

APPLICATION FILED AUG. 17, 1908. RENEWED JULY 12, 1909.

Patented Nov. 1, 1910.

2 SHEETS—SHEET 1.



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RACE GAME APPARATUS.

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974,376.

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2 SHEETS—SHEET 2.

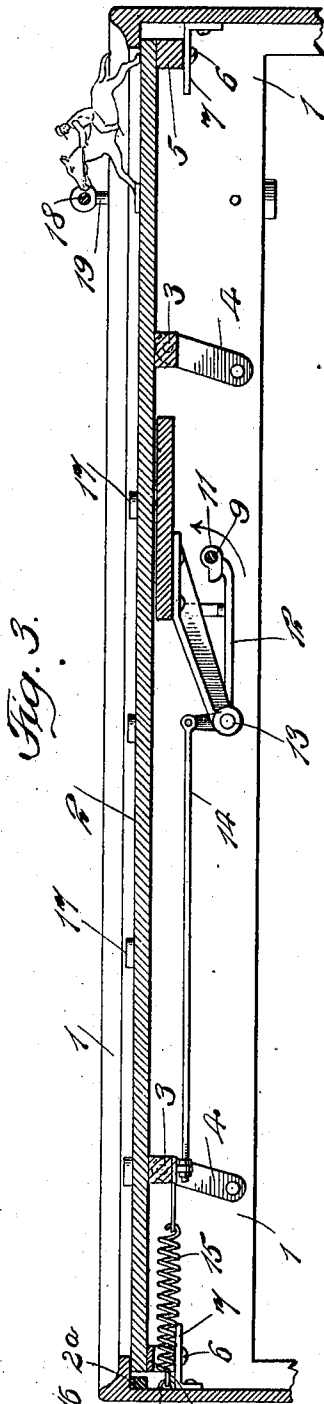


Fig. 3.

Witnesses:
Julius F. Smith
Agnes Campbell

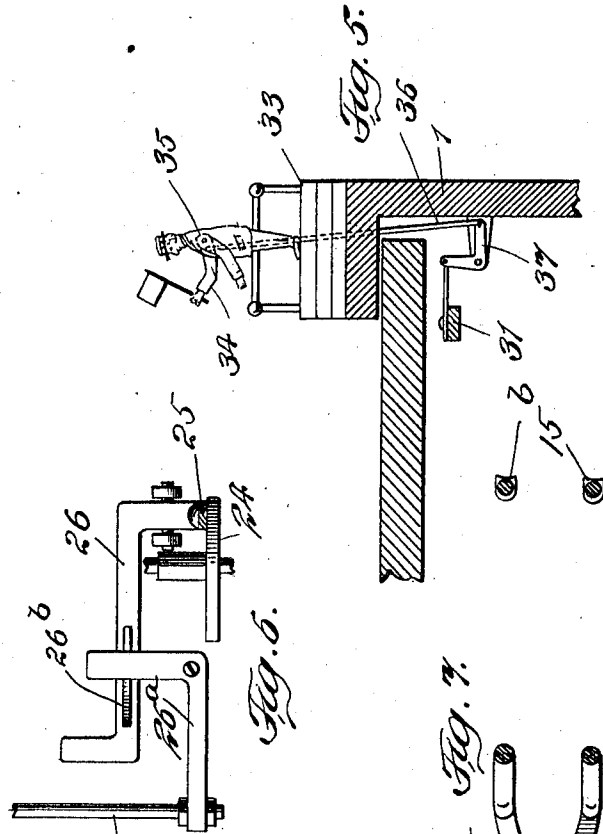


Fig. 4.

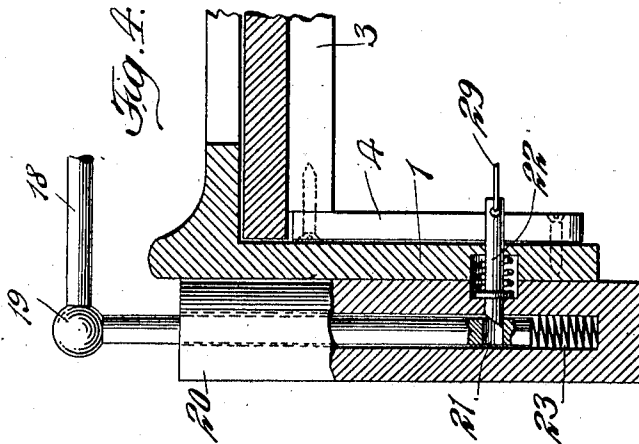
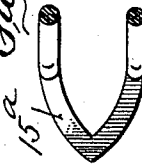


Fig. 5.

Fig. 7.



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UNITED STATES PATENT OFFICE.

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RACE-GAME APPARATUS.

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Specification of Letters Patent.

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Application filed August 17, 1908, Serial No. 448,768. Renewed July 12, 1909. Serial No. 507,262.

To all whom it may concern:

Be it known that I, JOHN GOODWIN, a subject of the King of Great Britain, residing in the borough of Manhattan, county of New York, city and State of New York, have invented certain new and useful Improvements in Race-Game Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a plan view of the race track; Fig. 2 a bottom plan view thereof showing the operating mechanism; Fig. 3 a longitudinal vertical sectional view of the race track; Fig. 4 a vertical transverse sectional view on the line IV—IV of Fig. 1; Fig. 5 a transverse sectional view on the line V—V of Fig. 1; Fig. 6 a detail view of the motor starting and stopping means; Fig. 7 a detail horizontal sectional view showing the horse supporting means.

One of the main objects of this invention is to provide a device in which a set of horses or other game pieces may be simultaneously started at one end of a level course and caused to travel to the other end thereof under conditions simulating as nearly as possible the conditions upon a race track, in that all of the horses are lined up to a gate or barrier and simultaneously started, when the starting flag is lowered.

Another object of the invention is to provide a toy figure on a raised platform at the side of the track to simulate the figure of an official starter, and to provide means whereby the barrier will be raised and the starting flag dropped at the same instant.

It is also the object of this invention to provide means whereby mechanism to cause the horses to move along the track is set in operation at the same instant the barrier is lifted and the starting flag dropped.

It will of course be understood that means are provided for interfering with the movement of the horses in such manner that it will be impossible to determine at the start of the race which of the horses will win, that is to say, will first arrive at the end of the course.

Referring to the various parts by numerals. 1 designates the supporting frame of the machine, which frame may be of any suitable construction. Inclosed within this frame is a horizontal table 2, which forms the track or course over which the horses move. This table is supported near its ends

by cross bars 3, which are secured to its under side, the ends of these cross bars being journaled in the upper ends of the arms 4, the lower ends of said arms being pivotally secured to the inner side of the frame 1. To the ends of the table 2 are secured cross bars 5, which are provided midway their ends with depending pins 6. Secured to the ends of the frame are inwardly extending horizontal slotted plates 7, which form guides to receive the pins 6, and serve to assist the arms 4 in maintaining the table level during its oscillations, as will be hereinafter described.

To give the table or course a backward and forward oscillating movement, I secure within the frame a spring motor 8. It will of course be understood that this motor may be of any suitable construction, and that I do not wish to be limited to the use of a self contained spring motor. One of the shafts 9 of the gear train 10 of said motor is provided with a cam 11 which is so disposed as to engage the end of a bell crank lever 12, which is pivoted at 13. One of the arms of the bell crank lever extends upwardly and is connected by a rod 14 to one of the cross bars 3. To this bar 3 is connected a spring 15, the other end of said spring being secured to the main frame at 16. It will be readily understood that when the cam 11 is rotated in the direction indicated by the arrow in Fig. 3, the table will be longitudinally oscillated through the movement of the lever 12, rod 14 and spring 15, the lever serving to move the table in one direction and the spring serving to move it in the opposite direction. A cushion 2^a arrests the forward movement of the table, the spring acting to draw the table against said cushion. The table is not arrested in its return or backward movement, but is free to complete its backward stroke under the influence of the cam 11.

The horses or other game pieces are each provided with a forwardly extending and pointed guiding and supporting plate 15^a, which is attached to the horses' fore-feet and projects forwardly from them. The guiding support bridges the space between the fore-feet but the hind-feet 15^b of the horses are separated as shown, and bear directly on table 2. It will thus be seen that the horse is well supported and the points of support are so far separated that the horse is not liable to be swung around side-wise

of the course. The pointed guide piece 15^A prevents the forward part of the horse becoming locked in the obstructions on the table 2, which will be hereinafter described, 5 and the separated hind-feet permit the obstructions to pass readily between them should the horse be swung side-wise sufficiently to bring said hind feet in line with any one of the obstructions on the table. 10 When the horses are arranged for a race, they are placed on the table or track at the right hand end thereof, as shown in Figs. 1 and 3.

The upper surface of the track or table is 15 provided with a plurality of transverse rows of obstructions 17 placed a suitable distance apart and adapted to interfere with the direct movement of the horses along the track. These obstructions are pointed at their forward 20 ends and are placed a suitable distance apart in each row to permit a horse to pass readily between them. The obstructions of one row are placed out of line with the obstructions in the adjoining row or rows, so 25 that the horses will not have a clear path along the track but will contact with one or more of said obstructions as it is moved from one end of the track to the other. It will be noted that the forward guide piece 30 of each of the horses is pointed and that the forward end of each obstruction 17 is also pointed. The purpose of this is obvious, as by such construction all danger of the horses becoming permanently stopped on the track 35 is avoided, said obstruction serving merely to impede the progress of the horses and to slightly divert them from their courses.

I find it very desirable in devices of this character to have a barrier by means of 40 which the horses may be properly lined up across the track and to provide means for automatically raising said barrier when it is desired to start the horses. This barrier consists of a horizontal rod or cord 18 45 mounted at its ends in vertical posts 19. The lower ends of these posts are adapted to slide vertically in sockets 20, secured to the sides of the frame 1. The lower end of each of the posts 19 is recessed at 21, and is adapted 50 to receive a spring latch 22 to hold the barrier in its depressed position. Beneath the bottom of each of the posts 19 is a spring 23. These springs serve to raise the posts and lift the barrier above the horses 55 when the latches 22 are released.

One of the shafts of the gear train of the motor is provided with a brake disk 24, which is adapted to be engaged by arm 25 60 of the pivoted brake lever 26. The other end of this lever is formed with a cam 26^b which is adapted to be engaged by one arm of the bell crank lever 26^a, the other end of this lever being connected to a rod 27 which extends to the outer side of the casing and 65 is provided on its outer end with a knob or

handle 28. By forcing this handle inwardly the bell crank lever will move the brake lever on its pivot and release the brake disk 24 and permit the motor to operate. When 70 it is desired to stop the motor, the handle 28, which constitutes a starting and stopping device, is pulled outwardly. The brake lever is provided with a spring, which forces it against the brake disk, and when the starting and stopping device is withdrawn, 75 the bell crank's lever permits the brake lever to operate and to instantly stop the motor.

Connected to the spring latches 22 are cords 29, said cords running over suitable 80 pulleys 30, thence to one end of a pivoted lever 31. The other end of this lever is adapted to be engaged by the push button 28 on the rod 27, so that when said button is pressed inwardly it will swing said lever 85 on its pivot. A small spring 32 tends to hold the lever 31 in its normal position.

At one side of the track close to the barrier is a raised platform 33, on which stands the figure of a starter holding a starting 90 flag in its right hand. The right arm 34 of the figure is pivoted as at 35, and connected to said arm is a rod 36. The rod 36 is connected at its lower end to an angle lever 37, which in turn is connected to the lever 31. 95

It is manifest that the horses and the table may be of any desired size, and instead of providing small rigid jockey figures as illustrated in the drawings, the horses may be ridden by persons, thereby 100 adding interest and excitement to the game.

From the foregoing it is manifest that by forcing inward the starting button 28 the motor will be released and permitted to operate, the latches 22 will be released through 105 the operation of the lever 31 and the cords 29 and that the starting flag will be dropped through the medium of the bell crank lever 37, rod 36 and the pivoted arm 34 of the starting figure. As the table oscillates its 110 forward end contacts with the cushion 2, thereby suddenly arresting the movement of the table and permitting the horses to move forward by reason of their momentum. The table at the end at which the horses 115 will start does not contact with the supporting frame and consequently the horses maintain their position during the return stroke of the table. By this means the horses are moved forward by a succession of short 120 steps.

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

1. A race game apparatus comprising a 125 horizontal table constituting a course or track, means to longitudinally vibrate said table, means to suddenly arrest the forward movement of said table, a series of game pieces adapted to be placed on the table and 130

to be freely and independently moved thereon, a transverse barrier near one end of the table, means for vertically moving said barrier, means to hold said barrier in position above the table and in the path of the game pieces, and means for releasing said barrier to permit it to be raised above the game pieces.

2. A race game apparatus comprising a horizontal table constituting a course or track, means to longitudinally vibrate said table, means to suddenly arrest the forward movement of said table, a series of simulated horses adapted to be placed on the table and to be freely and independently moved thereon, a transverse barrier near one end of the table, means for vertically moving said barrier, means to hold said barrier in position above the table and in the path of the horses, means to hold said vibrating means out of operation to permit it to be raised above the horses, and means to simultaneously release the vibrating means and the barrier, whereby the barrier will be raised above the horses when the table is vibrated.

3. A race game apparatus comprising a horizontal table constituting the course or track, means to longitudinally vibrate said table, means to suddenly arrest the forward movement of said table, a series of simulated horses adapted to be placed on the table and to be freely and independently moved thereon, a transverse barrier near one end of the table, means for vertically moving said barrier, means to hold said barrier in position above the table and in the path of the horses, a pivoted arm adjacent the barrier and carrying a starting flag, and means for simultaneously releasing the table vibrating means and the barrier and depressing the flag-carrying arm.

4. A race game apparatus comprising a table constituting a track, means for loosely supporting said table in a horizontal position, means to guide the ends of the table to prevent lateral vibrations, a spring connected to the frame and to the table, a pivoted table-moving lever having one of its arms connected to the table, a rigid support for said lever, a motor, a cam arranged to be rotated by said motor and adapted to engage the table-moving lever, a series of simulated horses adapted to be moved over the table, a barrier extending transversely of the table, and means to move the barrier from the path of the horses.

5. A race game apparatus comprising a table constituting a track, means for loosely supporting said table in a horizontal position, means to guide the ends of the table to prevent lateral vibration, a spring connected to the frame and to the table, a pivoted table-moving lever having one of its arms connected to the table, a rigid support for said lever, a motor, a cam arranged to be ro-

tated by said motor and adapted to engage the table-moving lever, a stop device to hold the motor out of operation, and means to move said stop device to release the motor.

6. A race game apparatus comprising a table constituting a track, means for loosely supporting said table in a horizontal position, means to guide the ends of the table to prevent lateral vibration, a spring connected to the frame and to the table, a pivoted table-moving lever having one of its arms connected to the table, a rigid support for said lever, a motor, a cam arranged to be rotated by said motor and adapted to engage the table-moving lever, a barrier, means to normally raise said barrier out of the path of the horses, catches to hold said barrier depressed, means to lock the motor, and means to simultaneously release the barrier catches and the motor.

7. A race game apparatus comprising a table constituting a track, pivoted arms supporting said table in a horizontal position, means to guide the ends of the table to prevent lateral vibration, a spring connected to the frame and to the table, a pivoted table-moving lever having one of its arms connected to the table, a motor, a cam arranged to be rotated by said motor and adapted to engage the table-moving lever, a series of simulated horses adapted to move over the table, a barrier, means to normally raise said barrier, catches to hold said barrier depressed, means to lock the motor, means to simultaneously release the barrier catches and the motor, a pivoted arm carrying a starting flag, and means connecting said arm to the barrier-moving means to drop said arm when the barrier is released.

8. A race game apparatus or toy comprising a table constituting the course or track, means to jar said table in a longitudinal direction, a series of figures adapted to be moved along said table by the jarring thereof, a plurality of rows of obstructions transversely of said table, the obstructions of one row being out of longitudinal line with the obstructions of the adjoining row or rows, a barrier at one end of the course or table, means to start and stop the jarring means, and means whereby the barrier will be raised when the jarring means is set in motion.

9. A race game apparatus or toy comprising a reciprocal table, a series of simulated horses thereon, each horse being provided with a forwardly extending, pointed, guiding supporting piece connecting the forefeet of the horse and bridging the space between them, the hind-feet of the horse being adapted to rest on the table at separate points and to assist in supporting the horse, a plurality of rows of obstructions transversely of the table, each of said obstructions being pointed at its forward end and the ob-

structions of one row being out of longitudinal line with the obstructions of the adjoining row or rows.

10. A race game apparatus comprising a table, means to longitudinally vibrate said table, a series of simulated horses adapted to be moved thereon in one direction by the vibrations of the table, a plurality of transverse rows of obstructions, the obstructions of one row being out of longitudinal line with the obstructions in the adjoining row or rows, a transverse barrier arranged to extend across the table in front of the horses, and means to move said barrier out of the path of the horses.

11. A race game apparatus comprising a table, means to longitudinally vibrate said table, a series of simulated horses adapted to be moved thereon in one direction by the vibrations of the table, a plurality of transverse rows of obstructions, the obstructions of one row being out of longitudinal line with the obstructions in the adjoining row or rows, a transverse barrier arranged to extend across the table in front of the horses, and means to simultaneously start the table-vibrating means and move the barrier out of the path of the horses.

12. A race game apparatus comprising a table, means to longitudinally vibrate said table, means to arrest the movement of the table in one direction to give it a series of shocks or jars during said vibrations, a series of simulated horses adapted to be moved thereon in one direction by the vibrations of the table, a plurality of transverse rows of obstructions, the obstructions

in one row being out of longitudinal line with the obstructions of the adjoining row or rows.

13. A race game apparatus or toy comprising a table constituting a course or track, means to vibrate said table longitudinally, means to suddenly arrest the movement of said table in one direction to give it a series of jars or shocks, a series of figures adapted to be moved along said table in one direction by the jarring thereof, a series of obstructions carried by said table and arranged a suitable distance apart transversely and longitudinally, some of said obstructions being out of longitudinal line with adjoining obstructions, whereby when a figure passes between two adjoining obstructions it will contact with and be retarded by an obstruction arranged out of longitudinal line with the obstructions passed by the figure.

14. A race game apparatus or toy comprising a table constituting a course or track, means to vibrate said table, a series of simulated horses adapted to be moved thereon by the vibrations of the table, constructions on said table adapted to retard the progress of the horses, and means to deflect the horses from said obstructions.

In testimony whereof I hereunto affix my signature in the presence of two witnesses this 5 day of August 1908.

JOHN GOODWIN.

Witnesses:

WM. R. DAVIS,
AGNES E. CAMPBELL.