March 10, 1953 A. R. ZAICHICK 2,631,041

HORSE RACING GAME

Filed July 19, 1949 3 Sheets-Sheet 1

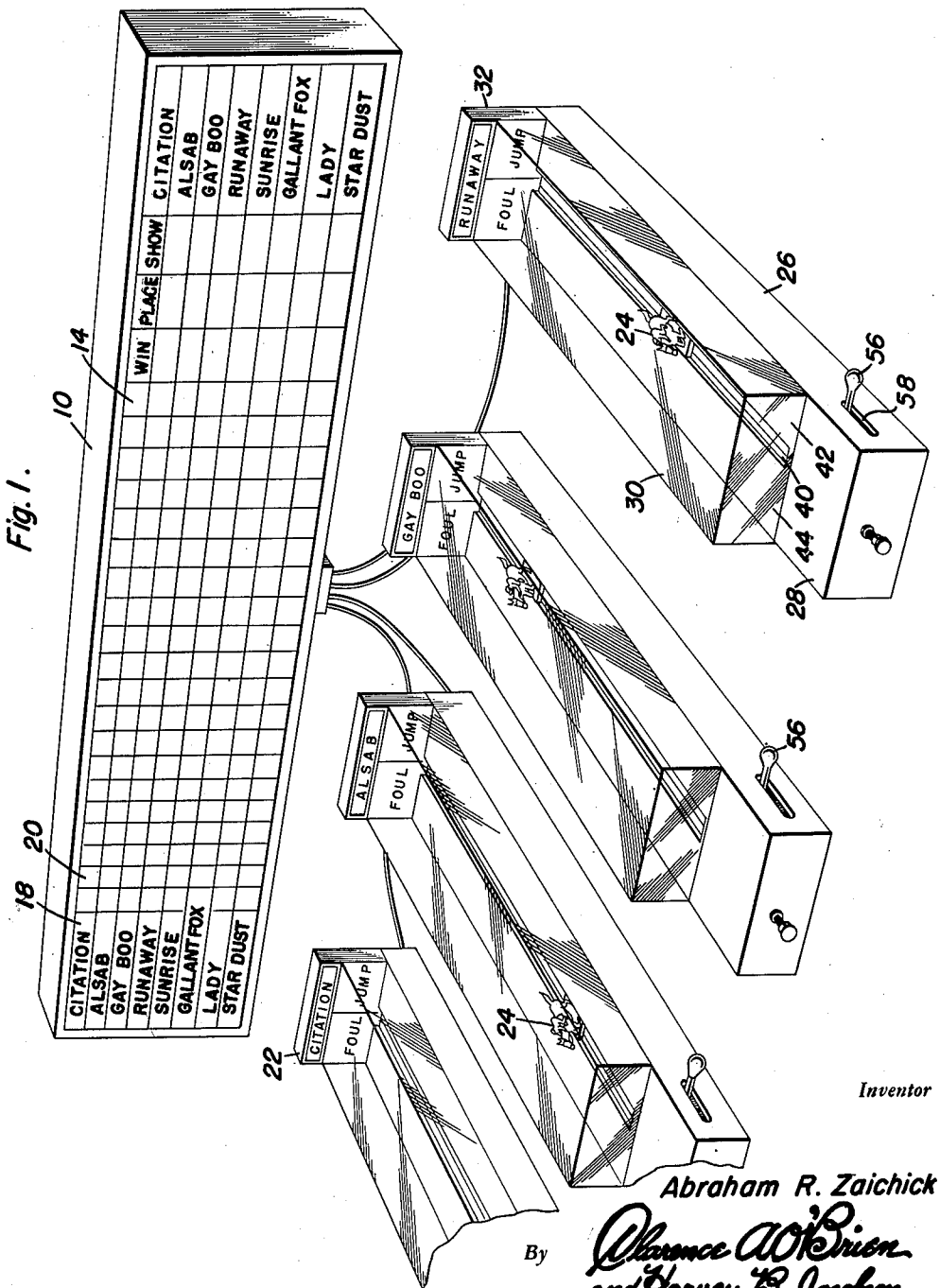


Fig. 1.

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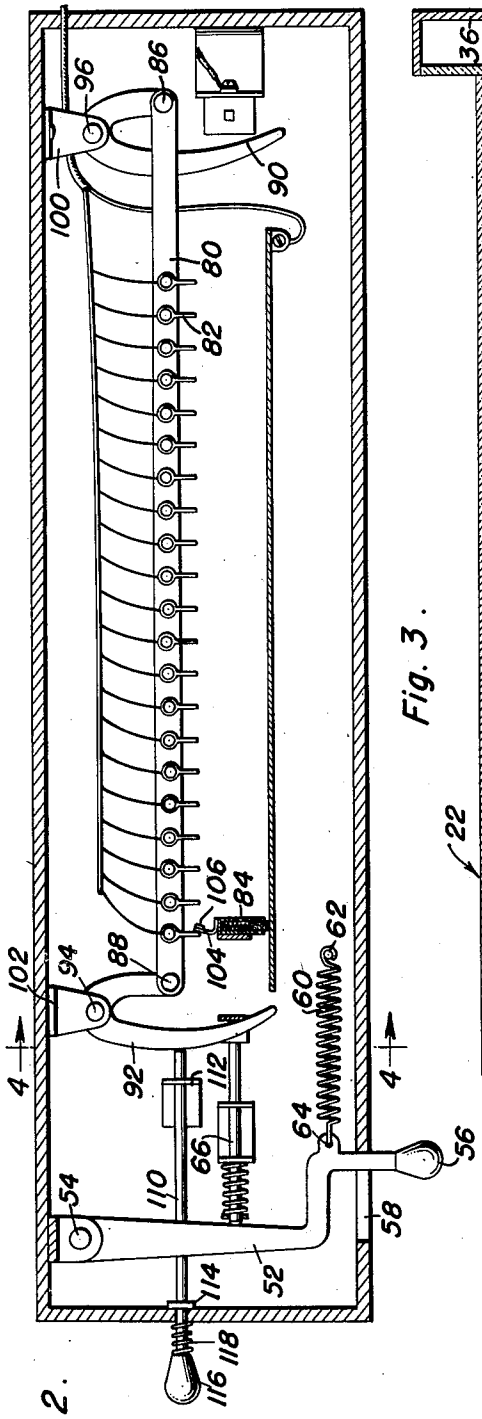


Fig. 2.

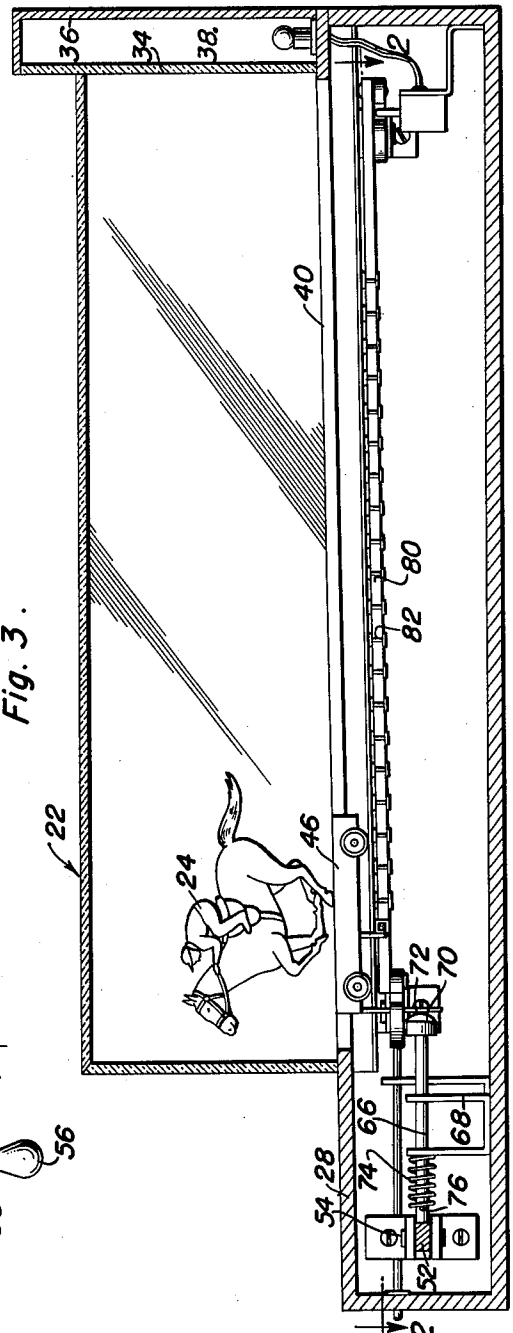


Fig. 3.

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HORSE RACING GAME

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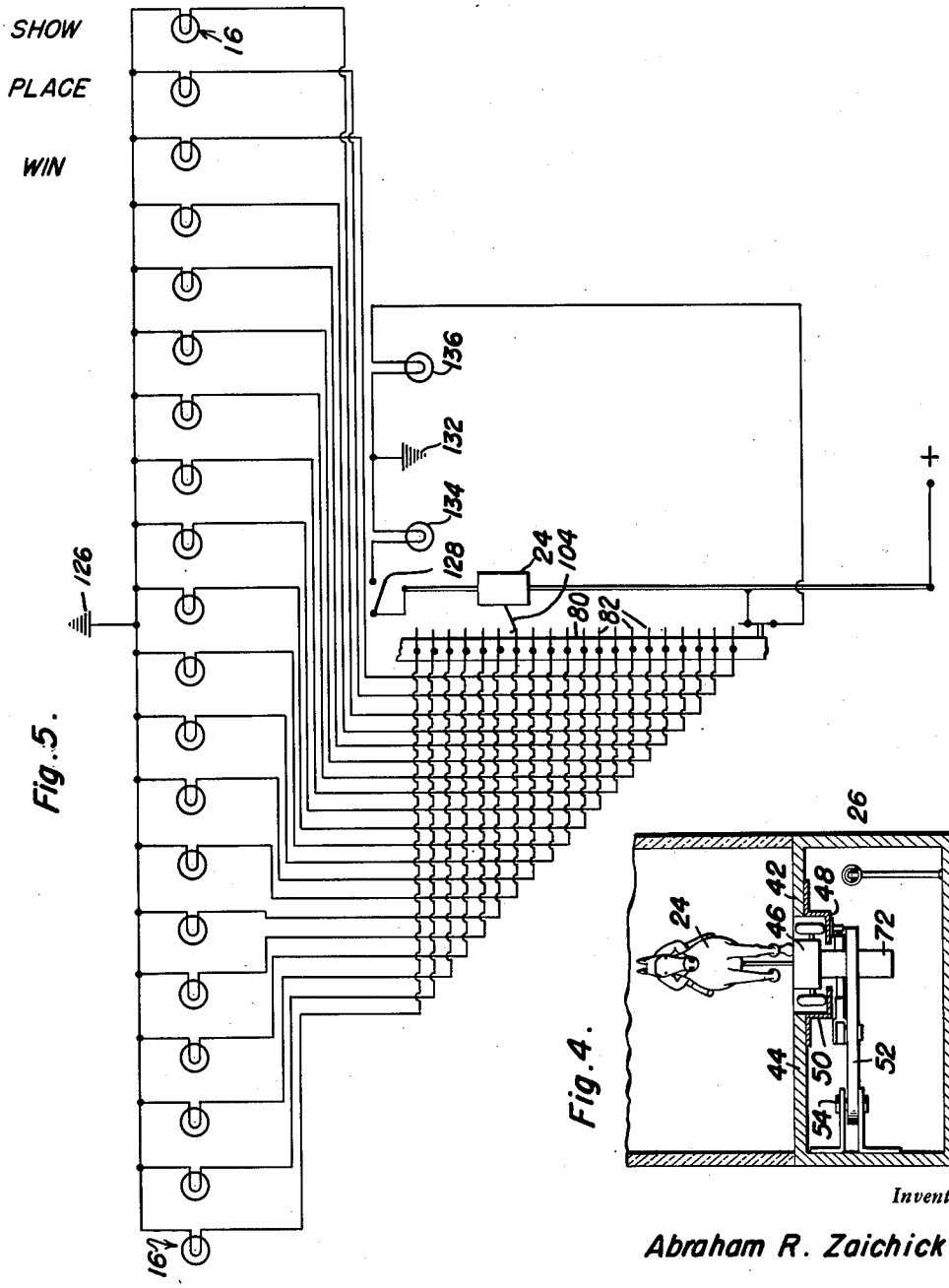


Fig. 5.

Fig. 4.

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UNITED STATES PATENT OFFICE

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HORSE RACING GAME

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Application July 19, 1949, Serial No. 105,574

5 Claims. (Cl. 273—86)

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This invention relates to game apparatus, and more particularly appertains to a racing game in which models or pieces simulating horses or the like are moved along a course by mechanical or other means, the progress of the pieces being recorded on a remote score board or chart.

The primary object of the present invention is to provide a combined game of skill and chance wherein individual spring-actuated or similar mechanical means are provided for impelling each piece or horse replica forwardly and upwardly along its respective guideway, the game piece or horse replica being then free to travel downwardly from the upper starting point under its own impetus to the lower finish point, with a series of contact points being provided along the guideway so as to record on a chart or board the travel of the game piece and to indicate the winners of a race.

Another object of this invention is to provide means for moving the contact points disposed along the guideway out of contact engagement by the game piece or horse replica, in the event that the game piece is impelled upwardly beyond the starting point, thus insuring that a certain amount of skill is required in controlling the initial movement of the game piece or horse replica.

These and ancillary objects and structural features of merit are attained by this invention, a preferred embodiment of which is set forth in the following description and illustrated in the accompanying drawings, wherein:

Figure 1 is a view in perspective of a game apparatus, constructed in accordance with the principles of this invention;

Figure 2 is a sectional view of one of the individual casings housing a game piece, the fixed contact points and the actuating means for impelling each game piece along its respective guideway being illustrated in plan view;

Figure 3 is a longitudinal vertical sectional view, illustrating the game piece in side elevation on the inclined guideway or track;

Figure 4 is a transverse sectional view taken on line 4—4 of Figure 2; and

Figure 5 is a schematic view of the wiring arrangement.

Generally, as seen in Figure 1, this invention which is directed to an apparatus for use as a group game, comprises an elongated illuminated board 10 which has a translucent or transparent face 14. A plurality of longitudinally extending, vertically spaced sets of lamps 16 are mounted within the board and disposed behind the face 14 in alignment with the longi-

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tudinally extending rows 18. Each of the lamps 16 is disposed in alignment with one of the blocks or sections 20 in each of the rows 18. A row 18 is provided and corresponds to one of the individual housings 22 for the game pieces or replicas of race horses 24. Of course, various other objects may be simulated, such as racing cars, or the like. It is to be noted that the space 14 is inscribed at each of its ends with the names of the particular pieces 24, so as to identify each of the pieces. Also, the vertical columns are arranged at one end of the board, the columns being the "win," "place" and "show" respectively, the columns also being in alignment with lamp 16.

The casing 22 consists of a rectangular bottom portion 26 having upstanding side walls and connected end walls with a top wall 28 being disposed at one end of the casing. A rectangular transparent cover 30 is disposed on the remaining open portion of the top section and is secured at one end to a back board 32 which has a transparent front face 34 and a back section 36 to define a compartment 38.

A trackway or guideway 40 is formed within the transparent housing 30 and includes two longitudinally extending, downwardly inclined strips 42 and 44 disposed on the top of the casing 26 and spaced at their inner edges from each other. The game pieces 24 are mounted on wheeled carriages 46, the carriage being adapted to travel on opposed tracks 48 and 50 which depend from and are secured to the inner edges of the sections 42 and 44. It is to be particularly noted that the sections 42 and 44 are inclined downwardly, so that the tracks 48 and 50 are inclined downwardly, the game pieces 24 being adapted to travel downwardly under their own impetus, with the wheels of the carriage 46 travelling on the tracks 48 and 50 from the back board 32 relative to the finish point at the track 28.

Means is provided for forcing or moving the game pieces upwardly to the starting point at the top of the guideway 40 and includes a lever 52 which is pivoted, as at 54, to one of the side walls of the casing 26 and which is provided with an offset end 56 extending through a slot 58 in the opposing side wall. A spring 60 is anchored, as at 62, to the bottom wall of the casing 26 and connected, as at 64, to the lever in order to retain the same in its forward position and urge the same forwardly, when it is manually moved rearwardly about its pivot 54 and released. When the lever 52 is released, it is adapted to

move against a plunger 66 which is slidably disposed in a U-shaped retaining bracket 68. The plunger is provided at its forward end with an enlarged button 70 adapted to strike against a depending bar 72, which is formed integrally with the carriage 46. A spring 74 is concentrically disposed about the rear end of the striker rod or bar 66 and is positioned between a transverse pin 76 and the rearward leg of the U-shaped bracket 68, so as to retain the plunger in position for engagement by the lever 52. Thus, it can be seen that by moving the lever 52 rearwardly and then releasing the same, the lever is urged by the spring 60 into striking engagement on the plunger 66. The plunger 66 is thus moved forwardly into striking engagement with the bar 72 carried by the carriage 46, urging the carriage upwardly along the inclined trackway to the starting point, adjacent the back board 32.

An elongated bar 80 carries a series of spaced laterally extending fixed contact elements 82, the bar 80 being normally disposed in the path of travel of the piece 24, so that the fixed contact points 82 are engaged by a contact member 84, which extends laterally from the game piece 24. The bar 80 is pivoted at its opposing ends as at 86 and 88 on cams 90 and 92 which are pivoted as at 94 and 96 to retaining brackets 100 and 102. The contact 84 comprises a wiper arm 104 which is constructed with a rubber face 106 so that, as the game piece moves upwardly, the rubber face hits against the contact 82 and does not form a circuit with the contact rod 80 and the contact points 82, which may be silver points.

While the rod or contact bar 80 is normally disposed parallel with the game piece 24, so that the fixed points 82 are contacted by the wiper arm 104, in the event that the game piece is impelled upwardly at such a rate of speed so that it passes by the first fixed contact point 82 on the rod 80, the carriage 46 will strike against the cam 90, pivoting the same about its pivot point 96 and moving the pivoted end 86 on the cams. When the cam 90 moves about its pivot point, the end 86 of the bar 80 is moved outwardly and upwardly, thus moving the rear cam 92 rearwardly and moving the bar 80 out of parallel placement with the playing piece 24, so that the fixed contact points 82 are moved out of possible engagement by the wiper arm 104. When the carriage 46 descends it strikes rear cam 92 and urges such into engagement with the reset rod 110 by moving the rear cam 92 forwardly.

The reset rod 110 is slidably disposed through retaining brackets 112 and 114 and is adapted to be moved outwardly upon movement of the cam 92. The reset rod 110 is formed with an enlarged outer end 116 and a spring 118 is disposed between the end 116 and the end wall of the casing 26. Thus, the rod 110 is normally retained in the position illustrated in Figure 2 by the spring and is provided to reset the rod 80 in its normal parallel position, as illustrated in Figure 2, with respect to the playing piece after the cam 92 has been driven rearwardly past its normal position.

While the tracks 48 and 50 are inclined to insure the downward travel of the game pieces 24, there is a possibility of one of the game pieces being driven up the tracks 48 and 50 to stop immediately behind one of the contact elements 82. Since the game piece 24 will be retained intermediate the ends of the tracks 48 and 50 by the engagement of its wiper arm 104 with said one contact element 82, it will be necessary to pivot the bar 80 away from the wiper arm. This may be accomplished by pressing inwardly on the outer end 116 of the reset rod 110. The game piece 24 will then move down the inclined tracks 48 and 50 and strike the cam 92 to reset the bar 80.

Attention is now directed to Figure 5 of the drawings for a more detailed explanation of the wiring arrangement.

It is to be noted that each of the contacts 82 is wired to one of the lamps 16 forming a circuit, which is grounded as at 126. Thus, as the carriage moves downwardly on the track, the arm 104 extending laterally therefrom wipes against the contacts 82 and the lamps 16 are successively illuminated from left to right to depict the rate of travel of the carriage and horse replica mounted thereon. However, in the event that the carriage is propelled up the trackway at too great a speed, the bar 80 will be moved into an angular position, out of its normal straight position, and a switch 128 will be closed, completing a circuit, which is grounded as at 132 and in which are wired lamps 134 and 136, the latter being mounted in the compartment 38, and illuminate the sign indicating a foul jump on the transparent front face 34 of the compartment 38, as illustrated in Figure 1.

Having described the invention, what is claimed as new is:

1. A racing game comprising a casing, an inclined trackway in said casing, a racing object movably disposed on said trackway, spring actuated means for propelling said object up the trackway including a lever pivotally mounted in the casing and extending outwardly therefrom, a spring connected to said lever and casing for urging said lever forwardly upon manual retraction and release thereof, a plunger slidably mounted in the casing, said lever swinging against and urging the plunger forwardly, an arm carried by the object and engaged by the plunger, said object having an extending flexible wiper arm, a bar pivotally mounted at its opposing ends and normally disposed parallel with and adjacent to the trackway, fixed contacts carried by the bar and adapted to be sequentially engaged by the wiper arm, and electrical scoring means associated with said contacts, said bar having depending means at its upper end which upon engagement by said racing object pivots the bar and fixed contacts out of position to be engaged by said wiper arm.

2. A racing game comprising a casing, an inclined trackway in said casing, a racing object movably disposed on said trackway, spring actuated means for propelling said object up the trackway including a lever pivotally mounted in the casing and extending outwardly therefrom, a spring connected to said lever and casing for urging said lever forwardly upon manual retraction and release thereof, a plunger slidably mounted in the casing, said lever swinging against and urging the plunger forwardly, an arm carried by the object and engaged by the plunger, said object having an extending flexible wiper arm, a bar pivotally mounted at its opposing ends and normally disposed parallel with and adjacent to the trackway, fixed contacts carried by the bar and adapted to be sequentially engaged by the wiper arm, and electrical scor-

ing means associated with said contacts, said bar being mounted at its opposing ends on cams, said cams being pivoted on the casing and one of said cams upon engagement by the racing object moving the bar relative to the trackway whereby the contacts are moved out of position for preventing engagement by the wiper arm.

3. A racing game comprising a casing, an inclined trackway in said casing, a racing object movably disposed on said trackway, said object having an extending flexible wiper arm, a bar pivotally mounted at its opposing ends and normally disposed parallel with and adjacent to the trackway, fixed contacts carried by the bar and adapted to be sequentially engaged by the wiper arm, and electrical scoring means associated with said contacts, said bar having depending means at its upper end which upon engagement by said racing object pivots the bar and fixed contacts out of position to be engaged by said wiper arm.

4. A racing game comprising a casing, an inclined trackway in said casing, a racing object movably disposed on said trackway, said object having an extending flexible wiper arm, a bar pivotally mounted at its opposing ends and normally disposed parallel with and adjacent to the trackway, fixed contacts carried by the bar and adapted to be sequentially engaged by the wiper arm, and electrical scoring means associated with said contacts, said bar being mounted at its opposing ends on cams, said cams being pivoted on the casing and one of said cams upon engagement by the racing object moving the bar relative to the trackway whereby the contacts are moved out of position for preventing engagement by the wiper arm.

5. The racing game of claim 4 wherein said one cam actuates a switch for illuminating indicia indicating a foul jump when engaged by said racing object.

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