

Nov. 19, 1940.

A. F. CHOUINARD

2,222,403

BALL ROLLING GAME

Filed March 6, 1939

3 Sheets-Sheet 1

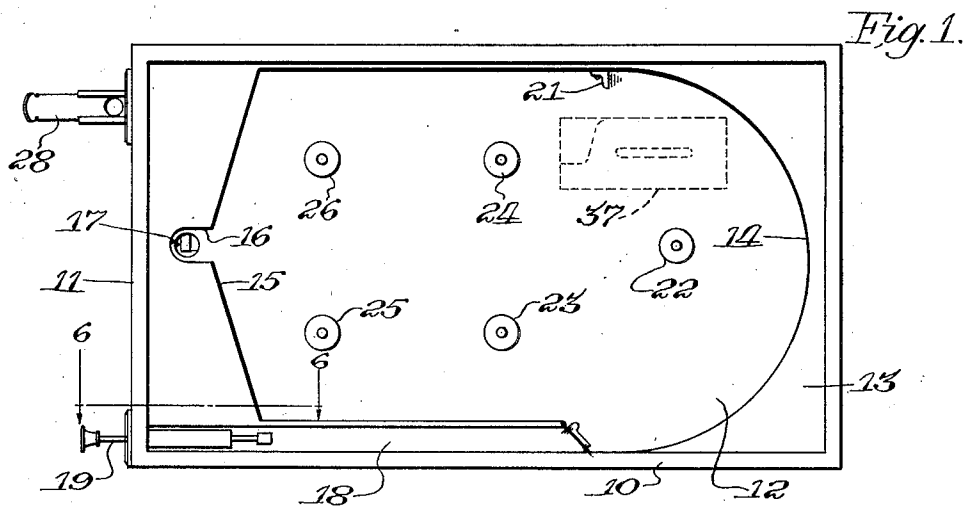


Fig. 2.

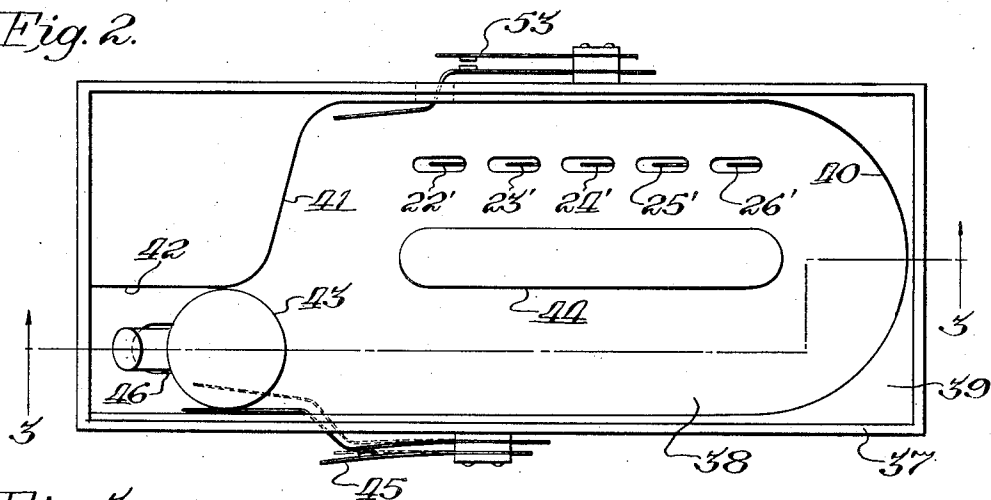
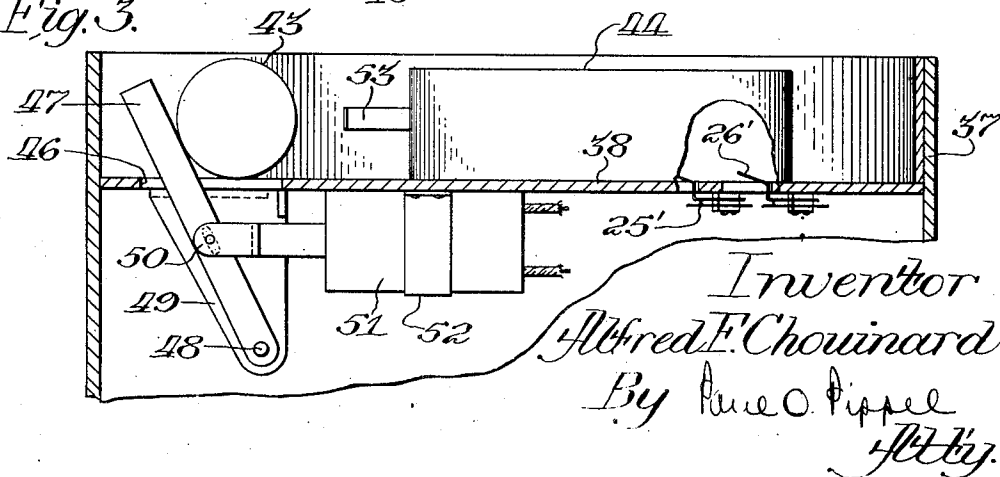


Fig. 3.



Nov. 19, 1940.

A. F. CHOUINARD

2,222,403

BALL ROLLING GAME

Filed March 6, 1939

3 Sheets-Sheet 2

Fig. 4.

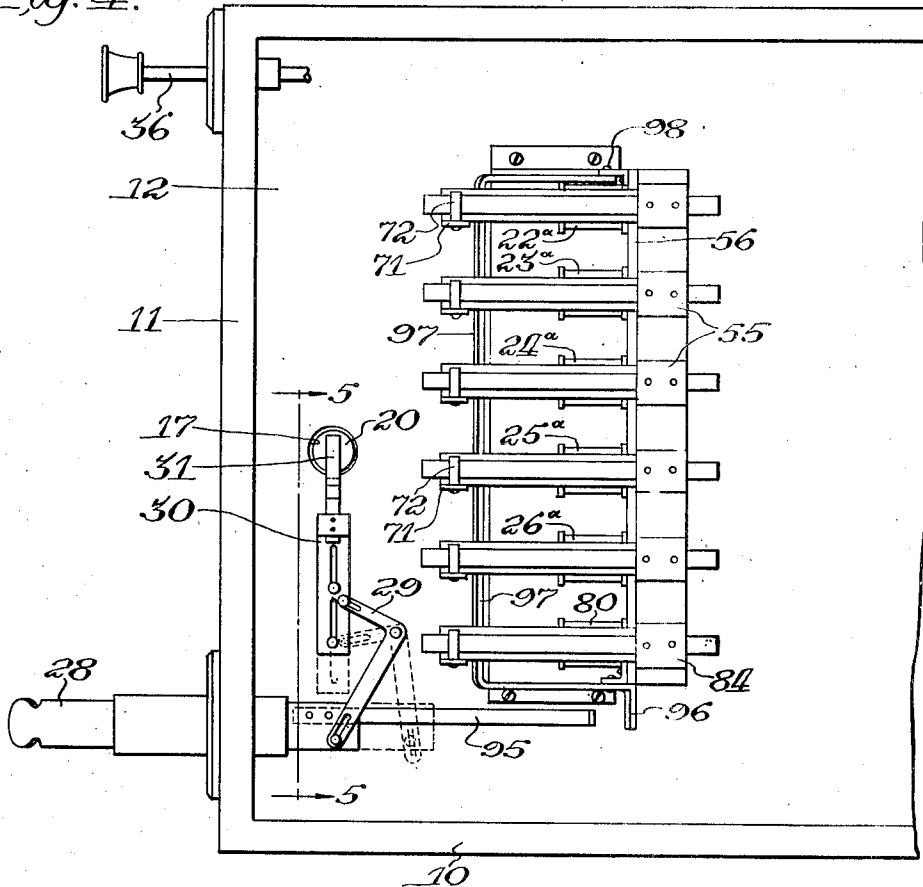


Fig. 5.

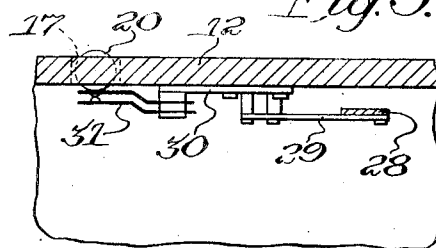
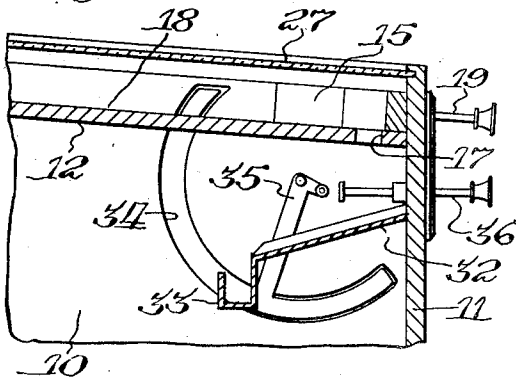


Fig. 6.



Inventor
 Alfred E. Chouinard
 By Paul O. Appel
 Atty.

Nov. 19, 1940.

A. F. CHOUINARD

2,222,403

BALL ROLLING GAME

Filed March 6, 1939

3 Sheets-Sheet 3

Fig. 7.

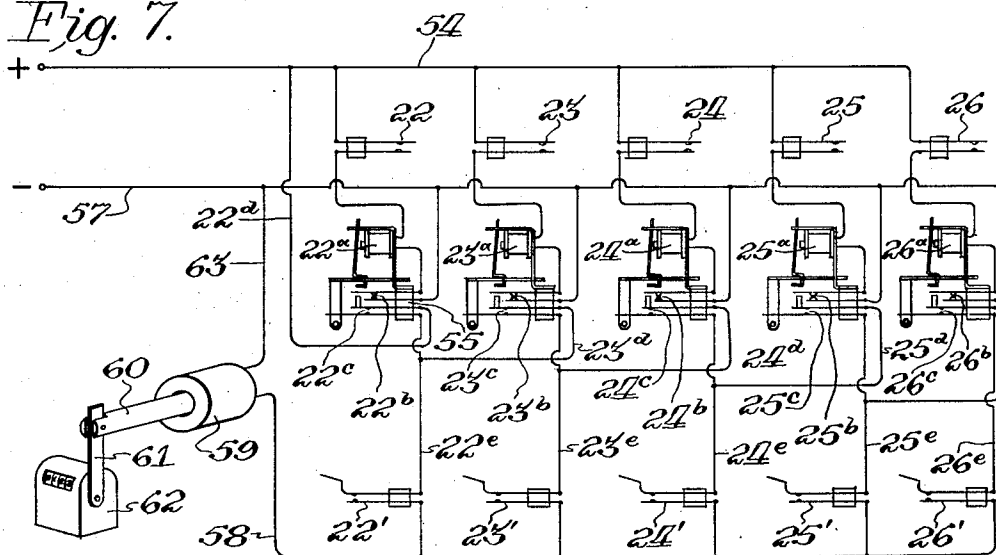


Fig. 8.

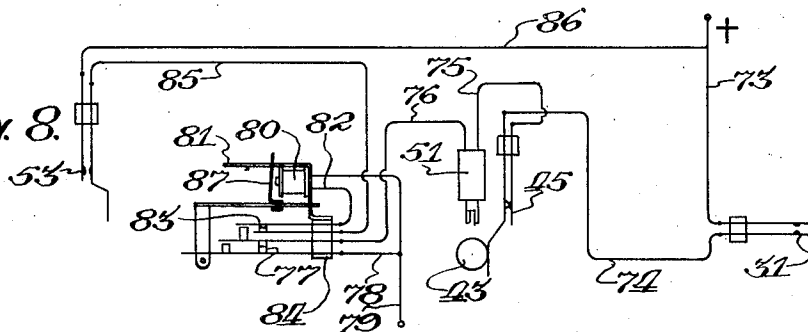


Fig. 9.

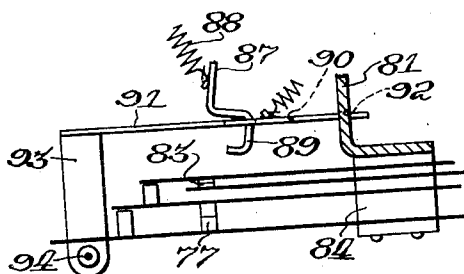
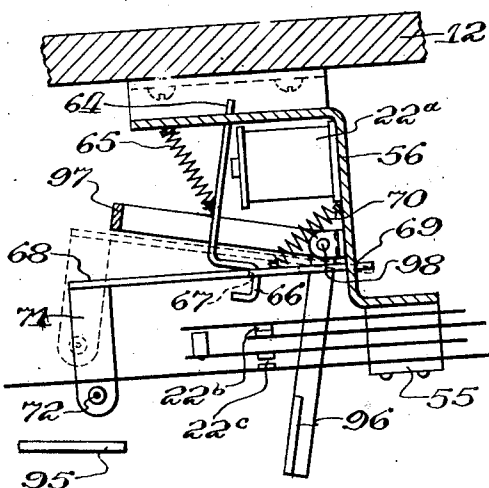


Fig. 10.

Inventor
 Alfred F. Chouinard
 By Paul O. Kippel
 Atty.

UNITED STATES PATENT OFFICE

2,222,403

BALL ROLLING GAME

Alfred F. Chouinard, Chicago, Ill., assignor to
Raymond T. Moloney, Chicago, Ill.

Application March 6, 1939, Serial No. 259,997

15 Claims. (Cl. 273—121)

This invention relates to a ball rolling game and more particularly to a metering means to record "wins" played on the game.

It is common in pin ball types of games to utilize coil spring bumper or equivalent contact switches on the ball rolling surface of the game as obstacle members, which switches are normally open, but operable by a ball rolling on the surface to close a circuit including means used for keeping score, or paying out rewards or free play checks. It is usual in achieving such a win that skill must be shown by the player in rolling the ball to operate a certain number of the obstacle members, and sometimes it is necessary that they be operated in a certain sequential order.

It is desirable in these games to provide an auxiliary means in the game circuits to meter or record the number of "wins" achieved on the game over any desired period of time, such means being additional to any score indicating or reward dispensing devices or means. As such machines are coin released for operation, the owner thereof may thus have a record of "wins" to check against the earnings of the machine. The desirability of such a metering device, if it be automatic and fool-proof in operation, will thus be apparent.

The main object of the invention is to provide an improved pin ball type of ball rolling game. Another object is to provide a metering means to serve in keeping a consecutive record of "wins" played on the game.

Still another object is to provide such a recording means which will function in a fool-proof automatic manner and operate as the result of the closing of certain obstacle switches on the game table.

Still another object is to utilize the temporary closing of the obstacle switches to set up an auxiliary circuit which however is not effective to cause operation of the counting mechanism which is included therein, until all or some of the obstacle switches have been closed in a certain sequence, thus enabling a kicker to operate by propelling a metering control ball to travel a predetermined course to close certain open switches in the auxiliary circuit and thus cause operation of the counting or recording mechanism.

Another object is to provide certain automatic control means for the auxiliary circuit to make the same fool-proof in use.

Another object is to provide an improved means for resetting all parts previous to the playing of each game.

Another object is to locate such "win" metering means in a position beneath the game table so that it will be located out of the way of the player and cannot be disturbed, nor serve to dis-

tract him in exercising his skill in playing the game.

Another object is to utilize the metering means in increasing the number of "wins" made possible in a single playing of the game dependent upon the skill displayed in hitting the obstacle switches.

Other important objects will become known to those skilled in this art as the present disclosure is more fully made.

These desirable objects may be achieved in a ball rolling game having the usual cabinet enclosing a table sloped slightly from the horizontal so that a ball projected by a manually operated projector will roll over the surface of the table and if properly directed in a skilful manner, serve to engage and close obstacle switches located on the table. As these switches are so closed, auxiliary circuits are set up, and in the event a certain order in hitting the obstacle switches has been achieved to make for a "win"; then when the playing ball gravitates to an "out" position at the lower end of the table, a kicker underneath the table is operative to project a metering ball around a predetermined course to close roll-over switches in the auxiliary circuits and cause operation of a metering or counting device associated with said auxiliary circuits to record "wins". The metering means herein is so constructed to make possible five wins in a single playing of the game. Thus, in proportion to skill displayed in playing the game the player can achieve higher scores, greater rewards, and more in amusement values than in the usual pin ball type of ball rolling game. An automatic control is included in the metering means to make the metering ball travel its course only once, even though the playing ball remains in its "out" or spent position on the table. Resetting means is provided to be actuated when the coin release means is worked in setting the parts previous to the playing of each game cycle.

In the accompanying sheets of drawings illustrating a practicable example of the invention as applied to a pin ball type of ball rolling game:

Figure 1 is a plan view of a typical pin ball game;

Figure 2 is a relatively enlarged detail, plan view of the metering means per se;

Figure 3 is a cross sectional view through the metering means, taken along the line 3—3 of Figure 2, looking in the direction of the arrows;

Figure 4 is an enlarged, bottom view of the mechanism at the low or front end of game cabinet to illustrate the coin control and resetting mechanism.

Figure 5 is a detail, cross sectional view of the

out ball release means, taken along the line 5—5 of Figure 4, looking in the direction indicated.

Figure 6 is a detail sectional view to show the ball lifter mechanism, viewed from the line 6—6 of Figure 1;

Figure 7 is an illustrative wiring diagram for the setting up and actuation of the metering and counting means;

Figure 8 is another wiring diagram for the metering ball kicker and certain controls therefor;

Figure 9 is an enlarged detail view of an electromagnetic relay used in the circuits of Figure 7; and,

Figure 10 is a similar view of the electromagnetic switch control relay used in the circuit of Figure 8.

Looking first to Figure 1, the ball rolling game comprises a cabinet 10 having a front, or player's end, wall 11. Said cabinet carries a table 12, sloped slightly from the horizontal to provide a usual ball rolling surface delineated by an arch piece 13 providing a curved track 14, and a guide piece 15 at the other end. This latter end is the lower end of the table so that spent balls rolling on the table gravitate thereto and into a passage 16 provided to guide a spent ball into an out ball hole 17 formed through the table 12.

Along the right hand edge of the table, as viewed from a player's position, is a ball projection passage 18 at the low end of which and in the wall 11 is positioned a manually operable spring plunger 19 for projecting a game ball 20 (see Figure 5) through the passage 18, around the track 14, to rebound in the usual way from a rebound element 21 positioned as shown, on the table 12. A ball 20 thus may travel gravitationally down the table 12 to hit certain spaced obstacle switch members 22, 23, 24, 25 and 26, which are of the well known bumper type generally shown in Nelson Patent No. 2,109,678 issued March 1, 1938. These switches are normally open and are generally illustrated as contact switches in Figure 7. A glass panel 27 closes the top of the cabinet 10.

A conventional coin release slide 28 is carried in the front wall 11 at one end thereof and at its inner end, inside the cabinet 10 is connected to operate a bell crank lever 29 (see Figure 4) pivotally mounted on the under side of the table 12. Said lever is connected to operate a slide member 30 carried by the table, the free end of said member 30 carrying a normally open spring blade contact switch 31, which during the normal playing of the game and when the coin slide 28 is in its retracted position, is disposed under the hole 17 to serve as a support for a ball 20 entering said hole 17. Of course, when a ball so enters the hole it acts to close the switch 31 for a purpose later to appear.

When the coin slide 28 is pushed into the cabinet to release the game for play, the bell crank 29 is operative to work the slide 30 and move the switch 31 away from under the hole 17, so that when a ball 20 is supported thereon, said ball is caused to be released and falls through the hole 17 in the table 12. As appears in Figure 6, when this happens, the ball is received by a chute 32 to be directed into the usual, transversely inclined trough 33 for direction by gravity to the low end of an arcuate ball elevation groove 34 formed in the right hand wall of the cabinet. Operable in said groove in the well known way is a ball lifter 35 hingedly carried by the cabinet wall and operable by a man-

ually moved plunger 36 carried in the front wall 11. This mechanism serves to lift a ball 20 from the trough 33 into the passage 18 in a position to be projected onto the table by the plunger 19.

The mechanism of the metering means per se is illustrated in Figures 2 and 3, where it will be seen the same essentially comprises a unit in the form of a tray or box 37 which includes a horizontal, depressed floor 38. An arch piece 39 is carried at one end and provides an arcuate track portion 40 as shown, while the other end of the floor carries a deflector piece 41 to form a seat passage or pocket 42 for a ball 43, which will be called the metering ball. A partition 44 is provided centrally in the box on the floor 38 with the opposite ends of said partition terminating short of the respective ends of the box, thus to provide a generally oval track for the ball 43 to follow when the latter is kicked as will later be made known.

When the meter ball 43 is in its pocket 42 it bears against and closes a leaf spring contact switch 45 mounted on one side of the pocket as shown. The pocket 42 includes a slot 46 formed in the floor 38 and through said slot is projected an upright kicker lever 47 pivotally connected at its lower end by a pin 48 to a bracket 49 carried in a pendant manner from the under side of the floor 38. The lever 47 beneath the floor is pivotally connected between its ends to the movable core 50 of an electromagnetic device 51 supported by a bracket 52 from the underside of the floor 38. It can be seen when the kicker 47 is operated by the device 51, that the meter ball 43 is propelled around the oval track on the floor 38 in a counterclockwise direction as viewed in Figure 2. On the return half portion of this oval track are arranged five, spaced, normally open, roll-over, spring blade, contact switches, which will be designated 22', 23', 24', 25' and 26', since as will later appear they correspond or are related to the bumper switches 22 to 26 inclusive heretofore described. Each of these switches 22' to 26' is carried on the under side of the table 38 as appears in Figure 3 and has a ball roll-over portion extending up through a slot formed in the table 38, as shown. A control, roll against, spring blade switch 53 is carried at one side of the box 37 at the end of the oval track just beyond the last switch 22' in the direction the ball 43 travels. This metering control unit 37 is suitably carried in a position from the under side of the table 12 in the location shown in dotted lines in Figure 1.

Looking at Figure 7 it will be seen that one side of each bumper contact switch 22 to 26 inclusive is connected by a lead to a main wire 54 coming from any suitable source of electrical energy. The other side of each bumper switch is connected by a lead to one side of respective electromagnets 22^a, 23^a, 24^a, 25^a and 26^a.

Taking the device 22^a, it will be seen a wire leads from the other side thereof to one side of a normally closed spring blade switch 22^b, which as shown in Figure 9, is carried by an insulation block 55, in turn mounted on a bracket 56 which carries the device 22^a and is supported from the under side of the table 12. The other side of the blade switch 22^b is connected by a wire into the main return wire 57 that goes back to the source of energy. The same block 55 also carries another spring blade switch 22^c which is normally open, one side thereof being connected by a wire 22^d to the main line 54, while the other side thereof is connected by a wire 22^e to one side of 75

the roll over switch 22'. The other side of the latter switch is connected by a lead to a common wire 58 connected to one side of an electromagnetic device 59 located in any suitable place, and having a core 60 to operate a lever 61 which in turn may operate a well known form of counting mechanism 62 also positioned in any desirable place within the cabinet 10. A wire 63 goes from the other side of the device 59 to the return wire 57, as shown.

As shown in Figure 9, the electromagnet 22^a is positioned to attract an armature plate 64 normally pulled away from the magnet by a spring 65. The lower end of the plate is formed with a hook-shaped latch 66 passed through a slot 67 formed in a latch plate 68 loosely and pivotally carried at 69 in a slot provided in the bracket 56. This plate 68 is normally pulled upwardly by a spring 70. The free end of said plate 68 carries a rigid leg 71, carrying at its lower end a transverse insulated pin 72 disposed under the extended end of one blade of the switch 22^a.

It can now be seen that each of the coils 23^a, 24^a, etc., is wired in series with the wires 54 and 57 in the manner described for the coil 22^a and that each has associated with it a control mechanism of the kind illustrated in Figure 9 for the respective switches 23^b, 23^c, etc. The circuit of Figure 7 derives its energy from one source.

The circuit of Figure 8 may derive its energy from the same or another source and includes a main wire 73 which leads to one side of the switch 31, and a wire 74 leading from the other side thereof to one side of the switch 45. A wire 75 goes from the other side of the switch 45 into the kicker coil 51 and a wire 76 leads therefrom to one side of a normally closed blade switch 77, thence by a tap 78 back to the source of energy by a return wire 79.

This wire 79 leads into a magnet coil 80 carried by a bracket 81 positioned in any desirable place. A wire 82 leads from said coil to one side of a normally closed spring blade switch 83 carried by an insulator block 84 carried by the bracket 81. A wire 85 leads from the other side of switch 83 to one side of the switch 53 and finally a wire 86 goes from the other side of the switch 53 to the main wire 73. The coil 80 has associated with it the structure shown in Figure 10, which includes an armature plate 87 pulled by a spring 88 and formed at its lower end with a hook latch 89 entering a slot 90 in a latch plate 91 loosely and pivotally carried at one end in a slot 92 in the bracket 81. The free end of the plate 91 carries a leg 93 which at its lower end carries a transverse insulated pin 94 positioned below the extended end of the lower blade of the switch 77.

Going back now to Figures 7 and 9 it will be understood that when the magnets 22^a, 23^a, 24^a, etc., are operated, that their respective latch plates 68 will be raised to open associated switches 22^b, 23^b, etc., and close associated switches 22^c, 23^c, etc. These latch plates 68 must eventually be returned to the full line position shown in Figure 9 and to that end the coin slide 28 carries a rigid bar 95 as shown in Figures 4 and 9. When the coin slide is pushed into the cabinet in releasing the game for play this bar 95 engages and pushes an arm 96 to rock a bail member 97 hinged at 98 to the bracket 56. When the bail 97 is thus rocked downwardly each of the latch plates 68 will be engaged thereby and returned to a normal starting position. A suitable spring, not shown, may be connected to said bail 97 to restore it to

a raised position clear of the plates 68. This completes the detailed description of the parts.

In playing the game it will be assumed the coin slide 28 has been operated to clear a ball 20 from the pocket 17; that the lifter 35 has been operated to place the ball 20 in the passage 18; that all switches are in the normal starting position as shown in full lines in various figures; and that the meter ball 43 is in its pocket 42 holding switch 45 closed. The ball 20 is now propelled onto the table 12 by the projector 19 and it will be assumed the bumper obstacle 22 has been engaged and in the usual way momentarily closed thereby.

Looking to Figure 7, when switch 22 is closed, the coil 22^a is energized to attract armature 64, as shown in Figure 9. This frees the latch plate 68 associated therewith from the latch hook 66, causing the spring 70 to snap the plate 68 upwardly, whereupon the normally closed switch 22^b is opened and the normally open switch 22^c is closed. The effect of this is to send energy from wire 54 through switch 22^c, wire 22^e to one side of the associated roll over switch 22'.

In a like fashion if the ball 20 hits each of the other obstacle switches 23, 24, 25 and 26, one side of each of the roll-over switches 23', 24', 25' and 26' will receive electrical energy. But nothing happens yet as it is to be remembered that these roll-over switches in the metering unit 37 are normally open.

Eventually the play ball 20 comes to rest by gravity in the hole 17 and on switch 31 to close the latter, whereupon, as seen in Figure 8, a circuit 73, 74, closed switch 45 (held so by ball 43) is established to the coil 51, which leads back through wire 76, closed switch 77, wire 78 and return wire 79. It follows that the kicker 47 is now forcibly operated by the armature 50 to kick or propel the meter ball 43 around the oval track of the unit 37. When the ball 43 leaves the switch 45 the coil 51 is for the moment deenergized. The ball 43 now rolls over the switches 26', 25', 24', 23', 22' in the order named, and when each said switch is closed, providing one side thereof is "hot" and receives current from the closing of its corresponding obstacle switch 26, 25, 24, etc., causes a circuit to be completed through wire 58 to energize the coil 59 and operate the counting mechanism 62. In the particular series hook-up disclosed the counting mechanism can only work on a successive build up of circuits from obstacles 22, 23, 24, etc., in the order named. Thus, in this form "wins" are only counted as they are in sequence in the order designated.

When the ball 43 returns to home position in its pocket 42 the switch 45 would again be closed and the circuit that made the kicker 47 operate would once more be complete and the operation would thus be repeated indefinitely, which, of course, is not desired. Thus, the switch 53, which is normally open, acts as a cut-out switch when the ball 43 closes same after its first roll over the switches 22', 23', etc. When switch 53, as shown in Figure 8, is so closed by the ball 43, a circuit 85, 85, closed switch 83, wire 82, coil 80, and wire 79 is established. This energizes the coil 80 to attract armature 87 and free latch plate 91 to spring up and open both switches 77 and 83 to make it impossible for the kicker 47 to function again.

When the "wins" have thus been recorded the game cycle is over. In the present form only one play ball 20 is used, which is released to the trough 33 in the manner heretofore described

when the coin slide 28 is again operated. The coin slide also operates the bail 97 to reset the latch plates 68 that were moved and said bail will also reset the latch plate 91 because its support 81 will be disposed with the bracket 56 to make this possible. With the arrangement shown each bumper 22, 23, etc., can function only once per game.

It will now be appreciated that an improved "win" metering and scoring means has been provided for the purposes stated.

The intention is to cover herein all changes and modifications of the illustrative example disclosed, which do not constitute departures from the spirit and scope of the invention.

What is claimed is:

1. For a ball rolling game having a table sloped from horizontal over which a play ball is rollable to an "out" pocket formed in the low end thereof, to close a switch therein, said table carrying a plurality of obstacles in the form of normally open switches closable when bumped by said ball, a circuit including said switches; a "win" counting means including normally open switches included in corresponding paired auxiliary circuits, one side of the latter switches being in a circuit with means to operate the counting means, and the other side of the latter switches adapted to be placed in circuit with a source of energy when the corresponding obstacles are ball bumped to condition the auxiliary circuits, means comprising a track including the latter switches and a meter ball disposed in the track in a pocket provided therein, a switch in another but related circuit held normally closed by the meter ball, and a kicker included in said latter means electromagnetically operable to roll the meter ball along the track and close the switches therein to establish the auxiliary circuits and operate the counting means.

2. A "win" counting and metering means for games having a table over which a play ball rolls to hit and temporarily close normally open contact switches located on the table, said means comprising a track having a series of spaced open roll over switches thereon respectively corresponding to and related with the contact switches, circuits for the roll over switches including means operable from the corresponding contact switches to direct energy to one side of the roll over switches, a counter and electromagnetic operating means therefore disposed in circuits with the roll over switches, a meter ball in the track, and an electromagnetically operable kicker in another but related circuit disposed to kick the meter ball along the track to roll over the roll over switches and close same to complete the first mentioned circuits to cause actuation of the counter.

3. A "win" counting and metering means for games having a table over which a play ball rolls to hit and temporarily close normally open contact switches located on the table, said means comprising a track having a series of spaced open roll over switches thereon respectively corresponding to and paired with the contact switches, circuits for the roll over switches including means operable from the contact switches to direct energy to one side of the roll over switches, a counter and electromagnetic operating means therefor disposed in the circuits, a meter ball in the track, an electromagnetically operable kicker in an auxiliary but related circuit disposed to roll the meter ball over the track and successively over the roll over switches and close any circuits

established by the contact switches to cause actuation of the counter, and switch means operable by the play ball to cause energization of the electromagnetically operable kicker.

4. A win counting and metering means for games having a table over which a play ball rolls to hit and temporarily close normally open contact switches located on the table, said means comprising a track having a series of spaced open roll over switches thereon respectively corresponding to and paired with the contact switches, circuits for the roll over switches including means operable from the respective contact switches to direct energy to one side of the roll over switches, a counter and electromagnetic operating means therefor disposed in the circuits, a meter ball in the track, and an electromagnetically operable kicker in an auxiliary but related circuit disposed to kick the meter ball along the track to roll over the roll over switches and close the first mentioned circuits to cause actuation of the counter, said win counting and metering means comprising a unit located below the table.

5. A win counting and metering means for games having a table over which a play ball rolls to hit and temporarily close normally open contact switches located on the table, said means comprising a floor formed with an oval track having spaced normally open roll over switches thereon respectively corresponding to and paired with the contact switches, circuits for the roll over switches including means operable from the respective contact switches when the latter are closed to energize one side of the roll over switches, a "win" counter, an electromagnetic operating means for the counter disposed in the circuits, a meter ball on the floor, and an electromagnetically operable kicker in an auxiliary but related circuit disposed to kick the meter ball around the track to roll against and close the switches therein to close circuits for energizing the electromagnetic operating means and operate the counter.

6. A "win" counting and metering means for games having a table over which a play ball rolls to hit and temporarily close normally open contact switches located on the table, said means comprising a floor formed with an oval track having spaced normally open roll over switches thereon respectively corresponding to and paired with the contact switches, circuits for the roll over switches including means operable from the respective contact switches when the latter are closed to energize one side of the roll over switches, a "win" counter, an electromagnetic operating means for the counter disposed in the circuits, a meter ball on the floor, an electromagnetically operable kicker in an auxiliary but related circuit disposed to roll the meter ball around the track to engage and close the switches therein to close circuits for energizing the electromagnetic operating means and operate the counter, and means to cause the meter ball to travel around the track only once per game cycle.

7. A "win" counting and metering means for games having a table over which a play ball rolls to hit and temporarily close normally open contact switches located on the table, said means comprising a floor formed with an oval track having spaced normally open roll over switches thereon respectively corresponding to and paired with the contact switches, circuits for the roll over switches including means operable from the respective contact switches when the latter are

closed to energize one side of the roll over switches, a "win" counter, an electromagnetic operating means for the counter disposed in the circuits, a meter ball on the floor, an electromagnetically operable kicker in an auxiliary but related circuit disposed to roll the meter ball around the track to engage and close the switches therein to close the circuits for energizing the electromagnetic operating means and operate the counter, and electrically operable means controlled by the meter ball to open the circuits and make the game inoperative after the meter ball has engaged all of the roll over switches.

8. For a ball rolling game having a table sloped from horizontal over which a play ball is rollable to an out pocket formed in the low end thereof, to close a switch therein, said table carrying a plurality of obstacles in the form of normally open switches closable when bumped by said ball, a circuit including said switches; a "win" counting means including normally open switches included in auxiliary circuits, one side of the latter switches being in still another circuit with means to operate the counting means, and the other side of the latter switches adapted to be placed in circuit with a source of energy when the corresponding obstacles are ball bumped, said obstacle switches and latter switches being paired, means comprising a track including the latter switches and a meter ball disposed in the track in a pocket provided therein, a switch in a fourth related circuit held normally closed by the meter ball, a kicker included in said latter circuit electromagnetically operable to roll the meter ball along the track and close the switches therein to operate the counting means, and means to make the kicker ineffective after the meter ball has engaged all track switches.

9. A "win" counting and metering device for ball rolling games in which a circuit includes open switches closeable by a play ball, said device comprising means including a floor forming a track having switches therein respectively in circuits with and corresponding to and paired with the first switches, means to hold the circuits for the latter switches energized when corresponding first switches are closed by the play ball, an electromagnetic ball kicker in another circuit and the kicker being disposed at an end of the track, a meter ball in the track which ball is moved by the kicker when it is operated to travel the track and operate the switches therein, and an electromagnetically actuated counter in the circuit operable when closed track switches are engaged by said meter ball.

10. In a "win" counting apparatus, a floor having a track thereon, open switches disposed along said track and included in a circuit with an electromagnetic device, a counter operable from the device when the device is energized, said switches being closed as the result of the movement of a ball in a ball rolling game, a meter ball in the track, and means for automatically moving the meter ball along the track at the termination of the playing of the ball rolling game to cause it to close the switches in the track and thereby cause operation of the counter.

11. In a "win" counting apparatus, a floor having a track thereon, open switches disposed along said track and included in a circuit with

an electromagnetic device, a counter operable from the device when the device is energized, said switches being closed as the result of the movement of a ball in a ball rolling game, a meter ball in the track, and means for automatically moving the meter ball along the track at the termination of the playing of the ball rolling game to cause it to close the switches in the track and thereby cause operation of the counter, said track being endless and having a pocket to form a starting position from whence the meter ball is rolled.

12. In a "win" counting apparatus, a floor having a track thereon, open switches disposed along said track and included in a circuit with an electromagnetic device, a counter operable from the device when the device is energized, said switches being closed as the result of the movement of a ball in a ball rolling game, a meter ball in the track, and means for automatically moving the meter ball along the track at the termination of the playing of the ball rolling game to cause it to close the switches in the track and thereby cause operation of the counter, said track being endless and having a pocket to form a starting position from whence the meter ball is rolled, and means for causing the meter ball to travel around the track only once for each play of the associated ball rolling game.

13. In a "win" counting apparatus, a floor having a track thereon, open switches disposed along said track and included in a circuit with an electromagnetic device, a counter operable from the device when the device is energized, said switches being closed as the result of the movement of a ball in a ball rolling game, a meter ball in the track, and means for automatically moving the meter ball along the track at the termination of the playing of the ball rolling game to cause it to close the switches in the track and thereby cause operation of the counter, said track being endless and having a pocket to form a starting position from whence the meter ball is rolled, and means for causing the meter ball to travel around the track only once for each play of the associated ball rolling game, said latter means comprising a normally open cut out switch in a circuit and closed by the meter ball itself.

14. In a "win" counting apparatus, a floor having a track thereon, open switches disposed along said track and included in a circuit with an electromagnetic device, a counter operable from the device when the device is energized, said switches being closed as the result of the movement of a ball in a ball rolling game having ball closed switches disposed respectively in paired circuits with the track switches, a meter ball in the track, and means operable at the termination of the playing of the ball rolling game to propel the meter ball along its track to cause it to engage and close said track switches and thereby operate the counter.

15. In combination, means forming a track and ball rolling surface, a number of spaced normally open switches thereon included in circuits with an electromagnetically operable device, a ball rollable over the switches to close same, and other normally open switches in other circuits paired with the aforementioned switches in such a manner that the device is operable only when paired switches are closed.

ALFRED F. CHOUINARD.