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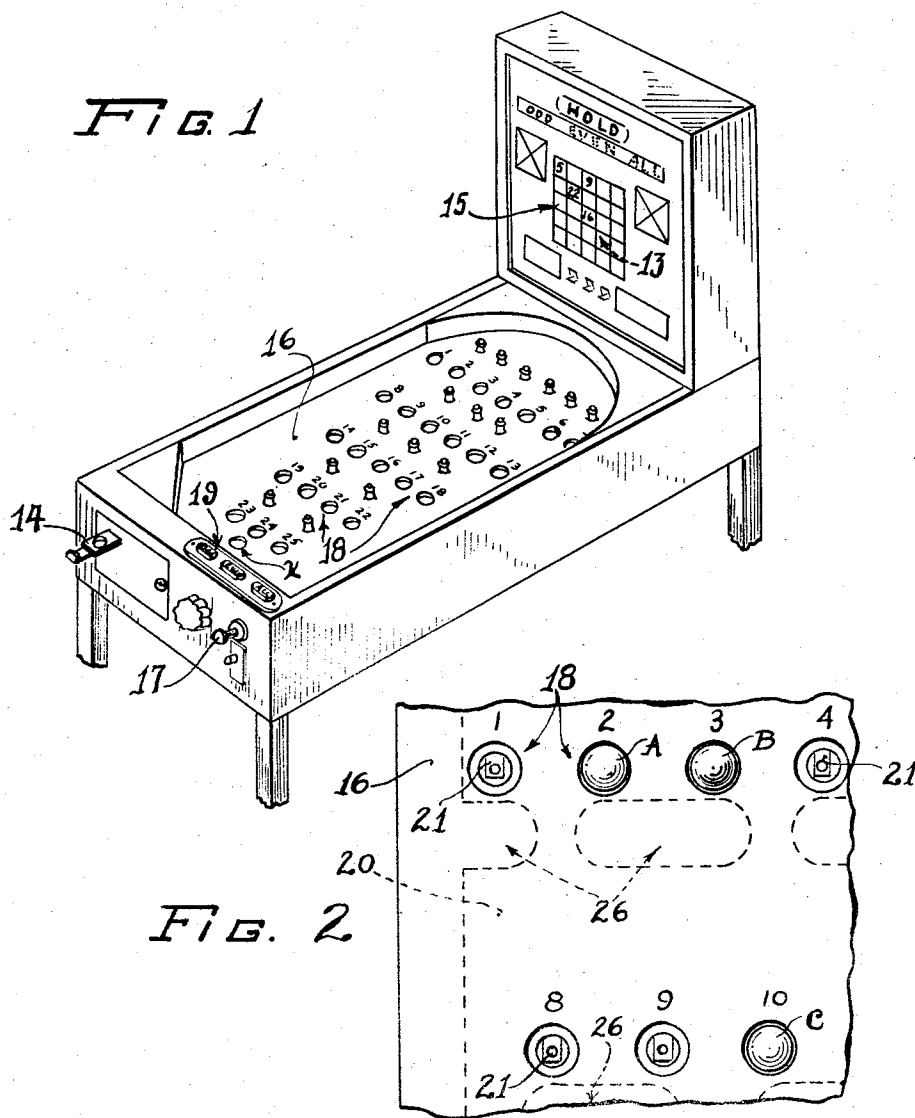
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2,853,304

PREVIEW SCORE CONTROL FOR BALL GAMES

Original Filed Oct. 23, 1953

2 Sheets-Sheet 1



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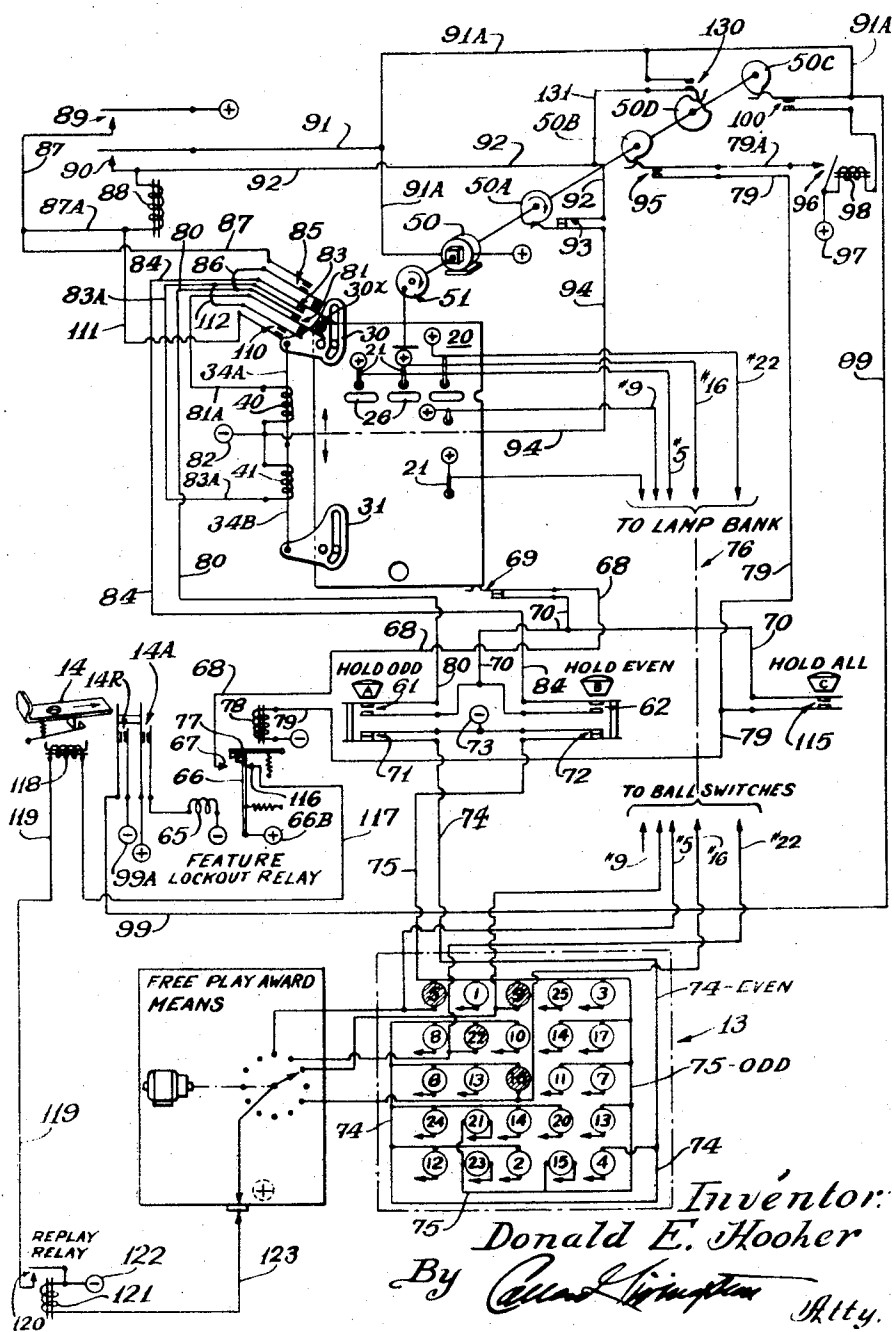
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2 Sheets-Sheet 2

FIG. 3.



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PREVIEW SCORE CONTROL FOR BALL GAMES

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Original application October 23, 1953, Serial No. 387,940, now Patent No. 2,710,756, dated June 14, 1955. Divided and this application May 2, 1955, Serial No. 505,091

9 Claims. (Cl. 273—125)

The present disclosures relate to amusement apparatus such as ball rolling games, and particularly to score-circuit and control means therefor, this application being a division of application Serial No. 387,940, filed October 23, 1953, now Patent No. 2,710,756, which relates to a selective ball-retaining and releasing means so contrived that the player of the game may cause certain scoring balls to be retained or released as an optional incident to further playing of the game with the object of improving the score with the aid of released balls, or holding gains already made with an intention possibly of improving the same or of taking advantage of some award, such as a full re-play, which might be available as a result of an accumulated or earned score, such selective releasing and retaining action being achieved, according to the disclosures of said patent, by means of a ball shutter which is adapted to move in several directions to register with different ball pockets or the like for the purposes aforesaid.

The present invention pertains to the types of game wherein one of the scoring objectives is the progressive accumulation or building up of some predetermined scoring condition or pattern and the portrayal, as by illumination by a series or arrangement of score lamps, of areas on a score panel, of the progress of scoring toward completion of the pattern or objective, it being one of the principal purposes to provide what is termed herein a preview control means for enabling the player of such a game to selectively extinguish certain illuminated score-display lamps in a partially completed scoring pattern, as aforesaid, to aid in the visualization of how the resultant configuration of the pattern (by the lamps which are permitted to remain illuminated) might appear if the change were to be permanently effected, at the player's election, whereby to aid the player in deciding which lamps, if any, or perhaps all, should be extinguished or continued in illuminated condition before proceeding with a further playing of the game.

For example, a score panel may have depicted thereon a so-called Bingo card consisting of a square figure subdivided into twenty-five smaller squares in rows five across and five down, each square being assigned some number which will be illuminated by a corresponding score lamp as a result of playing the game. In such a scoring arrangement, it is an object to procure illumination of at least three consecutive squares in the same straight line, either across, up and down, or diagonally.

Frequently the player succeeds in illuminating several incomplete possibilities, such as two successive numbers in several rows or directions which may be mutually adjacent so that the subsequent illumination of only one more number in a certain square might achieve a winning combination or set up a still better opportunity, for instance to score five in line, instead of only three, which is generally accorded a higher award value than three or four numbers in a line.

By utilizing the preview control means herein disclosed, the player may temporarily extinguish certain

lamps or groups of lamps, for example either the odd or even numbers on the panel may be temporarily erased to facilitate study of the possibilities for changing or improving the score by a continued playing of the game.

Accordingly, it is further an object of the invention to provide control and circuit means for a ball rolling game in which played balls actuate game switches and cause illumination of score lamps forming part of a predetermined array, pattern, or scoring condition, together with certain preview means operable at some time by the player for either temporarily or permanently extinguishing certain illuminated lamps with a corresponding alteration of the existing score conditions before continuing with a playing of the game or an incomplete round of play.

The foregoing and additional objects and aspects of novelty inherent in the invention will be more fully described hereinafter in view of the annexed drawings in which:

Fig. 1 is a partial perspective view of an amusement game adapted to employ the novel preview means;

Fig. 2 is a fragmentary plan view, to enlarged scale, of a ball-rolling playfield and a selective-return shutter therefor;

Fig. 3 is a combined circuit diagram and pictorial portrayal of game and control instrumentalities incorporating the novel preview control means.

Referring to Fig. 1, the type of game illustrated is of the coin-controlled variety which is adapted to be conditioned for a round of play by operation of a conventional coin chute or slide 14 or equivalent master control means, the operation of which causes a certain number of balls, say five, to be released to the player by known mechanisms (not shown) so that the player may propel the balls one at a time onto the playing field 16 by operation of a shooter or plunger 17 in the well-known manner with the object of lodging such balls in the numbered ball scoring pockets 18 which are dispersed over the playfield 16 with the object of achieving some particular score.

Let it be assumed by way of example that a player has lodged three balls, A, B, C, in pockets #2, #3, and #10, respectively, as shown to magnified scale in Fig. 2, and also assume that the player was entitled to play five balls in any round of play, and that the remaining two balls in this example failed to lodge in any scoring pocket, but rolled into the special exit pocket X at the bottom of the board, Fig. 1.

The aforesaid balls, A, B, and C, will be retained in their respective scoring pockets by a shutter panel 20, indicated in dotted lines partly in Fig. 2, and shown in its entirety in full lines in Fig. 3.

The shutter 20 is of the selectively shiftable character described in the aforesaid patent, the view in Fig. 3 being upward toward the underside of the shutter and showing some of the ball scoring switches 21 which are adapted to be held closed by the weight of a ball resting thereon in the appertaining ball pocket situated thereabove, as in Fig. 2. In its normal position, the shutter blocks escape of pocketed balls until such time as it is shifted in one or another direction to cause the necessary registration of the escape openings 26 with certain pockets, or all of them, depending upon the direction in which the shutter is caused to move.

Associated with each ball pocket and its appertaining score or ball switch 21 is a score lamp; and in the type of game under consideration, these lamps are arranged in a predetermined array or configuration in a lamp bank 13, and are each assigned an arbitrary score number or value, as depicted in the drawing.

With reference to Fig. 3, the player will be assumed to initiate a round of play by employing a coin to unlock the

conventional master control means shown in the form of a coin slide 14, which is then pushed in to close the associated master switch means including contacts 14A and 14R.

Closure of contacts 14A connects indicated power to lockout coil 65 causing its armature contact 66 to pull up and close circuit with contact 67 and apply power from terminal 66B to the feature feed conductor 68, armature 66 also becoming mechanically locked-in by locking armature 77.

A concurrent result of actuation of said master switch means is the closure of contacts 14R to apply starting power to reset motor conductor 99 connecting via conductors 91A to motor 50, starting the latter sufficiently to permit the cam switch carry-over contacts 130 to be closed by reset carry-over cam 50D, thereby permitting said motor to run for one full reset cycle until contacts 130 are opened again by cam 50D.

Such reset cycling of the motor 50 will reciprocate the shutter panel 20 once in a straight (up and down) line to release all previously trapped balls.

During the aforesaid full reset operation, it should be noted that the carry-over contacts 130 open before the cam 50C transiently closes the lock-release contacts 100 (the motor having momentum for this purpose), by reason of which the coil 98 of a lockout supervisory relay is not at this time energized, so that even though the lockout pulsing switch contacts 95 are simultaneously closed along with said lockout release cam switch contacts 100 during this full reset, energization of the lockout release coil 78 will not occur, but will be effected only upon taking a feature or selective reset as distinguished from a full game reset, as will appear later.

It will be assumed that the player shoots the allotted number (e. g. five) of balls and lodges some of them in both odd- and even-numbered pockets on the playfield of Fig. 1, and that these are the pockets corresponding to the numbers 5, 9, 16, and 22, which numbers will be illuminated in the usual manner on a glass or like back panel 15 (Fig. 1) by their corresponding lamps in the appertaining lamp bank 13, said lamps being respectively energized by certain ball switches 21 associated with the correspondingly numbered pockets via conductor 76 and certain bus-bar or common lamp-bank conductors 74, 75.

At this juncture the player may wish to utilize the holding or selective ball-return feature and must decide whether it would be more advantageous to his further scoring to hold the odd- or the even-numbered balls, or both, or neither.

According to the invention, the player is enabled to selectively extinguish the lights in the bank 13 for either the odd or the even numbers; or he may effect the return of the full complement of balls for further playing while extinguishing any lamp energized by his previous playing; and if it is now assumed that the player wishes to preview the score effect of holding the odd balls or numbers, he will push the odds button A only part way down, thereby opening the odds preview contacts 71 without, however, closing the odds hold contacts 61, these two sets of switch contacts being of the break-before-make variety.

As a result of such preview operation, the power connection from terminal 73 to the even lamps bus bar or common feeder conductor 74 will be broken at said preview contacts 71, and the even-numbered lamps 16 and 22 will be temporarily extinguished, it being remembered that the energization of all lamps in the first instance is dependent upon lodging a ball in the correspondingly numbered ball pocket, and the consequent closure of the appertaining ball switch 21, from which operating connections are extended via cable connectors 76 to the bank of lamps.

Having studied the visual effect of holding the existing odds score and extinguishing the even score, the player next, presumably, would release the odds switch button A

and push the even score holding switch button B partly down for a similar preview of the even-number pattern, thus opening preview contacts 72 (without closing the hold contacts 62) and thereby temporarily disconnecting power from terminal 73 to the common feeder conductor 75 for the odd lamps, so that only the even scoring numbers now remain illuminated.

Assume now that the player makes a decision to hold the even numbers. By depressing button B still farther, the hold even contacts 62 will become closed, thereby connecting power from terminal 66B, the now closed feature relay contacts 66, 67, conductor 68, closed shutter-panel safety-switch contacts 69, hold switch feeder conductor 70, said closed hold contacts 62, guide solenoid conductor 84, normally closed shutter guide supervisory switch contacts 83, return conductor 83a, to selector solenoid coil 41, and power terminal 82, thus energizing the solenoid 41 and causing the guide levers 34A, 34B to shift downwardly with a consequent counter-clockwise pivoting of the shutter guide means 30, 31 which will produce a selective shifting (i. e. diagonal in this instance) of the shutter plate 20, when the latter is moved, into a selective ball release position which will cause registration of the exit passages 26 with the ball pockets associated with the odd numbered ball pockets, in the manner and by the selective shifting mechanisms more fully depicted and described in the aforementioned Patent No. 2,710,756.

As an incident to the operation of the Hold Even button B, as described above, and the aforesaid counter-clockwise pivoting of the shutter guide 30, the switch pin 30X thereof will open the supervisory contacts 81 and disable the companion selector solenoid 40 via conductor 81A, while supervisory contacts 110 will be closed thus providing a closed circuit, to be explained hereinafter, for the holding relay coil 88 to maintain the energization of the hold even solenoid 41 via contact 89, conductors 87, 87A, 111, closed supervisory contacts 110, loop contact 112, and solenoid conductor 83A.

The energizing voltage for solenoid 41 on conductor 83A resulting from operation of the Hold Even button which connected power from source 66B for conductor 83A, as described above, is also applied to the holding relay coil 88 via its conductor 87A, conductor 111, closed supervisory contacts 110, loop contact 112, and the aforesaid solenoid conductor 83A (contacts 83 remaining closed in this operation), thereby setting up a holding circuit from power terminal 82 for both the holding relay 88 and selector solenoid 41 at holding relay contacts 89, and conductors 87, 87A, as well as a holding or cycling circuit for the shuffle motor 50 at contacts 90, conductors 91, 91A, to the motor, this holding circuit being maintained from power terminal 82 via conductor 94, normally closed drop-out contacts 93 of the motor drop-out or interrupter cam switch, and conductor 92.

Motor 50 now begins its single-cycle selective shuffle operation and reciprocates the shutter plate 20 to produce the requisite selective ball-return motion cooperatively with the directive cam effect of the selectively positioned guide means 30, 31, lodging the shutter resultantly in the shifted condition which is intended to produce release of all odd numbered trapped balls, including those numbered 5, 9 in this example, since the selection was to hold the even numbers.

When the aforesaid selective ball-returning or shuffling operation is completed, the cycling drop-out cam 50A will open the interrupter or cycling drop-out switch contacts 93, thereby dropping out the holding relay 88 so that its contacts 89, 90 are opened and the motor 50 stops.

An important incident to the foregoing feature or selective cycling operation of the motor means 50 and associated cam switch cycling means (as distinguished from a full reset cycling) is the operation of the feature lock-out means, which will prevent the player from making any further holding selections at this time.

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It is recalled that when the player first actuated the master control means 14 its game-starting switch contacts 14A energized the lock-out coil 65 to attract the armature contact 66 thereof which automatically became mechanically locked-in behind the locking armature 77.

Energization of the lock-out release coil 78 will release the locking armature 77 and thereby disconnect the power from terminal 66B for the feature selection switch means via feed conductors 68, 70, as contact 66 falls back to normal from contact 67, thereby disabling the selector switches.

Near the conclusion of each shuffle cycle of motor 50 (as determined by drop-out contacts 93), lockout cam 50B will transiently close the normally open lockout release contacts 95, thereby pulsing, via conductors 79, 79A the lockout release coil 78, because the lockout supervisory relay contacts 96 are momentarily closed at this time to connect switch 95 with power terminal 97, owing to the simultaneous closure of cam switch contacts 100 and the fact that there is still at this moment voltage on conductor 91A from the holding relay (82-92-90-91), which pulses the lockout supervisory relay coil 98 before the holding relay drops out responsive to opening of drop-out cam switch contacts 93 at the end of the cycle.

Once the lockout armature contact 66 drops back to the normal condition, the player cannot again avail himself of the selective ball-return feature until the Master Game Control Means 14 is further actuated.

When the shuffle cycle is concluded, as aforesaid, and the holding relay 88 drops out with stoppage of motor 50, the selector solenoid 41, which was being held during the cycle, will also be dropped out by opening of holding contacts 89 and consequent removal of power from conductors 87, 87A, 83A, the shutter guides 30, 31 being restored to the neutral condition shown by action of a solenoid spring means (not shown), as described in said patent.

Had the player elected to hold the odd numbers, the operation of the device would have been substantially the same with the selective circuit control means extending the connections to energize the selector solenoid 40, instead of 41, under initial control of the hold odd switch means 61.

By depressing the switch button A part way down, the preview contacts 71 open and cut out the power to the common feeder 74 for the even lamps, leaving the odd lamps illuminated. Upon pushing the button A all the way down the hold odd contacts 61 are closed, applying power to selector solenoid 40 via conductor 80, closed shutter supervisory contacts 81 and conductor 81A, whereupon guide levers 34A, 34B are pushed upwardly to pivot the shutter guides 30, 31 clockwise so that solenoid 41 is disabled at shutter supervisory contacts 83, and the hold relay coil 88 is energized via shutter supervisory contacts 85, loop conductor 86 and the initial solenoid operating voltage on conductor 80, the holding relay closing its own holding circuit at contacts 89 by means of which the selector solenoid 40 is also provided with holding voltage from conductor 87, closed contacts 85, and the loop 86, and closed contacts 81 to solenoid lead 81A, analogously to the operation in the preceding example.

The cycling of the shuffle motor will thereupon go forward exactly as in the previously described cycle for the hold-even operation, the cam switch ultimately breaking the motor and holding relay circuits at contacts 93, and the lockout release coil 78 being energized through cam switch contacts 95 and supervisory relay contacts 96, as before, so as to bar further feature selections until the master switch means 14 is subsequently actuated.

Should the player have pocketed both odd and even balls but desire to retain the resultant score and obtain any free plays standing to his credit, he may push the hold all switch button C and close contacts 115 to apply power

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from lockout relay terminal 66B, contacts 66, 67, closed, conductor 68, closed shutter safety switch contacts 69, conductor 70, said hold all contacts 115 closed, to the lockout release coil lead 79, thereby energizing the lockout release coil 78 to drop out the locked armature contact 66 and interrupt power from said terminal 66B so that no further feature-holding operations can be had at this time.

The principal result of pushing the hold all switch is to release the lockout relay and disconnect all power from the hold selection switches at lockout contacts 66-67, and to set up the free play circuit by restoring connection of the power terminal 66B to the free-play conductor 117 via lockout relay contacts 66, 116, so that the Master Control Means 14 can be conditioned by energization via conductor 119 of free-play coil 118 for operation without a coin, provided, of course, that the replay relay means or coil 121 is energized from source 122 at this time to close its contacts 120 when the power circuit is set up to conductor 123 by the "Free Play Award Means." Thus, no free play can be had until the lockout armature is restored to the normal position shown in the drawing.

The full reset, as distinguished from the selective resetting operations for holding odd and even balls, as in the foregoing examples, is effected by operation of the Master Control Means 14 (whether by use of a coin or free play) to close master reset contacts 14R, thereby applying power from terminal 99A to main reset conductor 99, thence via conductor branches 91A to the motor 50, starting the latter sufficiently for the main reset cam 50D to close the reset carry-over switch contacts 130 and continue the application of power to the motor from the cam switch contacts 93 via conductor 131.

Thus, the motor will operate through a complete reset cycle by reason of a momentary starting impulse from the master reset switch means 14R and the ensuing closure of the motor circuit by the carry-over switch contacts 130 without the holding relay means 88 being involved at all; and at the end of this full reset cycle the motor will be stopped by opening of the carry-over cam switch contacts 130, the cam slot in cam 50D being positioned so as to break the motor circuit immediately before a full closure of supervisory cam switch contacts 95 and 100 occurs, and before the time when drop-out contacts 93 would open, the cam slot on 50D being long enough to allow for some overtravel of the motor and cams in this action while providing a safety margin before the cycling contacts 130 can close again, so that the motor does not improperly recycle itself, as might otherwise occur when the holding relay is involved on selective reset and the cycling is under control of the drop-out cam switch contacts 93 instead of carry-over contacts 130, since contacts 93 promptly reclose after the cycle is ended and such precaution is necessary to prevent recycling.

When a coin is employed to condition the master control means 14 for operation, the full resetting operation is initiated by switch means 14R; but as an incident to such operation, the master switch contact means 14A also sets the lockout circuit at 66, 67 so that in the interim it might be supposed that the hold switch means could be effectively actuated, but this is not the case because as soon as the shutter panel 20 begins to move the safety shuffle switch means 69 opens the selecting circuit and there can be no interference with the proper shuffling operation.

Only at the end of the selective reset is the lockout release coil 78 energized through closure of the cam switch contacts 95 and 100 and the lockout supervisory relay contacts 96. In a full reset, the holding relay is not involved and therefore the supervisory relay 98 is not energized because the pulsing of cam switch contacts 100 occurs after the carry-over switch contacts 130 have opened, and therefore contacts 95 are not effective to trip the lockout release coil 78 in a full reset.

I claim:

1. Amusement apparatus comprising in combination, a set of electric score lamps, energizing circuits for each of said lamps and each said circuit including a score switch actuated by a playing piece; and a preview control means comprising predetermined groups of said lamps and the energizing circuits therefor respectively connected to different power supply conductors, and preview switch means for each said group of lamps and connected with the appertaining power supply conductor for operation to temporarily interrupt the power supply to the appertaining lamp group for the purpose of extinguishing such lamps as may be energized in any desired group as an aid to visually appraising the resultant score effect.

2. Amusement apparatus comprising a plurality of electric score display lamps and energizing connections for each of the same and respectively including a score switch adapted to be actuated by a playing piece to effect illumination of the appertaining display lamp so long as such switch is maintained in actuated condition by a said playing piece; electrically-controlled selective release means operable to effect release of playing pieces from actuating relation to selected groups of said score switches to extinguish lamps in the appertaining groups which are energized thereby; a power-supply connection feeding the lamps of each said group; and preview means for temporarily extinguishing the lamps of any group to modify an existing display effect and facilitate envisioning the resultant display effect, said preview means including selectively operable preview switch means for each said group and connected with the respective power-supply connection thereof for operation to temporarily cut off the power to the corresponding group of lamps; together with selectively operable switch means for actuating said electrically controlled release means to effect release of the playing pieces from switch-actuating relation to the score switches of any said group or all of said groups to effect a relatively permanent extinction of the energized lamps in a desired group.

3. In a ball-rolling game, a playfield including a plurality of out-pockets into which balls are to be played; ball-retaining and releasing shutter means for said playfield and having ball exit passages for registration with said pockets and so arranged that in a first position of the shutter means a passage is registered with each of the totality of pockets for release of any and all pocketed balls, and in a second position no passage is registered as aforesaid whereby to retain the balls lodged in any and all pockets, and in at least two additional positions exit passages will be registered with some but not all of said pockets, the group of pockets appertaining to each said additional position mutually excluding at least some of the pockets included in the group of the other said additional position; selectively-operable, electrically-controlled shutter-moving means for moving said shutter means to either of said two additional positions, at least; ball-operated score switch means operatively associated with each of the pockets of said groups for operation respectively by a ball lodged in any of the appertaining pockets; a score light connected to be energized by each one of said score switch means, the lights respectively appertaining to the pockets of each said group being arranged in corresponding groupings for viewing by the player; and preview circuit means including switch means selectively operable by the player for temporarily extinguishing all illuminated score lights in either said grouping whereby the player is enabled to preview the extinguishing effect upon the score lights in either grouping which would result from selective operation of the control circuit means to move the shutter means to that one of said additional positions which would effect release of the balls lodged in pockets of the appertaining group.

4. In a ball-rolling game, a playing field having ball pockets with open bottoms; a shuffle panel movable in various directions beneath said bottoms from a normal

ball-holding position into and out of a plurality of ball-releasing positions to return balls to play; ball switch means associated with said pockets for operation by balls lodged therein; said pockets being arbitrarily identified by odd and even score numbers; a score lamp connected to be operated by each ball switch and illuminate identifying display indicia for the corresponding odd or even number of the appertaining pocket and ball switch; said shuffle panel including ball-releasing exits registrable with the odd numbered pockets in a first one of said ball-releasing positions and with said even numbered pockets in a second one of said releasing positions and with the totality of both odd and even numbered pockets in a third one of said positions; electrically actuated drive means and selector switch circuit means for operating the same to produce selected movement of said shuffle panel into said first or second releasing positions to release the balls pocketed in the corresponding odd or even numbered pockets and thereby extinguish the appertaining score lamps and return the released balls for further playing thereof; together with selectively operable preview switch means and circuit means operable to temporarily extinguish the illuminated odd or even numbered score lamps to enable the player to visualize the lamp-extinguishing effect which would result from selectively operating the selector switch means to produce movement of the shuffle panel into either of said first or second releasing positions; and a master control circuit including a master starting switch, cycling switch means and lockout switch means and connections respectively controlled thereby to condition said selector switch means, said preview switch means and said electrically actuated drive means for operation in a game cycle initiated by operation of said master switch to produce movement of the shuffle panel to said third releasing position before it can be moved selectively to either said first or second releasing positions, and before said preview switch means can be effectively operated, and to disable said selector switch means in each said cycle after one selective operation thereof until said master switch means shall thereafter be actuated to initiate another cycle.

5. In a game apparatus played with playing pieces, score control means comprising a plurality of circuit control devices each actuated by a playing piece; a plurality of score indicators each connected for indicating actuation by one of said control devices and adapted to remain in an indicating condition until released; a first selectively operable release means for releasing all indicators at one time or any one of certain groups thereof at one time from indicating condition and restoring the same to non-indicating condition; and a second release means selectively operable by the player of the game and having connection with said indicators for operation to effect a temporary release of any of said groups of indicators from indicating to non-indicating condition to provide a visual aid to the player to assist in appraising the desirability of effecting actual release irrevocably of the indicators by said first release means.

6. Apparatus according to claim 5 in which said first and second release means have a common operating control movable to a first position to actuate the second release means only, and also movable to a second position to actuate the first release means.

7. Apparatus according to claim 6 in which said common operating control is arranged and constructed so that it cannot be actuated to operate the first release means without passing through said first position thereof in which it operates the second release means.

8. In a score control apparatus for a ball-rolling game of the type having ball-operated score switches and score-controlled, selectively-operable replay means for releasing balls for further play; improvements comprising: preview score control means including a plurality of score lamps

and connections for energizing the same severally by actuation of corresponding score switches from a certain appertaining one of several power supply circuits, each of said supply circuits being connected to supply a certain appertaining group of said score lamps; and preview switch means connected for selective momentary operation to disable the power supply connection for any of said groups of score lamps energized therefrom for such time as said preview switch means shall be held in disabling operation, whereby to aid in the visual comparison of different possible score effects resulting from deenergization of illuminated lamps in one or another of said groups in advance of selective operation of said replay means.

9. In a score control apparatus for a ball-rolling game of the type having ball-operated score switches and score-display lamps actuated by said score switches, together with score-controlled, selectively-operable replay means for releasing balls for further play provided said lamps are energized in any of a plurality of predetermined different geometric patterns; improvements comprising: preview score control means including a plurality of said score lamps and connections for energizing the same severally by actuation of corresponding score switches from a certain appertaining power supply circuit,

each said supply circuit being connected to supply a certain appertaining group of said score lamps; and preview switch means connected for selective momentary operation to disable the power supply connection for any of said groups of score lamps energized therefrom for such time as said preview switch means shall be held in disabling operation, whereby to aid in the visual comparison of different possible score effects resulting from deenergization of illuminated lamps in one or another of said groups in advance of selective operation of said replay means to condition the game for further play to achieve scoring energization of lamps in accordance with at least one desired pattern as aforesaid; together with circuit means operably associated with said preview switch means and selectively operable to extinguish the lamps of a selected one of said groups prior to such replay.

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