United States Patent

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[72] Inventors **Julius Cooper**
New Hyde Park;
Erwin Benkoe, Manhasset Hills, both of N.Y.

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[73] Assignee **Ideal Toy Corporation**
Hollis, N.Y.

[54] **START-FINISH MECHANISM FOR RACING GAME**
15 Claims, 6 Drawing Figs.

[52] **U.S. Cl.** ..... **273/86 R,** 238/10 F
[51] **Int. Cl.** **A63f 9/14**
[50] **Field of Search** ..... 273/86 R, 86 B, 86 C, 86 D, 86 E; 46/202, 243; 238/10 A, 10 E, 10 F; 104/60

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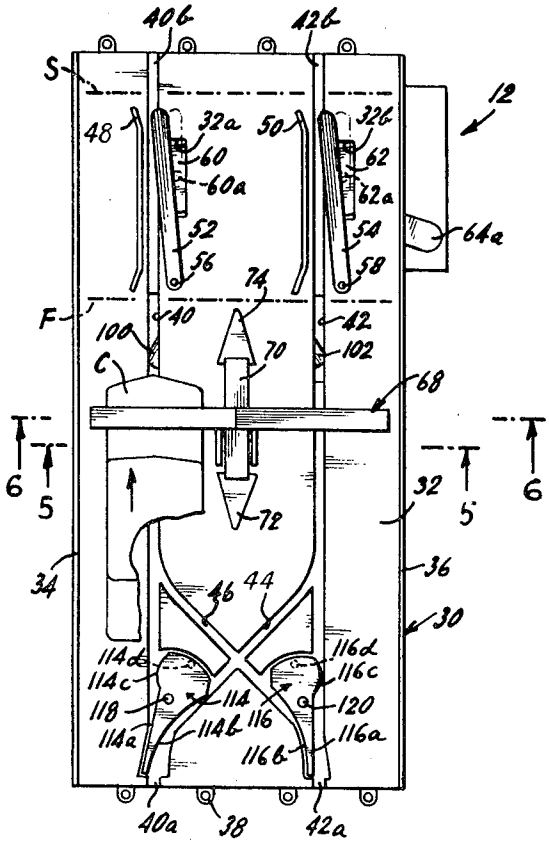
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Primary Examiner—Anton O. Oechsle
Attorney—Amster & Rothstein

ABSTRACT: A starting and finishing gate for use in a racing game which includes a racing course having first and second racing lanes. The gate includes first and second gate members which are arranged in relation to the first and second racing lanes to move between lane blocking positions and lane clearing positions. In the lane blocking positions, the gate members establish a starting line for the cars and when moved to the lane clearing position, the cars are permitted to travel about the racing course. The gate also includes a finish indicator having first and second signals arranged to indicate the arrival at a finish line of one of the cars on one of the racing lanes.

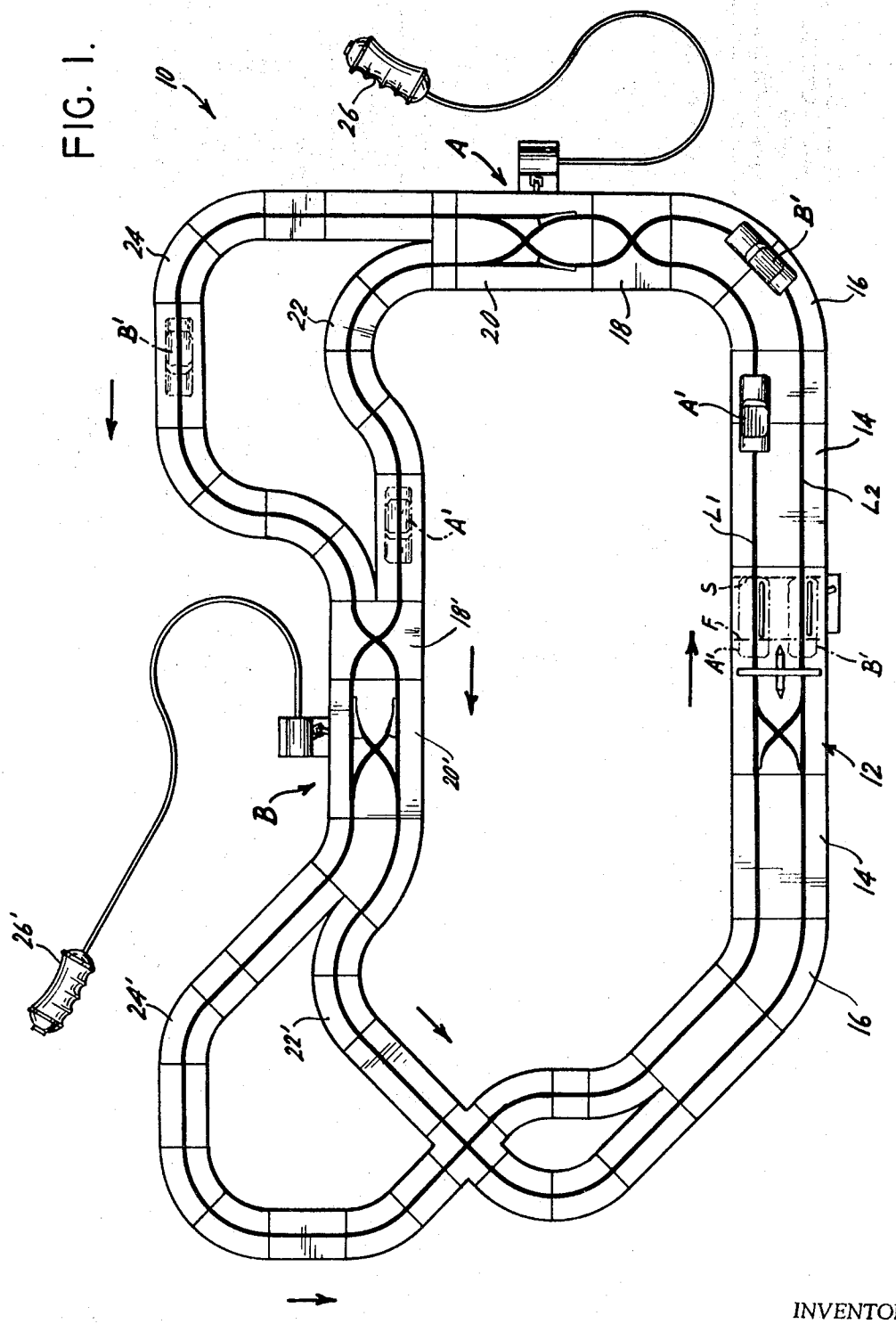


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FIG. 1.



INVENTORS
JULIUS COOPER
ERWIN BENKOE

BY

Amster & Rothstein

ATTORNEYS

FIG. 2.

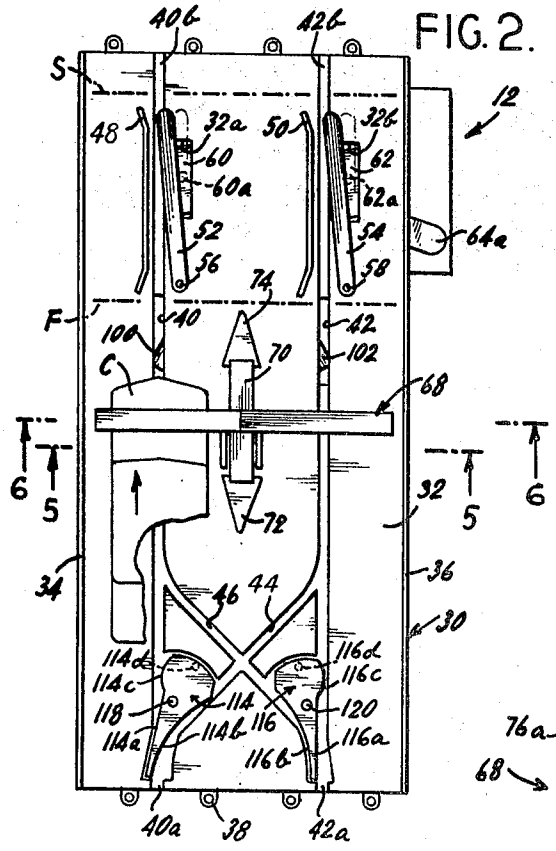


FIG. 3.

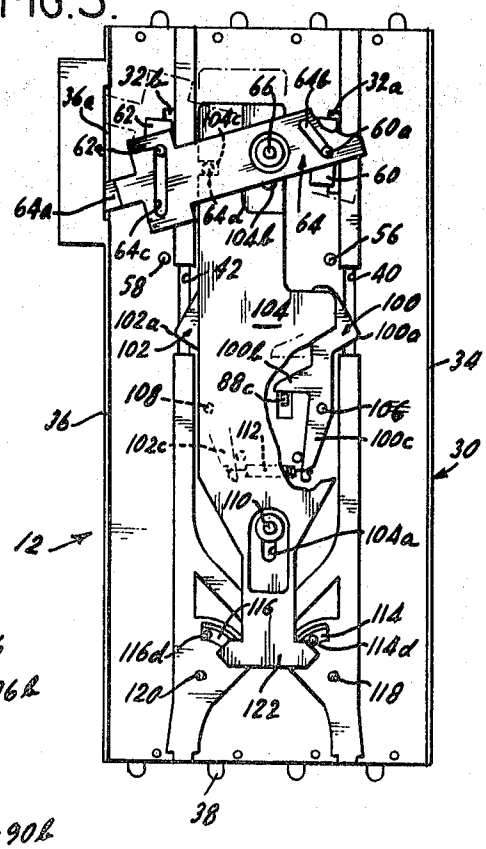


FIG. 4.

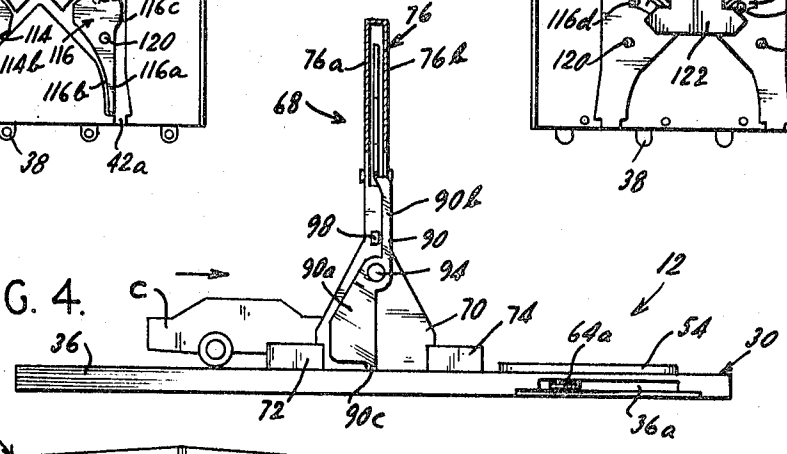


FIG. 5.

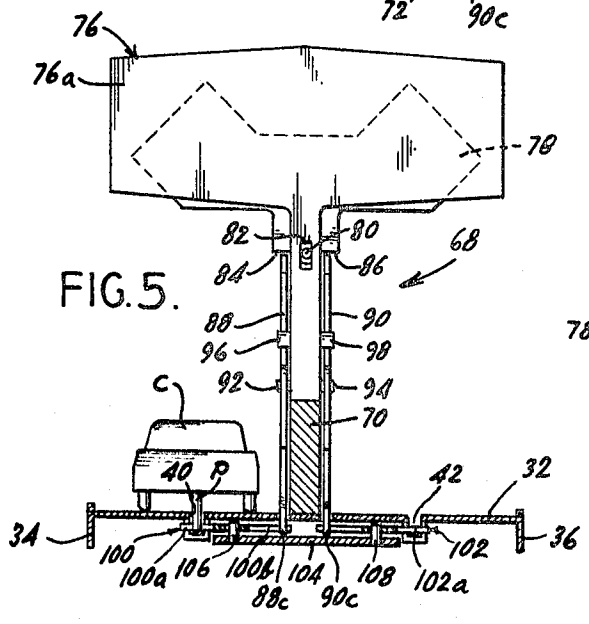
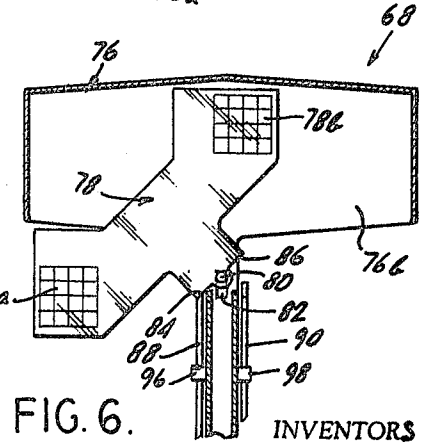


FIG. 6.



INVENTORS
JULIUS COOPER
BY ERWIN BENKOE
Amster & Rothstein
ATTORNEYS

START-FINISH MECHANISM FOR RACING GAME

The present invention relates generally to toys, and in particular, to a starting and finishing gate for use in a racing game wherein self-powered cars travel about a racing course having first and second racing lanes.

In copending application Ser. No. 868,449, filed Oct. 22, 1969, entitled "Vehicle Racing Games," which application is assigned to the assignee of the present application, there is disclosed a racing game which is to be played with at least two vehicles which are driven at substantially the same speed yet may be raced along the raceway or track in different elapsed times, depending upon the manipulative skills of the player of the game. In such racing game, a car is assigned to each of the players, with each player having the facility to switch his own car, as well as that of his opponent from a racing course of longer length to a racing course of shorter length, and vice versa, with a view to causing his own vehicle to traverse the particular course in a shorter elapsed time and to cause his opponent's vehicle to traverse the course in a comparatively longer elapsed time. In a typical illustrative embodiment, there is provided an interchangeable track assembly which includes plural individual track sections which are interconnectable into various track layouts to define the raceway including an inside lane and an outside lane. The raceway includes at least two track sections which include lane switching means individually operable to switch the cars or vehicles from one lane to the other. Respective switch-actuating means are operatively connected to the lane-switching means for manipulation thereof whereby the cars may be switched from one lane to the other and back. A manual control is provided for each lane switching means whereby each of the players may switch either his vehicle or that of his opponent from one lane to the other, with the objective of causing his vehicle to complete one or more laps about the raceway in a shorter elapsed time than his opponent's vehicle.

In the use of this type of racing game, and indeed in almost any racing game, it would be highly desirable to provide an operator-controlled starting gate which would enable the two or more cars to be simultaneously released to travel the racing course and to also provide a finishing gate wherein a clearcut signal is provided along one of the racing lanes to indicate which of the cars has won the race. In the particular racing game of the copending application, wherein both cars may be on one or the other of the racing lanes as they approach the finishing line, it is highly desirable to provide a gating arrangement wherein the cars are directed onto the separate racing lanes as they approach the finish line to avoid a collision between cars on the same lane. Preferably, these related functions should be achieved by a device which is inherently of simple and rugged construction such that it may be manufactured on a mass production basis at relatively low unit cost and utilized over long periods of time without malfunctioning.

Broadly, it is an object of the present invention to provide a starting and finishing gate for an automotive racing game which provides for the start in unison of racing cars and provides a visible signal of the winner at the end of any given race. Specifically, it is within the contemplation of the present invention to provide a starting and finishing gate useful in a racing game wherein cars move between two lanes yet are separated in advance of the finish line such that the winner of the race may be indicated and the cars stopped without causing the cars to interfere with each other.

It is a further object of the invention to provide a starting and finishing gate for use in a racing game which is of simple and rugged construction and is capable of manufacture on a mass production basis at relatively low unit cost.

In accordance with an illustrative embodiment demonstrating objects and features of the present invention, there is provided a starting and finishing gate for use in a racing game, including a racing course having first and second racing lanes which comprises a track body including first and second lane sections forming parts of the first and second racing lanes and adapted to be travelled by first and second cars. First and

second gate members are movably mounted on the track body in operative relation to the first and second lane sections respectively, and are mounted on the track body in operative relation to the first and second lane sections for movement from lane-blocking positions to lane-clearing positions. The gate members establish a starting line for the cars when in the lane blocking positions and free the cars to travel about the racing course when in the lane clearing positions. Control means are provided for moving the first and second gate members in unison to release the cars at the commencement of a race. A finish indicator is provided having respective first and second signalling devices for indicating the arrival at a finishing line of one of the cars in advance of the other. First and second car sensors are mounted on the track body in operative relation to the first and second lane sections, respectively, and are independently movable in response to passage of cars along the corresponding one of the first and second lane sections to provide first and second actuating motions which are coupled to the finish indicator to actuate one or the other of said first and second signalling devices.

As a feature of the invention, the first and second sensors are movable between operative and inoperative positions but are disposed in their operative positions when the gate members are in their lane blocking positions. Means are provided which are operable in response to movement of the gate members to the lane clearing positions for moving the first and second sensors into the inoperative positions and for restoring the first and second sensors to the operative position when the first and second gate members are returned to the lane-blocking positions. Thus, when the gate members are in their withdrawn or retracted position, the race will continue without tripping the finish indicator, notwithstanding the fact that the first and second sensors are operated. When the gate members are brought to the lane-blocking positions wherein they will stop cars at the finish of a race (and also establish a starting position for the next race), the first and second car sensors are enabled to achieve the desired function of providing a signal as to which car has won the race.

As a further feature of the invention, provision is made in advance of the finish indicator along the first and second racing lanes to assure that the cars, whether on separate finishing lanes or on the same finishing lane, will be separated from each other to pass onto individual lanes as they approach the first and second car sensors to signal the finish of the race without interfering with each other and to also properly position the cars for the running of the next race.

The above brief description, as well as further objects, features and advantages of the present invention, will be more fully appreciated by reference to the following detailed description of a presently preferred, but nonetheless illustrative embodiment in accordance with the present invention, when taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a plan view of a typical track assembly defining one specific raceway layout having inside and outside lanes and incorporating a starting and finishing gate embodying features of the present invention;

FIG. 2 is a top plan view of the starting and finishing gate;

FIG. 3 is a bottom plan view of the starting and finishing gate;

FIG. 4 is a longitudinal elevational view, with parts broken away and in section, of the starting and finishing gate;

FIG. 5 is a sectional view on an enlarged scale taken substantially along the line 5–5 of FIG. 2, looking in the direction of the arrows and showing the signal flags housed within the finish indicator; and,

FIG. 6 is a partial sectional view taken substantially along the lines 6–6 of FIG. 2, looking in the direction of the arrows and showing one signal flag in its dropped position indicating the finish and winner of a race.

Referring now to the drawings, there is shown a typical, but purely illustrative, track layout for a racing game, generally designated by the reference numeral 10, in which a starting

and finishing gate, generally designated by the reference numeral 12, in accordance with the present invention, finds useful application. The racing game includes a racing course having a first or inner racing lane L_1 and a second or outer racing lane L_2. The track sections which make up the inner and outer racing lanes or courses L_1, L_2 are of varying lengths, shapes and functions but have slots or grooves which make up the continuous guideways of the inner and outer lanes of the raceway which guideways receive depending guide pins on the cars (see FIG. 5).

In the typical but illustrative track layout, there are provided straight track sections such as indicated at 14 which are substantially rectangular and define straight runs of the raceway, curved track sections such as indicated at 16 which make up the curves of the raceway, fixed dual lane crossover sections such as indicated at 18, 18', lane switching sections such as indicated at 20, 20', plural single lane sections of various sections, lengths and configurations such as those designated at 22, 22' defining continuations of the inner course or lane L_1 and following the respective lane switching sections 20, 20' and further plural single lane sections of various lengths, shapes and configurations such as those designated at 24, 24' defining corresponding runs of the outer lane or course L_2 and likewise following the lane-switching sections 20, 20'.

Typical vehicles or cars for use in the present racing game are shown along lanes L_1, L_2 and have been designated as A', B'. These vehicles include a wheeled chassis containing a fractional horsepower motor which is operated by one or more batteries, such as of "N" size, and interchangeable car bodies to impart different appearances thereto. For a complete description of the construction of typical cars useful in accordance with the present invention, reference may be made to U.S. Pat. No. 3,350,813, entitled "Electrically Powered Wheeled Toy Vehicle," which patent is assigned to the assignee of the present invention.

At the operator-controlled stations A, B, there are provided hand controls 26, 26' which enable the players to manipulate the lane switching track sections 20, 20' as more fully described in copending application Ser. No. 868,449 which is incorporated herein by reference. It will suffice to understand for the present purposes that the substantially constant speed vehicles A', B' will make one or more laps about the racing course, being switched from lane to lane under control of the players at control stations A, B, with the cars starting from starting line S at the start-finish gate track section 12. When the lead car enters the last lap and the trailing car passes gate 12 (in the direction indicated by the directional arrow in FIG. 1), the gate 12 is rendered operative and becomes effective to automatically separate the cars as they complete the last lap (if both are in the same lane), provides a visible indication of the winner of the race at the finish line F, and then stops the cars in their separate lanes at the starting line S for the next race.

Reference will not be made to FIGS. 2 to 6, inclusive, for a complete description of the starting and finishing gate of track section 12 which may be employed in the illustrative racing game 10 which has been described in conjunction with FIG. 1. Gate 12 includes an elongated substantially rectangular track body 30 having an upper wall 32 and depending side flanges 34, 36. The track body, which may be a plastic molded piece, is provided at its opposite ends with connecting means, generally designated by the reference 38, to enable the starting and finishing gate 12 to be connected in various track layouts, as exemplified by the raceway shown in FIG. 1. In its upper wall 32, track body 30 is formed with first and second lane sections, grooves or guides 40, 42 which provide continuous runs of the inner and outer lanes L_1, L_2. Lane section 40 includes an entry end 40*a* and an exit end 40*b*. Similarly, lane section 42 includes an entry end 42*a* and an exit end 42*b*. Track body 30 is also formed in upper wall 32 with crossover grooves or guide lanes 44, 46. Crossover groove or guide lane 44 has an entry end which emerges into the entry end 40*a* of the first or inner lane section 40 and an exit end which merges into the second or outer lane section 42 at an intermediate location. Similarly, and in opposite fashion, crossover groove or guide lane 46 has its entry end merging into the entry end 42*a* of lane section 42 and its exit end merging into lane section 40 at an intermediate location. The function of the crossover grooves 44, 46 in sorting out the cars at the finish of a race will be subsequently described.

Extending along one side of each of the lane sections 40, 42 contiguous to their exit ends 40*b*, 42*b*, are longitudinally extending fixed gate members 48, 50 which may be integrally molded on the upper wall 32 of track body 30. Opposite the stationary first and second gate members 48, 50 are first and second movable gate members 52, 54 which are disposed in operative relation to the first and second lane sections 40, 42 and are movable from lane-blocking positions (illustrated by the full lines in FIG. 2) to lane-clearing positions (illustrated by the dotted lines in FIG. 2). Gate members 52, 54 are mounted at pivots 56, 58 on upper wall 32 to one side of the lanes 40, 42. Upper wall 32 is provided with rectangular cutouts 32*a*, 32*b* to enable actuating arms 60, 62 which are integral with the gate members 52, 54 to project to the underside of track body 30, as seen in FIG. 3.

Disposed at the underside of the track body 30 is a manually operable control member 64 for actuation of gate members 52, 54 in unison. Control member 64 includes a control lever 64*a* projecting through cutout 36*a* in side flange 36. Control member 64 is medially pivoted at 66 on the underside of track body 30 and is provided with curved slots 64*b*, 64*c* which receive actuating pins 60*a*, 62*a* depending from actuating arms 60, 62. Slots 64*b*, 64*c* are dimensioned and positioned in relation to the actuating pins 60*a*, 62*a* such that when control lever 64*a* is in the position illustrated in FIGS. 2 and 3, the gate members 52, 54 are in the illustrated lane-blocking positions and when the control lever 64*a* is moved toward the starting line S, movable gate members 52, 54 swing outwardly into the lane-clearing positions (shown by the dotted lines in FIG. 2) wherein they are substantially parallel to stationary lane members 48, 50 and are out of obstructing relation to lane sections 40, 42. Thus, a car, such as generally designated at C in FIGS. 4 and 5 and having a depending guide pin P, is free to commence its traverse about the raceway 10, for example as shown in FIG. 1.

Mounted on the track body 30 forwardly of the finish line F is a finish indicator, generally designated by the reference numeral 68, which includes a standard 70 removably mounted on opposed mounting blocks 72, 74 which define a vertically extending guideway into which standard 70 may be plugged by the user. Standard 70 carries a downwardly opening signal housing 76 which includes spaced front and rear walls 76*a*, 76*b*. Disposed between the front and rear walls 76*a*, 76*b* is a rockable signalling device 78 which includes first and second signals in the form of checkered flags 78*a*, 78*b*. Signalling device 78 is pivotally mounted intermediate flags 78*a*, 78*b* at a fore-and-aft pivot 80 which is loosely mounted within an elongated vertically extending slot 82 formed in standard 70. Supporting shoulders 84, 86 are formed on the signalling device 78 at opposite sides of pivot 80 which shoulders normally rest upon the upper ends of corresponding coupling or actuating members 88, 90 which are pivotally mounted on standard 70 at laterally extending pivots 92, 94. Actuating members 88, 90 are weight balanced to bear against respective stops 96, 98 formed on standard 70. For example, as seen in FIG. 4, actuating member 90 includes an enlarged head 90*a* below pivot 94 which urges upstanding holding finger 90*b* of actuating member 90 to a position wherein it underlies shoulder 86. Similarly, the opposite coupling or actuating member 88 bears beneath shoulder 84. Together, members 88, 90 hold signal flag in its balanced and hidden position, as illustrated in FIG. 5. When, for example, holding finger 90 swings in the clockwise direction in FIG. 4, as by actuating depending finger 90*c* at the lower end of member 90, the corresponding support for the signal device 78 is removed and it will drop in that

direction. In FIG. 6, the signal device is shown dropped into a position corresponding to actuation of the coupling member 88.

The actuating or coupling members 88, 90 are selectively manipulated to drop the appropriate one of the signal flags 78a, 78b through the provision of first and second car sensors 100, 102 which are mounted on the track body 30 in operative relation to the first and second lane sections 40, 42, respectively, and are independently movable in response to passage of cars along the corresponding one of the first and second lane sections to provide first and second actuating motions for the finish indicator or signalling means 68. Sensors 100, 102 are mounted on a movable slide plate or carrier 104 at pivots 106, 108 such that the car sensors 100, 102 may be moved into and out of operative relation to the depending fingers 88c, 90c on actuating or coupling members 88, 90. Specifically, slide plate or carrier 104 is provided with elongated guide slots 104a, 104b, with guide slot 104a receiving guide pin 110 mounted on or formed integrally with track body 30 and guide slot 104b receiving pivot pin 66. Thus, slide plate or carrier 104 is mounted for limited longitudinal movement relative to track body 30 as determined by the length of guide slots 104a, 104b. Normally, slide plate 104 is in the position illustrated in FIG. 3 wherein the sensors 100, 102 are in a position to impart actuating motion to depending fingers 88c, 90c. This position of the slide plate 104 corresponds to the starting gate being closed and with the movable gate members 52, 54 in their respective lane blocking positions. Control member 64 is provided with an upstanding pin 64d which is received within a cutout 104c in slide plate 104 such that as the control lever 64a is moved to its position to open gate members 52, 54 (the dotted line position in FIG. 3), the slide plate 104 is longitudinally displaced to bring the car sensors 100, 102 out of operative relation to the actuating or coupling members 88, 90. In this clearance position, although sensors 100, 102 are moved by the pins P of cars C traversing the lane sections 40, 42, such actuating movement will not be imparted to the actuating or coupling members 88, 90. However, when control lever 64a is returned to the illustrated position, once again closing gate members 52, 54, car sensors 100, 102 are once again rendered effective in relation to actuating members 88, 90 to signal the end of the race. Specifically, car sensors 100, 102 include sensing parts 100a, 102a, actuating parts 100b, 102b and positioning arms 100c, 102c which are interconnected by spring 112 and bear against appropriate stops to position the sensing parts 100a, 102a to straddle the respective lane sections 40, 42. In this normal position, the actuating parts 100b, 102b bear against the depending fingers 88c, 90c of coupling members 88, 90 which extend through appropriate cutouts formed in the top wall 32 of track body 30. When a car pivots its sensor about its pivot (i.e., sensor 100 moving around pivot 106), the actuating part will contact the corresponding depending finger to manipulate the associated coupling member and initiate the operation of the signalling device in the appropriate direction. Although the sensors are in positions to be actuated by the car pins when the gate is opened (the dotted line position for control member 64 in FIG. 3), the actuating motion imparted thereto is ineffective since the sensors are sufficiently removed from the coupling members 88, 90 such that pivoting of the sensors imparts no motion to the coupling members 88, 90.

Lane sorting is achieved by the provision of lane-switching members 114, 116 at the entry ends 40a, 42a of lane sections 40, 42 and along the crossover grooves 44, 46. Lane-switching members 114, 116 are pivoted at 118, 120 and include outer sides 114a, 116a each of which will serve as one side of the corresponding lane section (i.e., straight side 116a serving as a part of lane section 42) and curved inner sides 114b, 116b each of which will serve as one side of the crossover grooves 44, 46 (i.e., curved side 116b forming part of crossover groove 46). Additionally, lane-switching members 114, 116 include actuating projections 114c, 116c along their outer sides which lie along the respective lane sections 40, 42 such that the passage of cars along the corresponding lane sections will automatically switch the positions of the lane-switching members. The curved inner sides 114b, 116b perform the same function. For example, lane-switching member 116 is in a position wherein a car will pass along lane section 42. However, when the pin P of a car passes projection 116c, lane-switching member 116 is swung to a position wherein the next car will be diverted to travel along crossover lane 46. Similarly, lane-switching member 114 is in a position wherein the next car passing therealong will travel along crossover groove 44 and as it does, the inner curved side 114b is contacted and moves lane-switching member 114 to a position wherein the next car will pass directly along lane section 40. It will be appreciated that the lane-switching members 114, 116 are operated independently of each other and assume either of the two illustrated positions depending upon the passage of cars along lane sections 40, 42. However, when the end of the race is to be indicated, it is essential that both lane-switching members 114, 116 occupy the same relative position (i.e., both being arranged to allow cars to pass along lane sections 40, 42, respectively and not be crossed over). To this end, lane-switching members 114, 116 are provided with depending cam followers 114d, 116d which project through corresponding arcuate slots in upper wall 32 and are positioned to be actuated by a common camming member 122 formed on slide plate or carrier 104. Camming member 122, which is moved in response to manipulation of control lever 64a, engages cam followers 114d, 116d to position the lane-switching members 114, 116 in the same relative position. For the illustrated condition wherein lane-switching member 114 would divert the next car along crossover track 44, cam 122 will contact cam follower 114d and swing the lane-switching member 114 into the same relative position as lane-switching member 116. Thus, if the lead car at the end of the race comes along the first or inner lane section 40, it will pass along that lane section. If the trailing car happens to be along the same inner lane section, the lane switching member 114 will have been switched by the first car into the illustrated FIG. 2 position whereupon the trailing car will move along crossover track 44 and finish along the second or outer lane section 42. If, however, the trailing car is moving along the outer lane section 42, lane switching member 116 will be in the appropriate position to allow the car to pass along that section and finish separately in its gate.

A typical sequence of operations will now be described in order to facilitate a further understanding of the present invention:

In order to start the race, control lever 64a is placed in the illustrated position to close gate members 52, 54 and the two cars to be raced are placed along the inner and outer lanes 40, 42 with their guide pins P being in the guideways and trapped by gate members 52, 54 cooperating with stationary gate members 48, 50. The signalling device 78 is balanced within the housing 76. In order to start the race, control lever 64a is moved from the FIG. 2 position toward the starting line S and into the dotted line position shown in FIG. 3, whereupon gate members 52, 54 swing to their open position and the cars traverse the racing course. In the dotted line position of control member 64, car sensors 100, 102 are moved away from coupling members 88, 90 as previously described. The race continues for one or more laps until both cars pass the starting line S and begin the final or flag lap at which time the operator returns the control lever 64a to the illustrated position. This moves the gate members 52, 54 to the lane blocking position, brings the car sensors 100, 102 into operative relation to the coupling members 88, 90 and cams the lane-switching members 114, 116 into the same relative position. Assuming that the car along the inner lane L_1 approaches the finishing line F first, it moves past lane switching member 114 switching it into the illustrated position. Thereupon, its pin P comes into contact with depending finger 88c of coupling member 88 pivoting the same to a position wherein the support beneath shoulder 84 is removed and the corresponding signal flag 78a

is dropped (FIG. 6) to signal that the car along the first or inner lane L_1 has won the race. If the trailing car happens to be along the inner lane, it will automatically be switched to the outer lane by guideway 44 and lane-switching member 114; and if it happens to be along the outer lane, it will pass therealong. Both cars will end up in chocked starting positions at starting line S for the next race. Prior to initiation of the next race, the signal flag 78 is once again moved to the balance position illustrated in FIG. 5 and the gate is ready for its next operation.

A latitude of modification, change and substitution is intended in the foregoing disclosure and, in some instances, some features of the invention will be used without a corresponding use of other features. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the spirit and scope of the present invention.

What we claim is:

1. A starting and finishing gate for use in a racing game including a racing course having first and second racing lanes formed by interconnecting a plurality of individual track sections, one of said track sections comprising a track body including first and second lane sections adapted to be travelled by first and second cars, first and second gate members movably mounted on said track body in operative relation to said first and second lane sections respectively and movable from lane-blocking positions in relation to said first and second lane sections to lane clearing positions, said gate members establishing a starting line for said cars when in said lane-blocking positions and freeing said cars to travel about said racing course when in said lane-clearing positions, control means for moving said first and second gate members in unison, a finish indicator having respective first and second signals for indicating the arrival at a finish line of one of said cars along one of said lanes in advance of the other, first and second car sensors mounted on said track body in operative relation to said first and second lane sections respectively and independently movable in response to the passage of cars along the corresponding one of said first and second lanes to provide first and second actuating motions and first and second coupling means disposed between said first and second sensors and said finish indicator and respectively responsive to said first or second actuating motions to actuate the corresponding one of said first and second signals of said finish indicator.

2. A starting and finishing gate according to claim 1 wherein said finish indicator includes an indicator housing, a signal member normally disposed in and hidden by said indicator housing and mounted thereon for rocking movement in a plane substantially transverse to said first and second lane sections, said signal member having a first flag overlying said first lane section and a second flag overlying said second lane section, said first coupling means being operable to rock said signal member in a direction to drop said first flag over said first lane section to serve as said first signal and said second coupling means being operable to rock said signal member in the opposite direction to drop said second flag over said second lane section to serve as said second signal.

3. A starting and finishing gate according to claim 1 wherein said first and second lane sections each include an entry end, a first crossover lane extending from the entry end of said first lane section and merging into said second lane section, a second crossover lane extending from the entry end of said second lane section and merging into said first lane section, a first movable lane-switching member disposed in operative relation to said first lane section and operable in response to the passage of cars to move successively between an inoperative position wherein a car passing along said first lane section remains thereon and a switching position wherein the next car passing along said first lane section is diverted to said first crossover lane and a second movable lane-switching member disposed in operative relation to said second lane section and operable in response to the passage of cars to move successively between an inoperative position wherein a car passing along said second lane section remains thereon and a switching position wherein the next car passing along said second lane section is diverted to said second crossover lane.

4. A starting and finishing gate according to claim 3 including means operable in response to movement of said first and second gate members into said lane-blocking positions for moving said first and second lane switching members into the same relative position.

5. A starting and finishing gate according to claim 1 wherein said finish indicator includes first and second flags and a housing arranged to normally obscure said flags from view, said first and second coupling means being operable to drop said first and second flags from within said housing in response to actuation of said first and second car sensor respectively.

6. A starting and finishing gate according to claim 5 wherein said finish indicator includes a stanchion, said housing being mounted on said stanchion and extending over said first and second sections.

7. A starting and finishing gate for use in a racing game including a racing course having at least one racing lane formed by interconnecting a plurality of individual track sections, one of said track sections comprising a track body including a lane section adapted to be travelled by one or more cars, a gate member movably mounted on said track body in operative relation to said lane section and movable from a lane blocking position in relation to said lane section to a lane clearing position, said gate member establishing a starting line for a car when in said lane blocking position and freeing said car to travel about said racing course when in said lane clearing position, control means for moving said gate member, a finish indicator associated with said track body having a signal for indicating the arrival at a finish line of a car, a car sensor mounted on said track body in operative relation to said lane section and movable in response to the passage of a car along said lane section to provide an actuating motion and coupling means disposed between said sensor and said finish indicator and responsive to said actuating motion to actuate said finish indicator.

8. A starting and finishing gate according to claim 7 wherein said finish indicator includes an indicator housing, a signal member normally disposed in and hidden by said indicator housing and mounted thereon for rocking movement in a plane substantially transverse to said lane section, said signal member having a flag overlying said lane section, said coupling means being operable to rock said signal member in a direction to drop said flag over said lane section.

9. A starting and finishing gate for use in a racing game including a racing course having at least one racing lane comprising a track body including a lane section adapted to be travelled by one or more cars, a gate member movably mounted on said track body in operative relation to said lane section and movable from a lane-blocking position in relation to said lane section to a lane clearing position, said gate member establishing a starting line for a car when in said lane-blocking position and freeing said car to travel about said racing course when in said lane-clearing position, manually operable control means for moving said gate member, a finish indicator having a signal for indicating the arrival at a finish line of a car, a car sensor mounted on said track body in operative relation to said lane section and movable in response to the passage of a car along said lane to provide an actuating motion, coupling means disposed between said sensor and said finish indicator and responsive to said actuating motion to actuate said finish indicator, said sensor being movable between operative and inoperative positions in relation to said coupling means, said sensor being disposed in an operative position when said gate member is in said lane blocking position and means operable in response to movement of said gate member into said lane-clearing position by said control means for moving said sensor into said inoperative position and for restoring said sensor to said operative position when said gate member is returned to said lane blocking position by said control means.

10. A starting and finishing gate according to claim 9 wherein said finish indicator includes a flag and a housing arranged to normally obscure said flag from view, said coupling means being operable to drop said flag from within said housing in response to actuation of said car sensor.

11. A starting and finishing gate according to claim 10 wherein said finish indicator includes a stanchion, said housing being mounted on said stanchion and extending over said lane section.

12. A starting and finishing gate for use in a racing game including a racing course having first and second racing lanes comprising a track body including first and second lane sections adapted to be travelled by first and second cars, first and second gate members movably mounted on said track body in operative relation to said first and second lane sections, respectively and movable from lane blocking positions in relation to said first and second lane sections to lane-clearing positions, said gate members establishing a starting line for said cars when in said lane-blocking positions and freeing said cars to travel about said racing course when in said lane-clearing positions, manually operable control means for moving said first and second gate members in unison, a motion-responsive finish indicator having respective first and second signals for indicating the arrival at a finish line of one of said cars in advance of the other, first and second car sensors mounted on said track body in operative relation to said first and second lane sections respectively and independently movable in response to the passage of a car along the corresponding one of said first and second lane sections to provide first and second actuating motion, first and second coupling means disposed between said first and second sensors and said finish indicator and respectively responsive to said first or second actuating motions to actuate the corresponding one of said first and second signals of said finish indicator, said first and second sensors being movable between operative and inoperative positions in relation to the first and second coupling means respectively, said first and second sensors being disposed in their operative positions when said gate members are in said lane-blocking positions, and means operable in response to movement of said gate members into said lane-clearing positions by said control means for moving said first and second sensors into said inoperative positions and for restoring said first and second sensors to said operative positions when said first and second gate members are returned to said lane-blocking positions by said control means.

13. A starting and finishing gate according to claim 12 wherein said first and second lane sections each include an entry end, a first crossover lane extending from the entry end of said first lane section and merging into said second lane section, a second crossover lane extending from the entry end of said second lane section and merging into said first lane section, a first movable lane switching member disposed in operative relation to said first lane section and operable in response to the passage of cars to move successively between an inoperative position wherein a car passing along said first lane section remains thereon and a switching position wherein the next car passing along said first lane section is diverted to said first crossover lane and a second movable lane-switching member dispose in operative relation to said second lane section and operable in response to the passage of cars to move successively between an inoperative position wherein a car passing along said second lane section remains thereon and a switching position wherein the next car passing along said second lane section is diverted to said second crossover lane.

14. A starting and finishing gate according to claim 13 including means operable in response to movement of said first and second gate members into said lane-blocking positions for moving said first and second lane switching members into said inoperative positions.

15. A finishing gate for use in a racing game utilizing at least two cars comprising first and second finishing lanes, a finish indicator having respective first and second signals for indicating the arrival at a finish line of one of said cars along one of said finishing lanes in advance of the other of said cars, first and second sensors arranged along said first and second lanes respectively and each movable in response to the passage of a car along the corresponding one of said finishing lanes, means operatively connected between said first and second sensors and said finish indicator for actuating the same to provide respective first and second signals in accordance with the movement of one or the other of said first and second car sensors and means in advance of said finishing lanes for assuring that said cars, whether on separate finishing lanes or on the same finishing lane will be separated from each other to pass along said first and second finishing lanes respectively as they approach said first and second car sensors.

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