

May 3, 1955

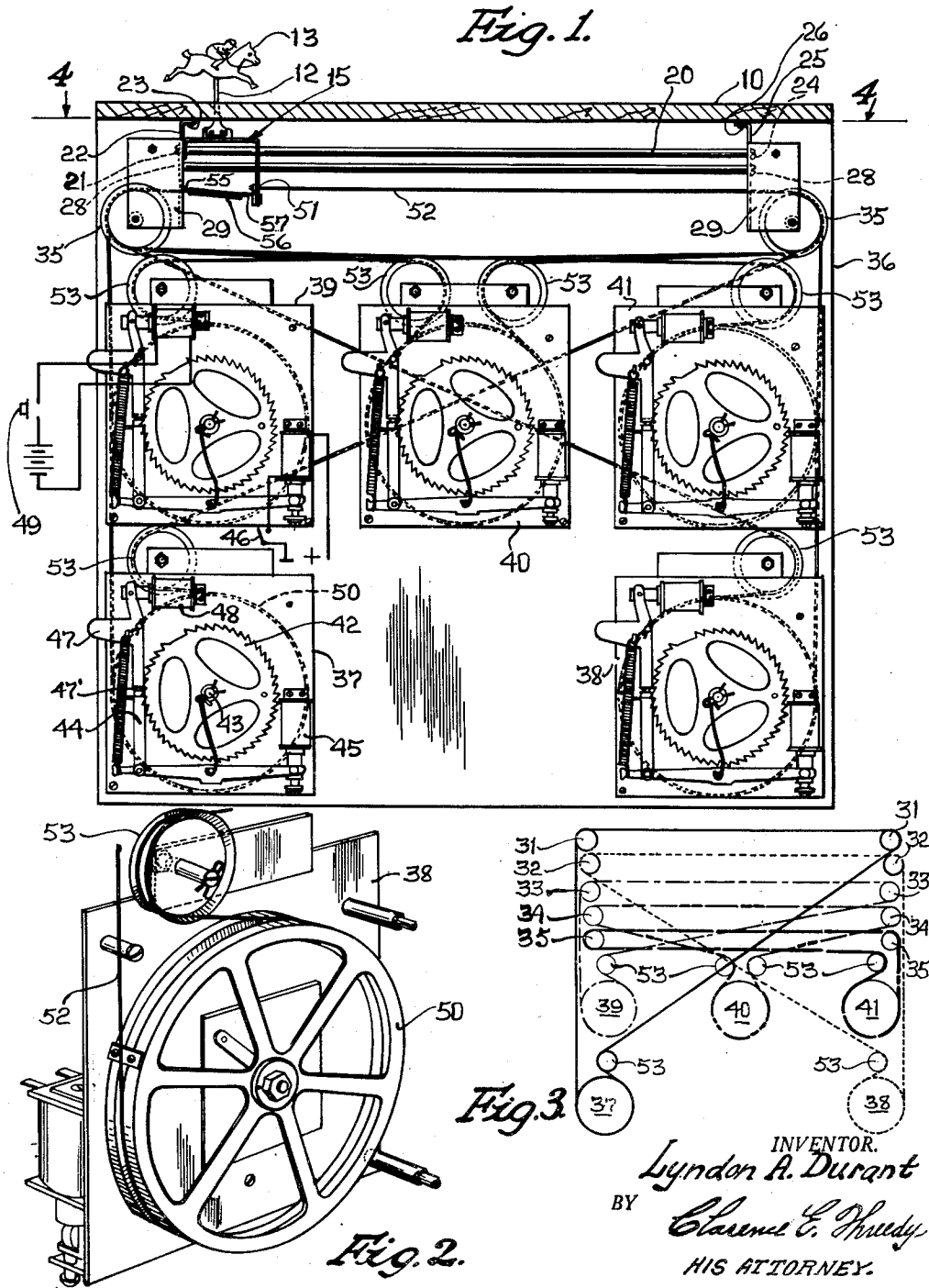
L. A. DURANT

2,707,637

RACING GAME APPARATUSES

Filed Oct. 29, 1951

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

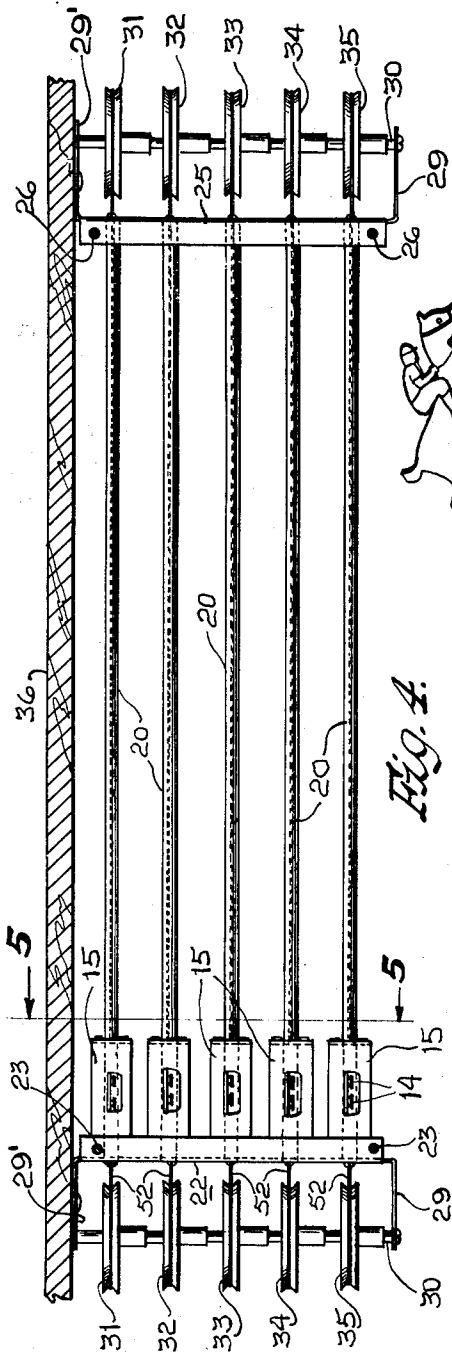


Fig. 4.



Fig. 6.

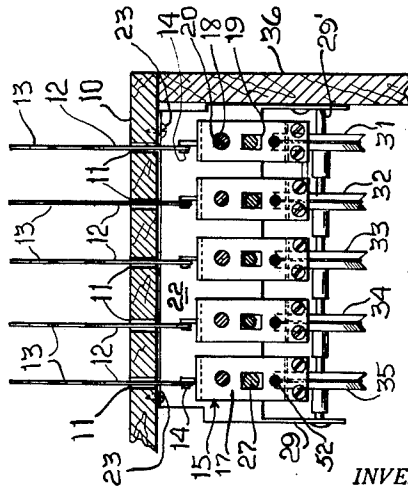


Fig. 5.

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RACING GAME APPARATUSES

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Application October 29, 1951, Serial No. 253,621

2 Claims. (Cl. 273--86)

This invention relates to new and useful improvements in racing game apparatuses in which a plurality of simulated horses are advanced independently step by step along paths arranged in parallel relation with respect to each other, there being one horse for each path. The principal object of the invention resides in the provision of a simple, effective and economical arrangement for advancing the simulated horses step by step along the parallel paths, the arrangement permitting the employment of a well-known type of step-up mechanism.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings showing the preferred form of construction, and in which:

Fig. 1 is a side elevational view, partly in section, of the amusement game apparatus embodying the invention;

Fig. 2 is a perspective view of an advancing drum;

Fig. 3 is a schematic illustration showing the driving belts for the respective pulleys of the advancing means;

Fig. 4 is a sectional detail view taken substantially on line 4-4 of Fig. 1;

Fig. 5 is a sectional detail view taken substantially on line 5-5 of Fig. 4;

Fig. 6 is a fragmentary perspective view of the carriage for supporting the simulated horse.

Referring more particularly to the drawings in which I have shown the preferred form of construction of my invention, 10 indicates a horizontally arranged panel which is provided with a plurality of slots 11 arranged in equal spaced parallel relation with respect to each other and extending lengthwise of the panel 10.

Projecting upwardly through these slots are stems 12, at the upper ends of which are carried simulated horses 13 preferably in running posture.

The stems 12 are attached as at 14 to carriages 15. Each carriage 15 is substantially U-shaped to provide a substantially horizontal bight portion 15' from which extends a relatively short leg 16 and a relatively long leg 17. The legs 16 and 17 are each provided with an opening 18, with the opening 18 of the leg 17 in alignment with the opening 18 of the leg 16. The leg 17 below the opening 18 is provided with a rectangular slot 19.

Through the openings 18 of the legs 16 and 17 extends a supporting rod 20, one end of which is connected as at 21 to a mounting plate 22 secured as at 23 to the mounting panel 10. The opposite end portion of the rod 20 is connected as at 24 to a mounting plate 25 similar to the mounting plate 22 and, like the mounting plate 22, connected as at 26 to the panel 10.

Below and in parallel relation to the supporting rod 20 is a guide rod 27 extending through the slot 19 and having its opposite end portions connected as at 28 to the mounting plates 22 and 25. These mounting plates 22 and 25 each provide parallel arms 29 and 29'. Journalled in these arms 29 and 29' are the ends of shafts

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30 extending in parallel relation with respect to each other.

The mounting panel 10 is supported by spaced opposite vertical walls, one of which is shown at 36 (Fig. 5). The illustrated wall 36 carries a plurality of advancing units 37, 38, 39, 40 and 41, offset laterally with respect to each other and with respect to the board so as not to obstruct the movement of operating cables or cords hereinafter referred to. Each of these units is of substantially similar construction and is well-known in the art and has a construction similar to that disclosed in application for United States Letters Patent, Serial No. 752,234, filed June 3, 1947, now Patent No. 2,618,719.

Each of these units, as shown, includes a ratchet wheel 42 mounted on a shaft 43 and adapted to be engaged by a step-up pawl 44 actuated by a solenoid 45 each time a switch 46 is closed. The switch 46 is likewise of a well-known construction and of a type used in marble pin games and adapted to be closed by a game piece, such as for example, a puck or a ball rolling thereover on a playing surface (not shown). Each unit further includes a holding or resetting pawl 47 actuated by a solenoid 48 upon the closing of a resetting switch 49. This pawl 47, as shown in the afore-mentioned application for Letters Patent, has an extension 47' which engages the pawl 44 whereby to release the latter from the ratchet wheel 42 to permit resetting of the same to starting position. On the shaft 43 of each unit is mounted a drum 50 (Fig. 2).

To the carriages 15 are attached as at 51 the corresponding end portions of driving cords or cables 52. These cords 52 pass over the pulleys 31 to 35 inclusive and over idle pulleys 53 mounted adjacent the drums 50 in the manner shown schematically in Fig. 3. The opposite ends of these cords or cables 52 are each attached as at 55 to a spring 56 having its opposite end portion attached as at 57 to the adjacent leg 17 of the carriage 15. These springs serve to maintain the cables or cords 52 taut and in close-fitting engagement with their respective pulleys 53 and drums 50.

While I have shown in the drawings five carriages and means for independently advancing step by step and returning the carriages from and to starting position, it is to be understood that any number of carriages with simulated horses thereon may be employed.

By the arrangement herein described, when any one of the advancing solenoids 45 is energized by the closing of a ball-actuated switch, the ratchet wheel of the unit including the energized solenoid, will be advanced one step or a distance equivalent to the pivotal movement of the pawl 44. The advancement of the ratchet wheel of such unit will in turn rotate the drum thereof an equal distance, with the result that the carriage 15 actuated by such drum will, with its simulated horse, be advanced an equivalent distance along its supporting rod 20. By this arrangement an interesting amusement game is provided whereby the players of the game will attempt to advance a particular horse over the remaining horses, and the horse which arrives at the finish line first will, of course, be proclaimed the winner.

One of the advantages of my invention as herein described is found in the fact that in building the apparatus there can be utilized the well-known step-up and resetting unit or mechanism which, when incorporated as a part of the combination of the apparatus, will provide an apparatus which can be manufactured at an economical cost.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, there-

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fore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

1. An apparatus of the class described comprising a step-up and resetting mechanism including a grooved drum operatively connected to said mechanism so as to be stepped up or reset thereby, a supporting rod having its extremities connected to said apparatus, a carriage carried by and movable along said rod, a guide rod below and in spaced parallel relation to said supporting rod and adapted to guide said carriage when it moves along said supporting rod, means operatively connecting said drum and said carriage, said connecting means including a plurality of guide pulleys, a flexible cable in vertical alignment below said supporting rod and said guide rod and extending around said pulleys and over said drum, and means for connecting opposite end portions of said cable to said carriage, said last-mentioned means including a spring member having one end connected to one end of said cable and the opposite end connected to said carriage.

2. An apparatus of the class described comprising a step-up and resetting mechanism including a grooved drum operatively connected to said mechanism so as to be stepped up or reset thereby, a supporting rod having its extremities connected to said apparatus, a carriage carried by and movable along said rod, a guide rod below

and in spaced parallel relation to said supporting rod and adapted to guide said carriage when it moves along said supporting rod, means operatively connecting said drum and said carriage, said connecting means including a plurality of guide pulleys above and in spaced relation to said grooved drum, a flexible cable in vertical alignment below said supporting rod and said guide rod and extending around said pulleys and over said drum, and means for connecting opposite end portions of said cable to said carriage, said last-mentioned means including a spring member having one end connected to one end of said cable and the opposite end connected to one depending end portion of said carriage, a supporting stem carried by said carriage and extending in an opposite direction to said depending end portions, and a simulated animal carried by said stem.

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