

Jan. 21, 1969

A. MILLER

3,423,091

ELECTRONIC RACING GAME

Filed May 17, 1966

Sheet 1 of 3

Fig. 1

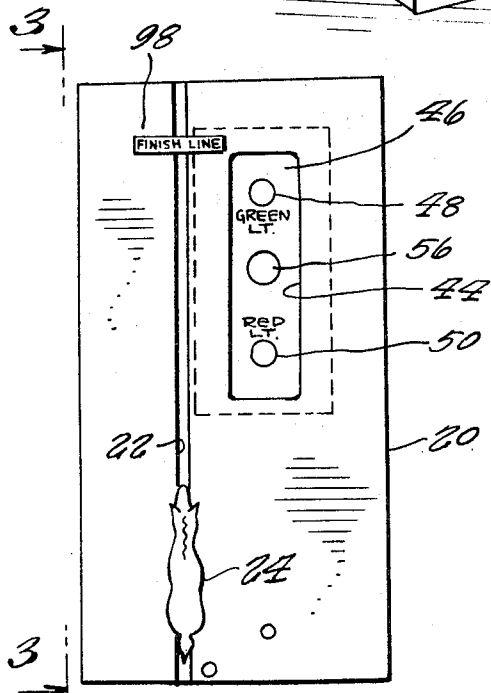
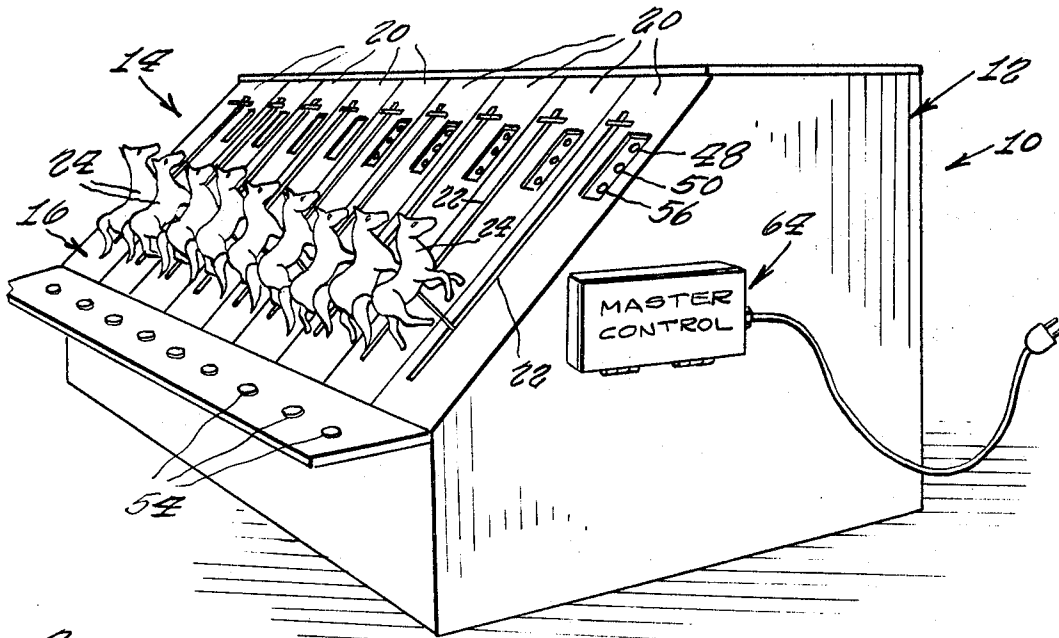


Fig. 2

INVENTOR
ALVIN MILLER
by Jacob L. Rollins
ATTORNEY

Jan. 21, 1969

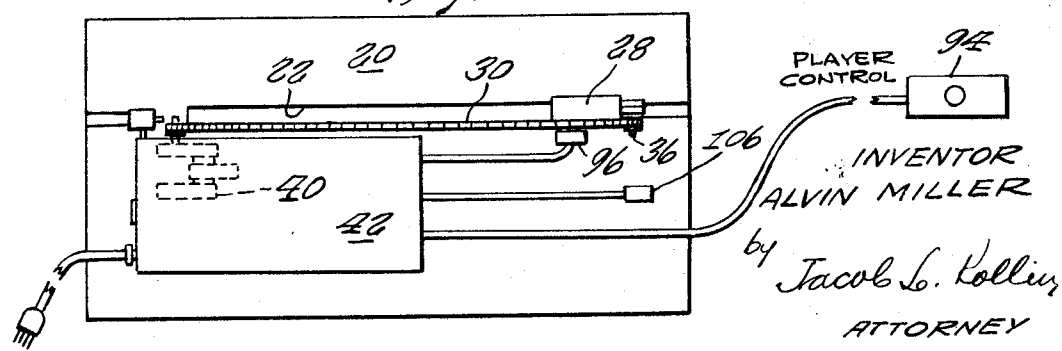
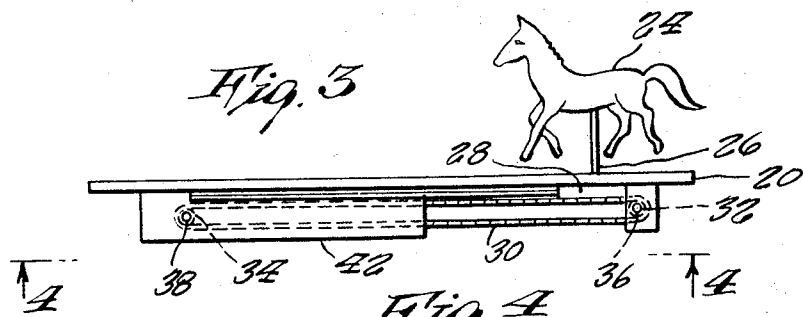
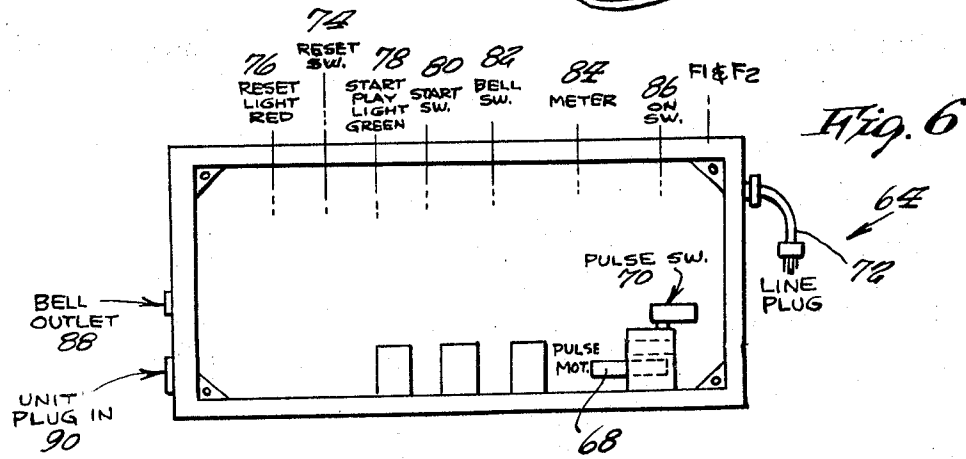
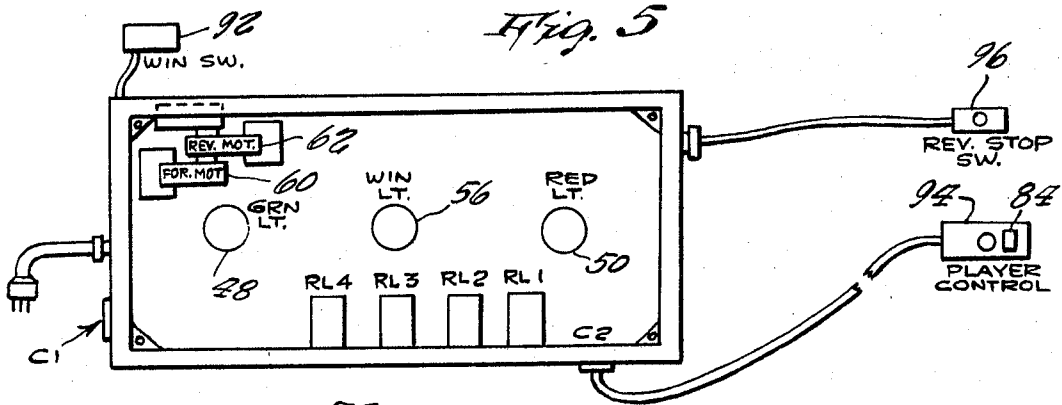
A. MILLER

3,423,091

ELECTRONIC RACING GAME

Filed May 17, 1966

Sheet 2 of 3



INVENTOR
ALVIN MILLER
by Jacob L. Kollins
ATTORNEY

Jan. 21, 1969

A. MILLER

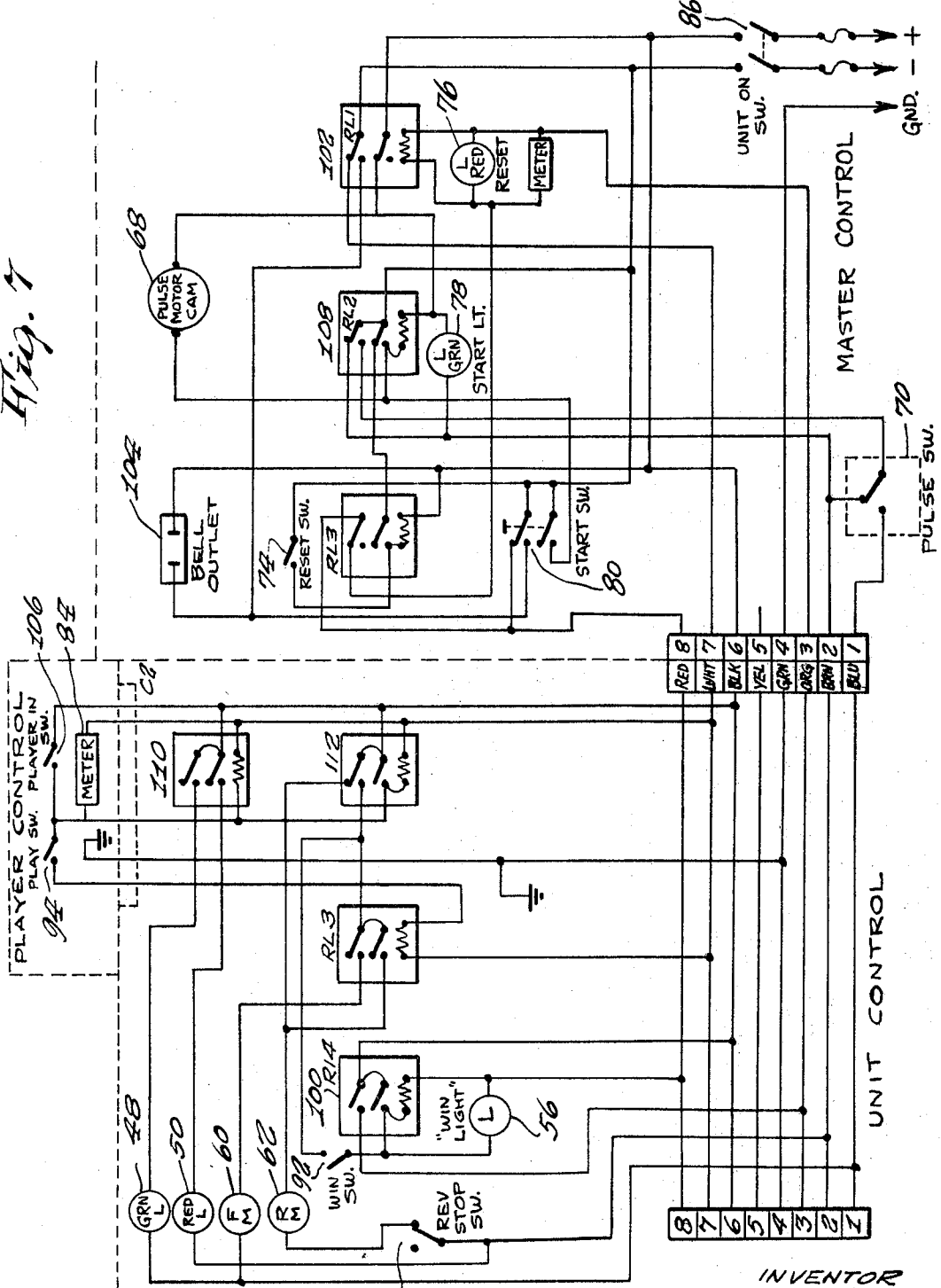
3,423,091

ELECTRONIC RACING GAME

Filed May 17, 1966

Sheet 3 of 3

Fig. 7



INVENTOR
ALVIN MILLER
BY
Jacob L. Hollis
ATTORNEY

1

2

3,423,091

ELECTRONIC RACING GAME

Alvin Miller, 18 Putnam Court,
Commack, N.Y. 11725

Filed May 17, 1966, Ser. No. 550,725

U.S. Cl. 273-86

Int. Cl. A63f 9/14

3 Claims

ABSTRACT OF THE DISCLOSURE

An electronic racing game comprising a housing, a front side on said housing, said front side having an inclined wall, said inclined wall being comprised of a plurality of unit panels, each of said panels having a slot therethrough forming a track, a horse configured playing piece movable along said track between a starting position at the lower end of said track and a finish line at the upper end of said track, means for moving said playing piece horse along said track, said means comprising a unit control associated with each of said panels, a singular master control associated with all of said unit controls, said master control being operated by an operator of said racing game, each of said unit panels comprising a playing station for an individual participating player.

This invention relates generally to penny arcade or amusement park games. More specifically, it relates to electrically operated skill games.

A principal object of the present invention is to provide an electronic horse racing game which provides for a player all the thrill and excitement of an actual horse race.

Another object is to provide an electronic racing game that can be competitively played by several players.

Another object is to provide an electronic racing game wherein the players press or release control buttons in cooperation with certain colored lights to move the horse ahead or prevent the horse from moving rearward.

Other objects are to provide an electronic racing game which is simple in design, inexpensive to manufacture, rugged in construction, easy to play and efficient in operation.

These and other objects will be readily evident upon a study of the following specification and the accompanying drawings wherein:

FIG. 1 is a perspective view of the present invention,

FIG. 2 is a plan view of one of the front panels,

FIG. 3 is an end elevation view taken on line 3-3 of FIG. 2,

FIG. 4 is a bottom view, as viewed on line 4-4 of FIG. 3,

FIG. 5 is a diagrammatic view of one of the unit controls,

FIG. 6 is a diagrammatic view of the master control unit, and

FIG. 7 is a wiring diagram of the electric circuit forming a part of the present invention.

Referring now to the drawings in detail, the reference numeral 10 represents an electronic racing game according to the present invention, wherein there is a housing 12 having a front side 14 including an inclined wall 16.

The wall 16 comprises a plurality of unit panels 20, each of which has a slot 22 therein serving as a track for a movable playing piece or vehicle in the configuration of a horse 24. Each horse is mounted on a rod 26, extending through the slot 22, the lower end of the rod being secured in a slide 28, movable along the underside of the slot. The slide is secured to an endless sprocket chain 30, movable around sprockets 32 and 34 supported on shaft

36 and motor shaft 38 respectively, the motor shaft 38 being driven by a drive mechanism 40, mounted in a unit control case 42 on the underside of the panel 20.

Each unit panel has an opening 44 therein, exposing an upper side 46 of the unit control 42 to show a green lamp 48, a red lamp 50 and a meter 84 mounted therein.

Each unit panel is part of a unit 54 comprising a playing station for one player of the game. Each unit control is also electrically connected to a "win" lamp 56.

The drive mechanism is comprised of a forward driving motor 60 and a reverse driving motor 62, which thus are able to move the horse either forwardly or rearwardly.

Each electronic racing game has a master control 64 having means to generate a forward and reverse pulse through a pulse motor cam (not shown) driven by a motor 68, which is also a pulse motor, through pulse switch 70. The master control has a line plug 72 for receiving electrical power to drive the racing game. The unit further includes a resetting switch 74, a red light reset 76, a green light mechanism 78, a start switch 82, a meter 84, and an "on" switch 86. A bell outlet 88 and unit plug-in 90 are provided on one side of the master control. Thus full controls are provided on the master control for controlling the several units 54.

Each unit control includes a "win" switch 92 and a reverse stop switch 90 and it is further provided with a player control 94 which the player uses to control the particular station.

The object of the game is for each player to try and have his horse travel to a finish line 98 at the upper end of the slot or track on his playing station and to arrive there ahead of the horses of the other players, thereby winning the racing game.

In operative use, the master control generates a forward and reverse pulse through its pulse motor cam. Due to the cam configuration and the rotation of the cam, the forward and reverse pulses are intermittent. These pulses are electrically wired to deliver voltage to lamps that are visible to the players. The forward pulse lights a flashing green light and the reverse pulse lights a flashing red light. These pulses are further electrically connected to the player control 94 which is manually operated by each player. The electrical circuit is such that when the green light is flashing, the player must depress the button on the player control so that the horse may advance toward the finish line; however the instant that the green light goes off and the red light goes on he must release the player control, or the horse immediately retreats backward. These motions occur instantly as the light alters and the players are required to be alert and dextrous to work the player control only at the right moment, so that the horse will generally advance during the playing time. The reverse stop limit switch 96 is used merely by the player to arrest rearward travel of a horse, at the bottom of the track.

The first horse that crosses the finish line will trip the "win" switch 92, thus closing the relay 100 in the unit control and lighting up the "win" lamp 56. This same signal is sent to the master control relay 102, which cancels the play circuiting and rings a bell 104.

Thereafter the operator presses a reset button of switch 74 on the master control, which clears the circuitry to make it ready for the next game.

In order for the players to play, the operator of the game must press the "player in" switch 106 which closes relays 110 and 112 in the unit control, thus making the unit ready for playing. When all the players are ready, the operator then presses the start switch 80 in the master control, thus closing relay 108 and energizing the pulse motor 68.

While the racing object in the above described illustration has been shown as a simulation of a horse, it is

3

to be clearly understood that the invention is not limited to such a racing object, but that cars, rockets, airplanes, boats and the like may be used instead without departing from the scope of the invention, and that various changes in the details, size and arrangements of the elements may likewise be made.

I claim:

1. In an electronic racing game, the combination of a housing, a front side on said housing, said front side having an inclined wall, said inclined wall being comprised of a plurality of unit panels, each of said panels having a slot therethrough forming a track, a horse configured playing piece movable along said track between a starting position at the lower end of said track and a finish line at the upper end of said track, means for moving said playing piece horse along said track, said means comprising a unit control associated with each of said panels, a singular master control associated with all of said unit controls, said master control being operated by an operator of said racing game, each of said unit panels comprising playing station for an individual participating player, said horse configured playing piece being mounted on a rod extending through said track slot, said rod being secured in a slide slidable along the underside of said panel, said slide being secured to an endless chain being carried over a pair of sprockets, one of said sprockets being mounted on a drive shaft of a drive mechanism, said drive mechanism comprising a forward motor and a reverse motor for providing forward and reverse move-

4

ment of said playing piece along said track, each said playing station further including a green lamp and a red lamp alternately lighted by said master unit, a player control switch manually controlled by a player, said player control comprising switch means to activate said forward motor when said green lamp is lighted and deactivate said reverse motor when said red lamp is lighted.

2. The combination as set forth in claim 1, wherein said master unit includes a pulse motor driving a cam to activate a pulse switch for alternately lighting said green and red lamps in all of said playing stations.

3. The combination as set forth in claim 2, wherein each of said playing stations includes a "win" switch activated by said playing piece upon reaching said finish line, said "win" switch having means to activate a "win" lamp and cancel further play circuitry.

References Cited

UNITED STATES PATENTS

639,692	12/1899	Woods	273—86
1,447,363	3/1923	Tozier	273—86
2,076,055	4/1937	William et al.	273—86
2,526,215	10/1950	Florimont	273—86
2,750,191	6/1956	Denman	273—86
3,231,275	1/1966	Lombard	273—86

RICHARD C. PINKHAM, *Primary Examiner.*

T. ZACK, *Assistant Examiner.*