

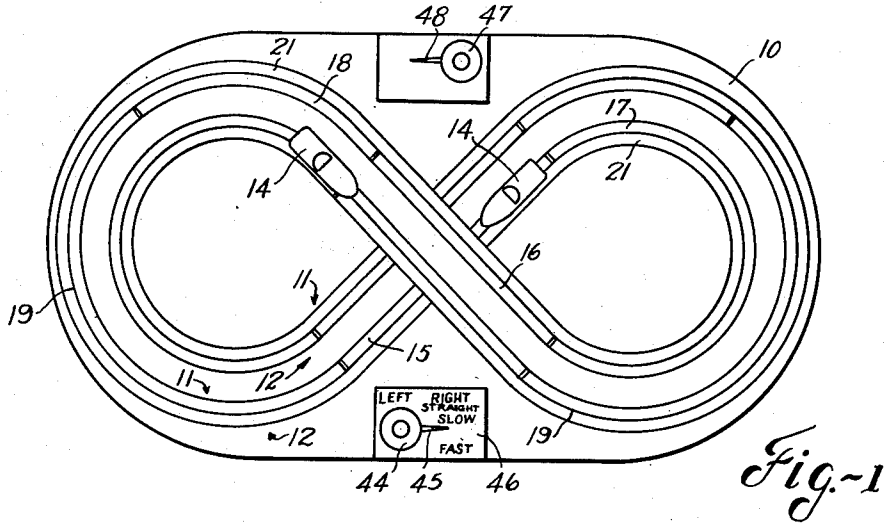
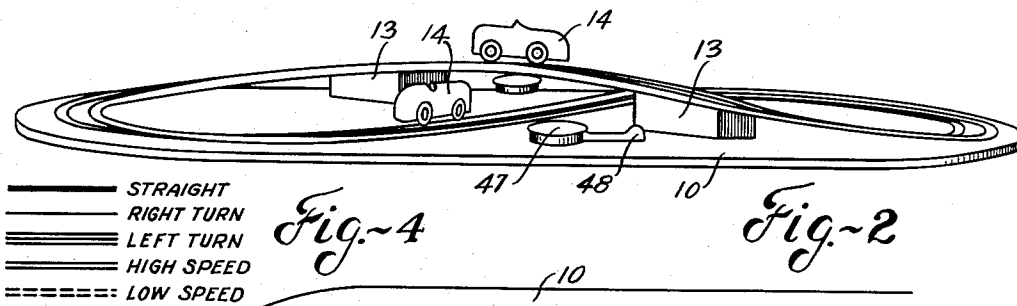
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2,750,191

RACING CAR GAME

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STRAIGHT
RIGHT TURN
LEFT TURN
HIGH SPEED
LOW SPEED

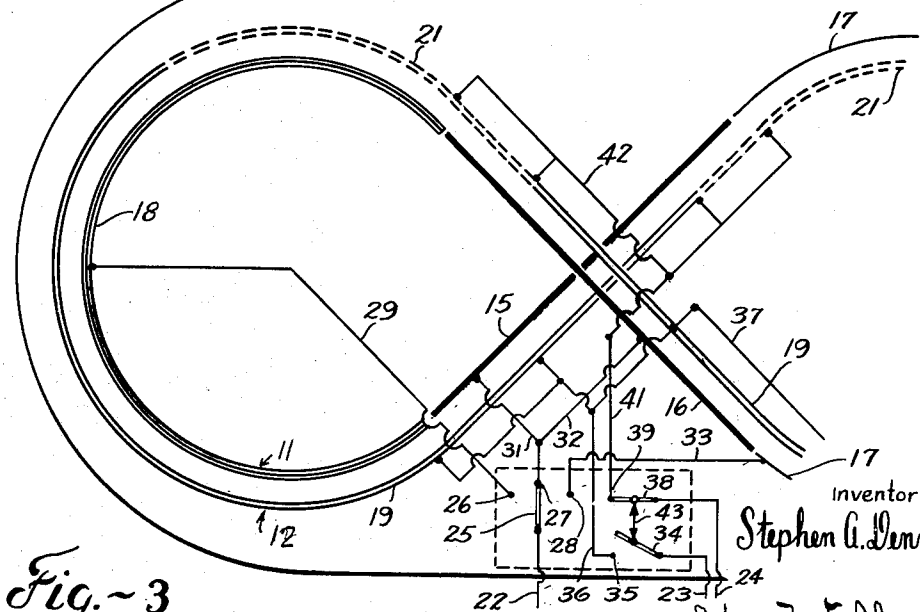


Fig. 3

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RACING CAR GAME

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9 Claims. (Cl. 273—86)

This invention relates to games involving and requiring the exercise of skill and coordination by the player and presenting an opportunity for a test of the relative skill and coordination of opposing players.

In its illustrative embodiment, the invention pertains to a racing game in which a toy car, horse, or other racer may be moved along or about a track under player-operated remote control with a speed and facility dependent upon the degree of skill and coordination exercised by the player.

The object of the invention is to simplify the construction as well as the means and mode of operation of race games as disclosed herein, whereby such games may not only be economically manufactured, but will be more efficient and exacting in use, adaptable to a wide variety of applications, but having relatively few parts and be unlikely to get out of repair.

A further object of the invention is to introduce in a racing game of the class described multiple controls which have reference to the speed and direction of motion respectively of the racer and which must be coordinated in their adjustment to effect uninterrupted travel of the racer upon its track.

A further object of the invention is to adapt the racing game for play by two or more players, each controlling the movements of a racer mounted upon parallel tracks of equal length.

Still another object is to present a racing game of the class described which is small enough for home use, being adapted for mounting on a floor or ordinary household table, but which presents a sufficiently long expanse of track and makes use of racers of such size and power as to make the game of more lasting interest than a mere toy.

A still further object is to embody the game in an integral unit which need not be assembled and disassembled before and after use, preparation of the game for use involving simply the making of a connection to a source of electric power.

A further object of the invention is to provide a race game possessing the advantageous structural features, the inherent meritorious characteristics and the mode of operation herein mentioned.

With the above primary and other incidental objects in view as will more fully appear in the specification, the invention intended to be protected by letters patent consists of the features of construction, the parts and combinations thereof, and the mode of operation, as herein-after described or illustrated in the accompanying drawings, or their equivalents.

There has been evolved a preferred embodiment of the invention represented by a game which in part includes a track presenting straightaway, right hand curve and left hand curve portions, the track comprising one or more pairs of parallel rails of an electrical conductive material, each rail of a pair being made up of a plurality of mechanically connected, electrically insulated sections, an electric motor driven car to be mounted on each pair of

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rails, and an electrical circuit including a first controller settable to straightaway, right hand and left hand curve positions to selectively energize corresponding sections of one rail and a second controller settable to high and low speed positions alternatively to selectively energize appropriate sections of the other rail, the controllers being arranged for two-hand operation by a player and requiring coordinated adjustment to effect motion of the car around the track.

Referring to the accompanying drawing, wherein is found the preferred but obviously not necessarily the only form of embodiment of the invention,

Fig. 1 is a plan view of a game constructed and arranged in accordance with the instant invention;

Fig. 2 is a view of the game of Fig. 1 in side elevation;

Fig. 3 is a diagrammatic view, showing the electrical connections and operating controls for one set of rails; and

Fig. 4 is a legend identifying the direction and speed symbols used in Fig. 3 to represent the rail circuits.

Like parts are indicated by similar characters of reference throughout the several views.

Referring to the drawings, a game in accordance with the instant invention is there shown adapted to be played or participated in by two persons. As will be evident from the following description, the game may be made to be played by but a single person, or by a number greater than two.

Referring to Fig. 1, the structure involved includes a flat base 10 made preferably of a rigid, non-electrical conductive material. Arranged upon the base 10 is a pair of parallel tracks each comprising a pair of spaced apart rails 11 and 12 made of an electrical conductive material. The pairs of rails 11 and 12 are arranged parallel to one another in any desired pattern, for example in a continuous figure 8 formation as here shown. As seen in Fig. 2, the mid-portions of the overlapping pairs of rails are elevated by blocks 13. Mounted upon the respective pairs of rails are electric motor-driven cars 14 which are guided by and electrically bridge the rails. It is the object of the game that the cars 14 shall be started from a common position on their respective tracks and be caused to move about the track by remote control, an element of skill and coordination being introduced as a factor in obtaining continuous motion of the cars so that it is possible for one car to complete a course around the track more quickly than the corresponding course is completed by the other car.

Inasmuch as each track, comprising a pair of rails 11 and 12, is identical to the other, only one track will here be described. As shown in Fig. 1, each rail 11 and 12 is made up of a plurality of sections which are individually fastened to the base 10 in such manner that adjacent ends of the sections are in registry with one another but are separated by a gap providing a barrier to the flow of electrical current from one section to another. Thus the several sections of each rail are mechanically connected to one another, but are electrically insulated or independent. By reason of its figure 8 formation, the track presents straightaway, right hand curve and left hand curve portions. Under the control system presently to be described, the rail 11 functions as the direction or steering control rail, while the rail 12 functions as the speed control rail. The above terms for the rails 11 and 12 are used in the spirit of the disclosure which is that of a racing car game. These are terms which would be used by players of the game as these terms have a definite meaning related to the travel of the car about the track. The several sections of the rail 11 include straightaway sections 15 and 16, a right hand turn or curve section 17, and a left hand turn or curve section 18. The several sections of

the rail 12 include high speed sections 19, and low speed sections 21.

Referring to Fig. 3, the several sections of the rails 11 and 12 are connected in an electrical circuit which includes a conductor 22 representing one side of the circuit, and parallel conductors 23 and 24 representing the other side of the circuit. The connection of the conductors 22, 23 and 24 to a source of current supply is effected through a transformer or like device so constructed and arranged as to apply a relatively high voltage through the conductor 23, and a relatively low voltage through the conductor 24. An electromotive force, for example, of 15 volts, may be applied through conductor 23, and a force of 12 volts applied through the conductor 24. The conductor 22 is connected to a switch device comprising a switch element 25 adjustable to three different operating positions in which it connects the conductor 22 to contacts 26, 27 and 28 respectively. Contact 26 is connected by a lead 29 to left hand turn section 18 of the rail 11. Contact 27 is connected by lead 31 and branch lead 32 to straightaway sections 15 and 16 of the rail 11, while contact 28 is connected by lead 33 to right hand turn section 17 of rail 11. Accordingly, when switch element 25 is adjusted to connect conductor 22 to contact 26, left hand turn section 18 of the rail 11 is energized to the exclusion of the other sections of that rail. When the switch element 25 is moved to engage contact 27, section 18 is deenergized and straightaway sections 15 and 16 are exclusively energized. When the switch element is adjusted to engage contact 28, the right hand turn section 17 is exclusively energized.

The high voltage conductor 23 is connected to a switch element 34 movable to and from a position engaging a contact 35. The contact 35 is connected by a lead 36 and branch lead 37 with high speed sections 19 of the rail 12. The low voltage conductor 24 is connected to a switch element 38 movable to and from a position engaging a contact 39. The contact 39 is connected by a lead 41 and branch lead 42 to the low speed sections 21 of the rail 12. The switch elements 34 and 38 are connected together, as indicated at 43, for alternative motion into and out of engagement with their respective contacts 35 and 39. That is, with the parts positioned as shown in Fig. 3, switch element 38 is in engagement with contact 39, and switch element 34 is out of engagement with contact 35. Accordingly, the low speed rail sections 21 are energized to the exclusion of the high speed sections 19. Now, if switch element 34 is moved to a position engaging contact 35, switch element 38 is at the same time moved out of engagement with contact 39. In this position of the parts, high speed rail sections 19 are energized to the exclusion of the low speed sections 21.

The switch devices above described are mounted upon one side of the base 10 and are respectively operable by a knob 44 and a lever 45 overlying a plate 46. On the plate 46 may be marked the indications "Left," "Straight" and "Right," and the indications "Slow" and "Fast." The former indications refer to the position of adjustment of the knob 44, which operates switch element 25, while the latter indications refer to the position of lever 45, which operates switches 34 and 38.

As an aid to better understanding of the operation of the apparatus, the rails 11 and 12 are shown in Fig. 3 with the several sections thereof represented by distinguishing symbol lines. These lines and the portion of the track which they represent are shown in a legend comprising Fig. 4. Thus, a single narrow solid line indicates a right hand turn section of the track; triple solid lines represent a left hand turn section; a broad solid line represents the straightaway sections; double solid lines represent high speed sections; and a double broken line represents low speed sections.

In the operation of the game, a car is stationed at a starting point which may, for example, be at the foot of the straightaway of the overlying portion of the track.

When a master switch, controlling electrical communication between the transformer and the source of current, is turned on, the sections of the rails 11 and 12 to which the conductors 22 and 23 or 24 are connected will be energized. If the switch 25 is set to energize straightaway rail section 15, and if the switch assembly 34—38 is set to energize the high speed sections 19, a circuit will be closed through the motor of the car and the car will begin to advance outwardly along the straightaway toward the right hand turn portion of the track. As the car enters upon such right hand turn portion, gaps in the rails 11 and 12 make it necessary that the direction control switch 25 be moved to engage contact 28 and the speed control switch assembly be moved to disengage switch element 34 from contact 35 and to engage switch element 38 with contact 39. The slow speed and right hand turn sections 21 and 17 of the rails accordingly are energized and motion of the car will continue. As the car passes partly through the right hand turn section, it passes a gap in rail 12, moving from a low speed section 21 to a high speed section 19. It then becomes necessary, while maintaining the direction control switch 25 in its right hand turn position, to adjust the speed control from "Slow" to "Fast" to energize the high speed sections 19. If this is done, the car will continue to travel until it reaches the foot of the straightaway on the underlying portion of the track where a gap occurs in rail 11. While the speed control is maintained in "Fast" position, the direction control must then be set to "Straight" position, and when this is done the car will move forwardly on the straightaway toward the left hand turn section 18 and low speed section 21 of the track. Entering upon such portion, the direction control must be set to left hand turn position, and the speed control must be set to "Slow" position. Part way around this turn the car enters upon high speed section 19, and a corresponding adjustment must be made in the speed control, the direction control remaining in its left hand turn position until the car returns to its starting point.

The control knob 44 and lever 45 are arranged to be grasped by the hands of the operator or player, and as seen above, the player must make coordinated adjustments of the knob and lever to cause the car to complete a course around the track. In the case of the two player game, as seen in Fig. 1, a separate set of controls, including a knob 47 and a lever 48, is mounted on the opposite side of the base 10 and governs the motion of a car upon the second of the illustrated tracks. Thus, two persons operating their respective speed and direction control may test their relative skill and coordination. The player making the quicker and more accurate adjustments of his controls will be enabled to move his car about the track with a greater speed and facility.

From the above description it will be apparent that there is thus provided a device of the character described possessing the particular features of advantage before enumerated as desirable, but which obviously is susceptible of modification in its form, proportions, detail construction and arrangement of parts without departing from the principle involved or sacrificing any of its advantages.

While in order to comply with the statute the invention has been described in language more or less specific as to structural features, it is to be understood that the invention is not limited to the specific features shown, but that the means and construction herein disclosed comprise but one of several modes of putting the invention into effect.

Having thus described my invention, I claim:

1. A game, including a track laid out with curved and straightaway portions and composed of a pair of parallel electrical conductive rails, each of said rails including a plurality of electrically insulated sections, power supply means, high and low voltage electrical connections ex-

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tending from said power supply means, the former of which connections is to high speed sections of one of said rails and the other of which is to low speed sections of said one rail, a first switch interposed in said connections setttable to energize said high speed and low speed sections alternatively, other electrical connections extending from said power supply means to sections of the other of said rails defining straightaway, left hand and right hand curved portions of the track, a second switch interposed in said other electrical connections setttable selectively to energize the straightaway, right hand and left hand section of said other rail, and an electric motor driven object to be mounted on said track, a circuit being completed through said object to induce motion thereof when the sections of both rails in contact with said object are energized.

2. A game according to claim 1, characterized by separate operating controls for said first and second switches, each arranged to be gripped by a hand of the player, skill and coordination on the part of the player being required to adjust said switches in correspondence with the movement of the object along the track to maintain the object in motion.

3. A game according to claim 2, characterized by a second track laid out in parallel to the first said track and separate operating controls for said second track, said separate controls being manipulative by a second player who by the exercise of greater skill and coordination attempts to advance the object on his track more rapidly than the object on the first said track is advanced by the first said player.

4. A game, including a track laid out with curved and straightaway portions and composed of a pair of parallel electrical conductive rails, each said rail including a plurality of electrically insulated sections, power supply means, high and low voltage electrical connections extending from said power supply means to the sections of one of said rails, certain of said sections of said one rail receiving high voltage and so being high speed sections and the other of said sections of said one rail receiving low voltage and so being low speed sections, a first setttable switch in said electrical connections to energize the high speed and low speed sections alternatively, separate electrical connections extending from said power supply means to the sections of the other one of said rails defining straightway and left hand and right hand curved portions of the track, a second setttable switch interposed in said separate electrical connections to energize said sections selectively, any one portion of the track being energized only when the sections of both rails in said portion are energized, and an electric motor driven object to be moved along said track at a rate dependent upon the skill and coordination exercised by a player in setting said first and second switches.

5. A racing game in which each of two or more players attempts to move an object such as a toy automobile around a course with the greatest speed and facility, including a track for each player comprising a pair of electrical conductive rails each made up of a plurality of mechanically connected electrically insulated sections, an electric motor driven object mounted on said rails to be moved therealong in response to the energizing of parallel rail sections in contact with said object, first adjustable means to selectively energize individual sections of one rail and second adjustable means to se-

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lectively energize individual sections of the other rail, the energizing of parallel rail sections requiring coordinated setting of said adjustable means, and separate controls manipulative by a player for operating said first and second adjustable means.

6. A racing game according to claim 5, wherein one of said rails presents straightaway, right hand curved and left hand curved portions, said first adjustable means having straightaway, right hand and left hand curve positions of adjustment, and in that the other of said rails is used for speed control, said second adjustable means having high speed and low speed positions of adjustment.

7. A game, including a track comprising a pair of parallel electrical conductive rails each made up of a plurality of mechanically connected electrically insulated sections, an electric motor driven object mounted on said rails for motion therealong in response to the energizing of parallel rail sections, a first adjustable means having straightaway, right hand and left hand positions of adjustment to energize corresponding sections of one of said rails selectively, and means utilizing the other of said rails for speed control including a second adjustable means having high speed and low speed positions of adjustment to energize appropriate sections of said other rail respectively, the separate adjustable means being under the control of a player who by the exercise of skill and coordination in setting said adjustable means endeavors to keep the motor driven object in continuous motion around the track.

8. A game, including a track comprising a pair of electrical conductive rails each made up of a plurality of mechanically connected electrically insulated sections, an electric motor driven object to be moved along said track by the energizing of successive parallel rail sections, an electric circuit for each rail providing for the independent selective energizing of individual sections of each rail, and a player operated controller for coordinating the energizing of successive parallel rail sections, including separately setttable switches in each of said circuits.

9. In a game, the combination of an electrically energized object progressively movable along a pair of parallel rails forming a track one rail presenting straightaway, right hand and left hand curved portions, an electrical circuit for each of said rails through which said rails are energized, and first and second adjustable switch means in respective circuits, said first adjustable means having straightaway, right hand and left hand curve positions of adjustment, and in that the other of said rails is used for speed control, said second adjustable means having high speed and low speed positions of adjustment.

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