductor, a block separate from the post and complementary conductors carried by the post and block and adapted to form connecting means therebetween.

5 5. A toy of the character specified comprising a speedway having a slot, an electric conductor upon the under side of the speedway adjacent the slot, a vehicle on the speedway, an electric motor on the vehicle, a
10 post depending from the vehicle and passing through the slot of the speedway, an electric conductor passing through the post and having connection with the electric motor to supply current thereto, a contact
15 pivoted to the lower end of the post and extending across the lower side of the conductor, means on the post to normally hold the contact in horizontal position, and a
20 spring between the post and contact to hold the latter in engagement with the said conductor.

6. In a toy of the character described, the combination of a speedway having a slot, a motor thereon, a post depending from the
25 vehicle and passing through the slot of the speedway, brackets at opposite sides of the post, contacts pivoted to the brackets, and limited in their movements in one direction thereby, and springs between the post and
30 contacts for normally holding the contacts in engagement with the conductors.

7. In a toy vehicle, and in combination with the frame and axle support, of a plate
35 attached to the frame and having a circular opening, a collar projecting upwardly from the axle support and passing through the opening of said plate, protuberances on the axle support disposed the one in front and the other in the rear of said collar, and

elements projecting laterally from the collar in line with the respective protuberances to overhang the plate and confine the latter between said protuberances and lateral extensions.

8. In a toy vehicle, the combination of an axle support having front and rear protuberances, a collar projecting upwardly from the axle support and disposed between the said protuberances, a plate carried by the frame of the vehicle and having a circular
50 opening to receive the collar of the axle support and front and rear extensions projecting from the collar in line with the protuberances to overhang the said plate and confine the same between said protuberances and extensions of the collar.

9. In a toy vehicle, the combination of an axle support having a depending cuff and an upwardly projecting collar, and having protuberances, the one in front and the other in rear of the collar, a plate carried by the frame of the vehicle and having a circular opening to receive the collar of the axle support and adapted to rest upon the said protuberances and extensions projecting from the collar and overhanging the said plate to confine the same between the protuberances and lateral extensions.

10. In a toy vehicle, the combination of an axle, an axle support provided with a cuff through which the axle passes, and a post detachably fitted in the said cuff and having a slot in its upper end for the passage of the axle when assembling or separating the parts.

In testimony whereof I affix my signature.

IRMA H. BOYER. [L. s.]