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RECORDING MECHANISM FOR GAMES

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2 Sheets-Sheet 1

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WITNESS:

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2 Sheets-Sheet 2

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ATTOREYS.
This invention relates to a recording mechanism whereby records may be made of scores obtained in various games, the recording mechanism being of general application to games of chance or skill.

In certain places such as amusement parks, or the like, where prizes are given for high scores in games of chance or skill, it is customary to permit the player to accumulate the scores obtained in playing the game during various visits to the park, or the like. This of course requires the keeping of permanent records and, in general, the issuance of receipts to the player so that he may prove at a subsequent date the scores previously made. Necessarily, of course, this has also involved the presence of an attendant who could verify and record the results. It is the broad object of the present invention to provide a recording device applicable, for example, to a coin operated machine not subject to the supervision of any attendant. Of course, the device is also applicable where an attendant may be present to collect the money paid for the privilege of playing and to generally supervise the game. As will be obvious hereafter, the invention is applicable to various games, being slightly modified only to conform with the scoring system of the game. For example, it is applicable to a bagatelle game of the type herein specifically illustrated in which chance plays the primary part, although it is also applicable to games of skill such as those involving a simulation of a gun and target in which the gun is movable by the player and in which the score depends upon his skill.

More specifically, the recording mechanism operates by the formation of a duplicate record, one copy of which is delivered to the player while the other copy is retained in the form of a permanent record within the machine. The arrangement specifically provides for the entry on both copies of the player’s name and address so that the score may be fully identified with him. Various subsidiary objects of the invention will be apparent from the following description read in conjunction with the accompanying drawings in which:

Fig. 1 is a diagrammatic sectional view showing the essential parts of one form of recording mechanism adapted for recording the scores of a bagatelle game;

Fig. 2 is a perspective view partially in section showing the game board and its connections to the recording mechanism; and

Fig. 3 is a sectional view of a detail.

In the arrangement illustrated herein the recording mechanism is adapted to the playing of a coin controlled game. It will be obvious, however, that it can be readily modified so that playing may be controlled by an attendant to permit, for example, the player to use only a certain number of balls in one play.

A coin C is inserted into a chute 2 to release a locking mechanism and initiate the playing of a game. The coin falls within a pocket 4 having an open bottom and slideable over a suitable surface so that, initially, dropping of the coin from the pocket is prevented. The initial positions are illustrated in Fig. 1 following the insertion of the coin. The pocket 4 forms part of a slide 6 which is connected by a link 8 to a suitable operating lever arrangement indicated at 10. After inserting the coin the player must raise the lever 10 to set the parts in condition for playing. As the lever 10 is raised the coin acts as a cam 15 forcing the lever 16 upwardly lifting a projection 20 out of a notch 21 formed in the periphery of a disc 22, the lever 19 being journaled upon a fixed cross shaft 17. The disc 22 carries a laterally projecting pin 24 entering an opening 26 in the slide 6. The pin 24 also enters the yoke 23 formed on the end of a lever pivoted at 25 on the slide 6, the opposite end forming an armature 27 for an electromagnet 28. The lever also carries a hammer 31 arranged to strike a bell 33. The yoke 23 has an opening of less longitudinal extent than the opening 26. The opening of the yoke 23 is of such size that the projection 20 is raised out of the notch 21 before the pin is engaged by the yoke so that when engagement does occur the disc 22 is freely movable, the projection 20 then lying above the periphery of the disc in a position to drop thereon after the coin comes into alignment with the chute 12 and drops therethrough into the coin box 14 which is held in closed position by a suitable lock indicated at 16. The coin box 14 is cylindrical in shape and has an interior diameter slightly greater than the coin to be used in the machine so that the coins will normally pile up in definite order with the result that, as will be pointed out later, the owner of the machine may determine what player may have used any counterfeit coins and may accordingly void his record.

As the slide 6 continues its movement to the right, as indicated in Fig. 1, the disc 22 is rotated clockwise with the projection 20 riding on its periphery so that the lever 18 is held in an upper position causing engagement of the contacts 74 and 76. During this movement the link 28 which is pivoted to the disc 22 is moved upwardly causing a counterclockwise movement of the segment 30, which drives the pinion 32 clockwise carrying with it the ratchet 34 which moves freely past the spring-pressed pawl 36 which is directed as shown, this pawl 36 being carried by a feeding roller 38 cooperating with a pressure roller 40, two strips being fed between these rollers as will be hereafter described.

A plunger 42 pressed downwardly by a spring 43
44 initially rides upon a horizontal upper surface of the slide 6 but during the initial movement of slide 6 to the right it will drop into the hollow 43, its lower end being guided by the link 49 which is pivoted to it and journaled loosely upon the shaft 17. The plunger 42 at its upper end carries a transverse pressure bar 46 adapted to overlie the type members 50 which are arranged to be eventually pressed against it by the transfer member 52, which may take the form of a type writer ribbon, so as to impress their characters upon an upper sheet 54 and also upon a lower sheet 58, the upper sheet 54 either having carbon on its lower side or there being interposed between the sheets a suitable typewriter ribbon or carbon paper. The sheet 54 is supplied from a roll 56 while the sheet 58 is supplied from a roll 60 both of these sheets passing together between the rollers 48 and 30. The upper sheet 54 is then directed through a suitable slot outside the machine while the sheet 58 is reeled upon a take-up roller 62 which may be held tensioned by a suitable spring of any convenient type. The two sheets pass together over a table 63 beneath an operating member 52 and there being interposed between them at this point a wide inked ribbon or carbon paper if the upper strip is not provided with ink or carbon on its lower side. The purpose of this arrangement is so that the player may write name and address upon the upper sheet at a location where it is opposite to the opening in 65, which name and address will be transferred to the lower sheet.

The type members 50 lie side by side and are carried by bars 64 individually pivoted to the upper ends of lever 66 pivoted on a common pin indicated at 67. Springs 69 react between the bars 64 and the levers 66 to hold the type members 50 in raised position. Suitable springs 69 urge the levers 66 to positions which normally retractor the type members from below the bar 46. By reason of these springs, during the initial movement of the slide 6 as mentioned above no printing occurs in the downward movement of the bar 46 as plunger 42 drops into the notch 43. The further movement of the slide 6 causes the plunger 42 to ride upwardly upon the flat surface 45 of the slide 6. Electromagnets indicated at 72, of which one is provided for each of the levers 66, are adapted to rock the levers in a counterclockwise direction as viewed in Fig. 1 by attracting armatures 70 carried by the levers to thereby move them against the tension of springs 69 to bring the corresponding type members 50 beneath the cross bar 46. The arrangement of the magnets which is illustrated is merely for the conservation of space, the various magnets being identical in their mode of operation. The magnets have a common connection through the contacts 74 and 16 to a source of current illustrated conventionally as a battery. Each magnet furthermore has an individual connection to a contact 78 which is arranged to be engaged by an individual cooperating contact carried by a corresponding leaf spring 80, the leaf springs being connected to the other side of the source of current.

At its rear end the slide 6 carries a block 84 which is provided with a plurality of openings 88 in which instances there are five. When the slide 6 is in its rearmost position these openings are aligned with the lower ends of five chutes 88 and also overlie the corresponding leaf springs 80 which also are five in number. It may now be noted that there are five electro-magnets 72 and the same number of levers 66 and type members 50, the type members being arranged side by side in positions successively projected beneath the bar 40. When the slide 6 is in its forward position as illustrated in Fig. 1 the openings overlie a common receiving member 90. An extension 39 of the block 32 underlies the lower ends of the chutes 33 when the block is in its forward position. Springs 35 form parts of the lower portions of the chutes 88 and are arranged to close contacts at 37 when urged outwardly by the presence of balls in the lower portions of the chutes. These contacts act in parallel to close a circuit including a source of power and electromagnet 29.

Referring now to Fig. 2, a bagatelle board is indicated at 92, this board being provided with the usual guideway 51 from which balls may be individually projected by manipulation of a spring-pressed plunger 56. A tube 55 opens at its upper end into the passage 94. Within this tube there is provided a plunger 100 having a member projecting laterally through a slot in the side of the tube 104 provided with a cable 102 carrying a ring or suitable handle 104. A sleeve 103 pressed upwardly by a light spring 110 is arranged to be moved upwardly, when the plunger 150 is raised, to cover the opening at which a tube 112 communicates with the tube 55. The upward movement of the sleeve 103 is limited by a suitable step, this sleeve having the function of preventing any balls from the tube 112 entering the tube 98 when the plunger 100 is raised, the arrangement permitting the use of a short plunger. The sleeve 103 is pivoted on a pin 106 and is held in this position and given such weight that it will press the sleeve 103 downwardly to such extent that the upper end of the plunger is below the opening of 112. The tube 112 communicates with the receiving member 93 hereafter mentioned. From the above it will be obvious that successive manipulations of the plunger 100 will enable the balls within the tube 112 to be moved individually into the passage 91 from which they may be projected upon the board.

A valve member or slide 114, having an opening 113 therein, is provided which closes the passage through the tube 112 except when the member 104 occupies its rearmost position, the valve being connected to a lever 115 operated by the rocking of a lever 115 against the tension of a spring 116. The slide 114 carries an electromagnet 130, connected in the circuit of electromagnetic 130 is arranged to attract a pawl 132 against the tension of a spring 134 to disengage it from a hook 136, which it would normally engage, carried by a slide 138 provided with an opening 140, which, when the slide is held together by engagement of the pawl and hook, will align with the opening 113.

The purpose of this is made clear hereafter. The board is provided with the usual openings 120 communicating with the upper ends of tubes 88 which lead the balls into corresponding openings 86 in the member 24. The balls shall not enter any of the openings 120 fall into a trough 122 from which they pass through tube 124 directly into the receiver 90.

In the foregoing description the operation has been considered up to the point where the member 94 ass rearmost position in the present instance there are five. When the slide 6 is in its rearmost position these openings are aligned with the lower ends of five chutes 88 and also overlie the corresponding leaf springs 80 which also are five in number.
tion and consequently the circuits are broken at 78. The type members 50 are accordingly retracted from beneath the bar 46.

As play takes place, those balls which do not enter any of the openings 120 will pass into the trough 122 and into the member 90. If a ball enters one of the openings 120 it will pass through the corresponding tube 38 and will enter the proper opening 86 in the member 84. As it does so its weight will press the corresponding leaf spring downward closing the circuit through the corresponding magnet 72 and accordingly causing a projection of the corresponding type member 56 beneath the bar 46. If two or more balls pass into the same opening 120 those subsequent to the first will be recorded as pointed out below and initially will rest upon the first ball with the major portion of the second ball above the level of the top of member 84, the member 84 being preferably of a height such that its upper surface is just above the top of the lowermost ball when that ball is resting upon a spring 80. After the play of the five balls, or any other suitable number, has been finished, the player will write his name and address upon the portion of the sheet 56 available through the opening 68. He will then move lever 10 downwardly to produce a succession of events as follows if it is assumed that no more than one ball is in any of the chutes 88:

First, the plunger 42 will drop into the opening 43 causing the bar 46 to press the type members 56 downwardly and record their characters upon both sheets 56 and 50. The balls before the balls are removed from the leaf springs 80 so that the magnets remain energized and the type members initially projected will remain beneath the bar 46. In further movement of the slide 6 to the left the pin 24 is engaged by the yoke 23 to rotate disc 22 counterclockwise and thereby produce a counterclockwise movement of feed roller 25 feeding the upper strip 54 outwardly through the slot and the duplicate member upon the reel 52. In further movement the notch 21 is brought beneath the projection 26 preventing reverse movement of the slide 6 until another coin is inserted. As the slide 6 reaches its extreme forward position, the openings 86 are aligned with the receiver 90 so that the balls are discharged thereinto. During the forward stroke the valve 114 is closed preventing the balls from entering the tube 112. When the magnets are deenergized all of the members 50 are moved to their inactive positions by the action of the springs 69. Following these operations the player may tear off the projected end of sheet 54 which contains the record of his score.

In case there is more than one ball in any chute 88, the magnet 29 will be energized by reason of the presence of one or more upper balls and yoke 23 held thereby in an elevated position to clear the pin 24. Since the opening 26 is longer than the opening in the yoke, the movement of the slide 6 to the right will not impede the disc 22 full movement and the record strips will be advanced only sufficiently for the printed records thereon to clear the active positions of the type members 50. Furthermore, the notch 21 will not move to a position beneath the projection 25 so that the slide 6 may be again moved to the right. In fact, this must be done to secure a record of an upper ball in any of the chutes 88. When the slide is again moved to the right, since the yoke is still raised, the pin 24 is moved only a little further to the right if at all.

The succeeding upper ball will then drop into the corresponding openings 88 and the corresponding magnets 29 will be energized to project their type members 50 into operative positions. If there are now no further balls in the chutes 88, the magnet 29 will be deenergized, the yoke 23 will drop to its active position and the bell will ring. Upon forward movement of the slide, the records will be printed and the parts brought to their initial positions as described above.

If more than two balls were initially in any one of the chutes 88, the player must continue to reciprocate the slide 6 until the bell rings. While the valve 114 is opened each time the slide is moved, since the magnet 130 remains energized as long as magnet 29 is energized, the slide 138 will not move with 114 and consequently the balls which have been played will not be again available during the movements of the slide 6. Finally when the magnet 29 is deenergized, the pawl 132 is released for the later simultaneous movements of the slides.

The game shown in connection with the recording mechanism is illustrated merely to indicate the complete operation. It will be obvious that the equivalent of switches 78 may be operated by numerous other game elements and that the unlocking device may free other types of mechanism for operation.

There may also be made suitable provisions for preventing cheating or for detecting counterfeit coins, or the like, as is usual in mechanisms of this character. Since such precautionary mechanisms are well known they are not illustrated herein since they form no essential part of the invention.

What I claim and desire to protect by Letters Patent is:

1. Recording means for a game which involves a possible repeated recording of a certain amount, comprising means for carrying a record bearing member, a plurality of separate means for recording separate amounts on the record member, a corresponding plurality of means for placing said recording means in active condition, means which in each operation may actuate once any active one of the recording means, and means limiting the operations of said actuating means during a single game to the maximum number of occurrences of a scored amount.

2. Recording means for a game which involves a possible repeated scoring of a certain amount, comprising means for carrying a record bearing member, a plurality of separate means for recording separate amounts on the record member, a corresponding plurality of means for placing said recording means in active condition, manually operable means which in each operation may actuate once any active one of the recording means, and means limiting the operations of said actuating means during a single game to the maximum number of occurrences of a scored amount.

3. Recording means for a game which involves a possible repeated scoring of a certain amount, comprising means for feeding a record bearing member, a plurality of separate means for recording separate amounts on the record member, a corresponding plurality of means for placing said recording means in active condition, means which in each operation may actuate once any active one of the recording means, and means limiting the operations of said actuating means during a single game to the maximum number of occurrences of a scored amount, said actuating
means serving to feed the record member small distances between duplicate recordings and ultimately to move the record member to a position for removal.

4. Recording means for a game which includes a possible repeated scoring of a certain amount, comprising means for feeding a record bearing member, a plurality of separate means for recording separate amounts on the record member, a corresponding plurality of means for placing said recording means in active condition, manually operable means which in each operation may actuate once any active one of the recording means, and means limiting the operations of said actuating means during a single game to the maximum number of occurrences of a scored amount, said actuating means serving to feed the record member small distances between duplicate recordings and ultimately to move the record member to a position for removal.

5. Recording means for a game, comprising a casing, means for feeding a pair of record bearing sheets simultaneously in superposed relationship, means for recording amounts on said record sheets, and means for actuating said recording means and feeding one of said record sheets to a receiving position within the casing and the other to the operator, said casing enclosing said recording means, means for actuating said means, and receiving positioning means against access from the exterior, but providing access to the record sheets while they are in superposed relation to permit the entry of data on both by the operator.

In combination with a game which at the end of play involves the location of elements in positions dependent upon the play and unsuitable for repetition of play, and which involves a possible repeated scoring of the same amount, recording means comprising means for carrying a record member, a plurality of separate means for recording separate amounts on the record member, a corresponding plurality of means for placing said recording means in active condition, means which in each operation may actuate once any active one of the recording means in accordance with the position of said elements, and means limiting the operations of said actuating means during a single game to the maximum number of occurrences of a scored amount, said actuating means serving to restore the elements to positions for repetition of play.

6. In a game apparatus, in combination, a housing having a dispensing outlet; a member providing a playing surface and said member having ball exit scoring openings therein corresponding to different scoring values; an inscription-receiving web in said housing; means including members automatically actuated by balls passing through said ball exit scoring openings to record the score of the game due to balls already played and representing different scoring values upon a portion of said web after a plurality of balls have been played, and means coupling with said recording means to dispense the said portion of the web through said dispensing outlet to the player.

6. In a game apparatus, in combination, a housing having a dispensing outlet; an inclined playing board provided with ball exit scoring openings corresponding to different scoring values; means for elevating balls, one at a time, up to the level of said inclined playing board; means for propelling balls, one at a time, onto the upper portion of said inclined playing board so that they may gravitate thereover and enter into said ball exit scoring openings; inclined run-ways below said playing board having communication with said scoring openings for returning balls from said scoring openings to said elevating means; an inscription-receiving member in said housing; means including members actuated by balls traveling along said run-ways to record the score of the game due to balls already played and representing different scoring values upon said inscription-receiving member after a plurality of balls have been played, and means to dispense said inscription-receiving member to the player through said dispensing outlet.

9. In a game apparatus, in combination, a housing provided with a dispensing outlet; a member providing a playing surface and said member having ball exit scoring openings therein corresponding to different scoring values; means for propelling balls, one at a time, up to said playing surface; run-ways below said playing surface having communication with said ball exit scoring openings for returning the played balls from said scoring openings to said elevating means; an inscription-receiving web in said housing; means including members actuated by balls traveling along said run-ways to record the score of the game due to balls already played and representing different scoring values upon a portion of said web after a plurality of balls have been played, and means to dispense the said portion of said web to the player through said dispensing outlet.

10. In a game apparatus, in combination, a housing; a member providing a playing surface, said member having ball exit scoring openings therein corresponding to different scoring values; means for propelling balls, one at a time, over said playing surface so that they may enter into and pass through said scoring openings; means for elevating spent balls, one at a time, from said playing surface to said play scoring openings up to said playing surface; printing means in said housing; an impression-receiving member in said housing; means including members actuated by balls traveling along said run-ways to record the score of the game due to balls already played and representing different scoring values and to dispense the said impression-receiving member thus printed to the player externally of said housing.

11. In a game apparatus, in combination, a housing; an inclined playing board having ball exit scoring openings formed therein corresponding to different scoring values; means for projecting balls, one at a time, onto the upper portion of said playing board, and means coupling with said scoring openings to record the score of the game due to balls already played and representing different scoring values; means for elevating balls, one at a time, from a point below said playing board to said scoring openings on a point below said playing board; means for elevating spent balls, one at a time, from a point below said playing board up to the level of the same; run-ways for conducting the played balls from said scoring openings to said elevating means, and means including a device operable by balls passing along said run-ways to record the score of the game due to balls already played and representing different scoring values after a plurality of balls have been played.

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