Sept. 19, 1944. J. I. R. ORIHUELA 2,358,533

COLLECTING AND CONTROLLING DEVICE FOR BILLIARD GAMES

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Fig. 1

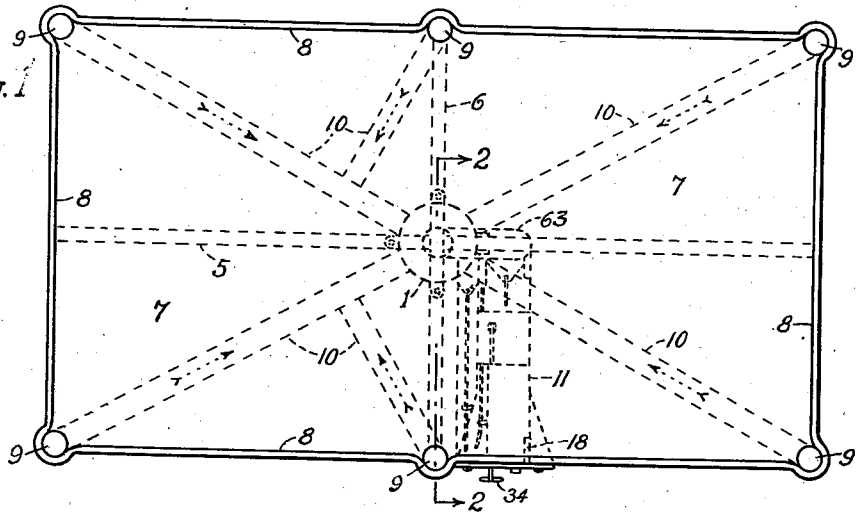


Fig. 2

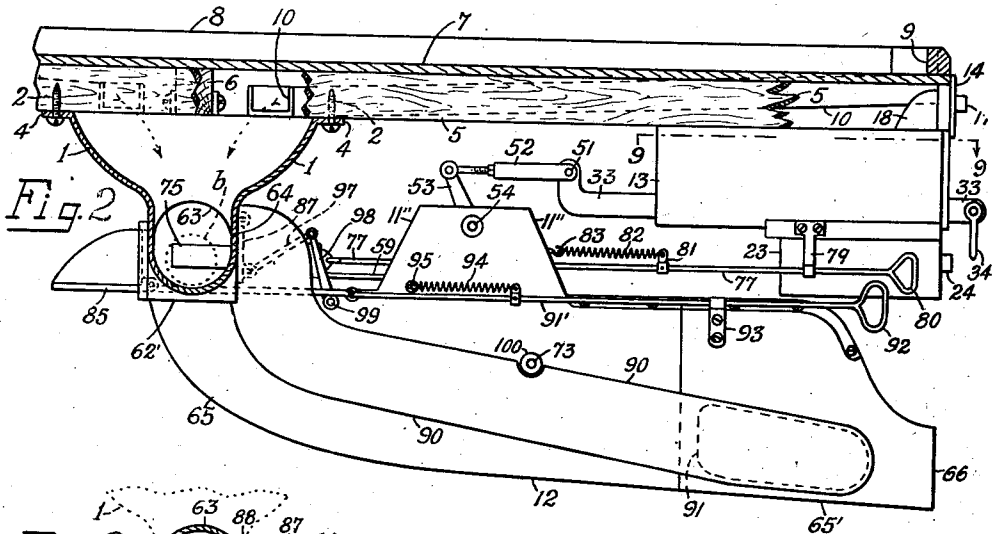
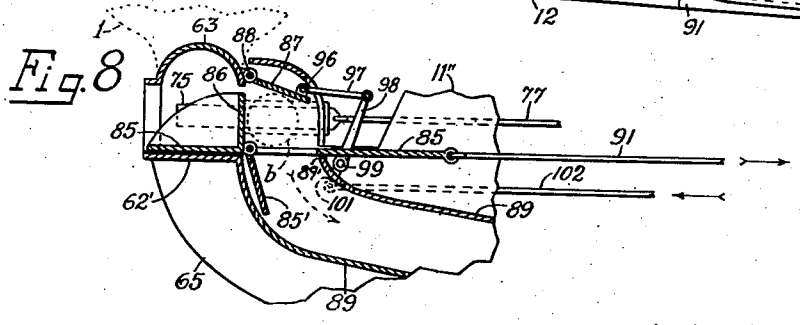


Fig. 8



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Fig. 3

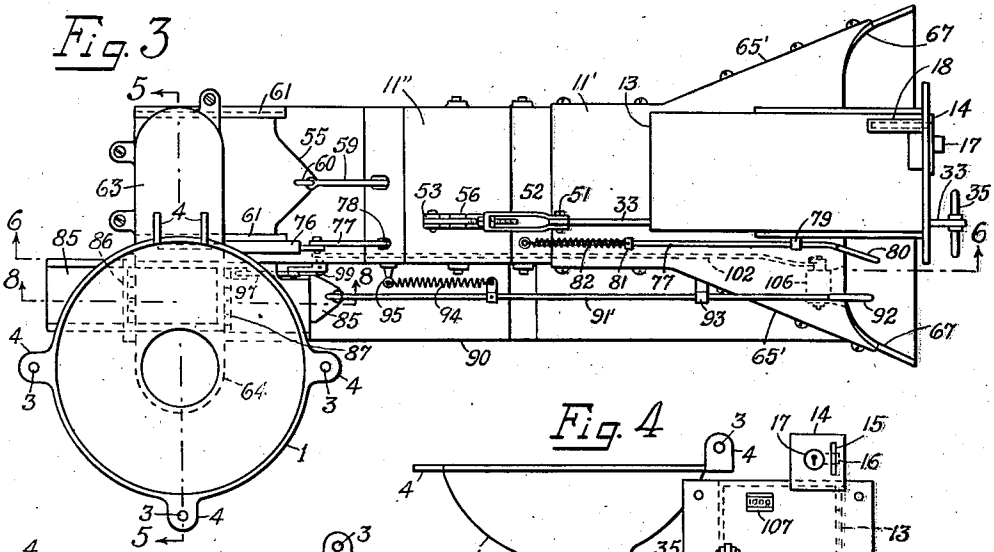


Fig. 4

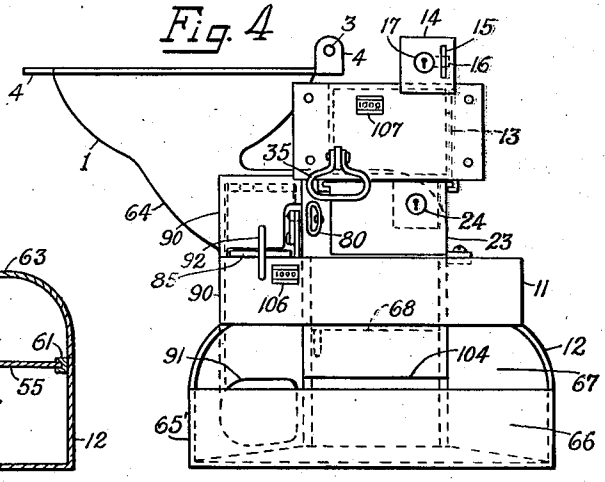


Fig. 5

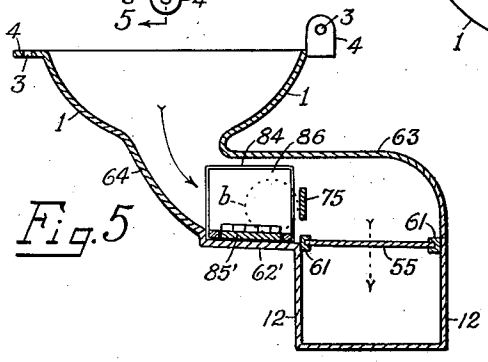
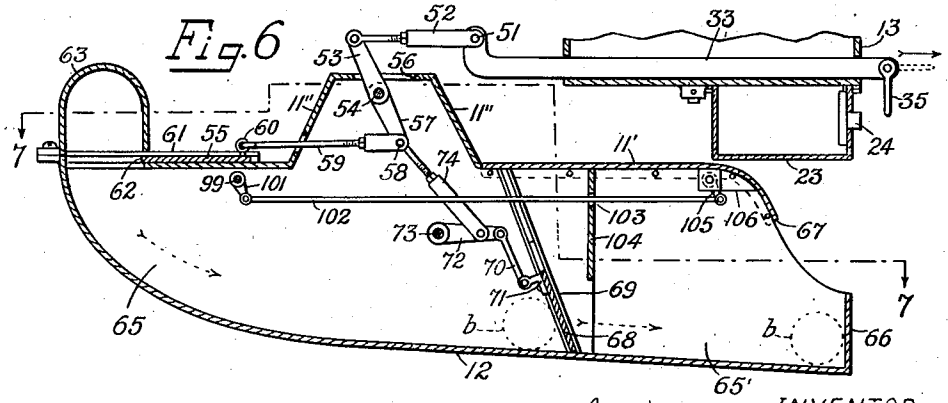


Fig. 6



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Fig. 11

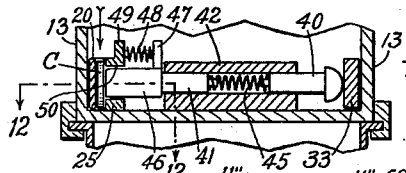


Fig. 7

Fig. 9

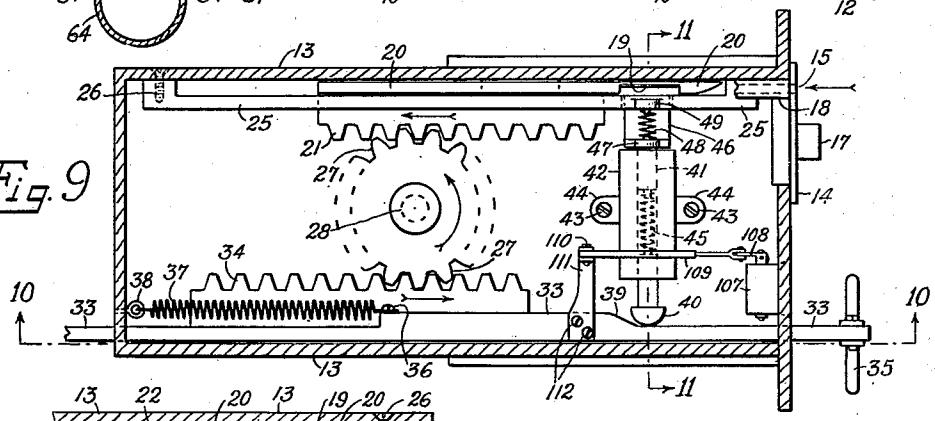


Fig. 12

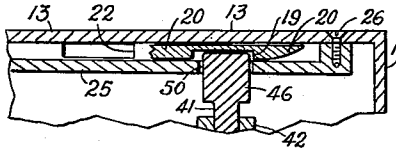


Fig. 10

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COLLECTING AND CONTROLLING DEVICE FOR BILLIARD GAMES

José I. Roque Orihuela, Habana, Cuba

Application May 8, 1941, Serial No. 392,565
In Cuba May 9, 1940

8 Claims. (Cl. 273—11)

This invention relates to the billiard games known as "Chicago" in which money is paid for each play, and it has for its object to provide a collecting and controlling device for that game, whereby the collections of money will be guaranteed and the authorities will be enabled to make an exact verification of the payment of official taxes to be made by billiard-saloons, as the device will show at any moment the exact amount of collections obtained.

Another object of the invention is to avoid that the genuine billiard-balls may be taken fraudulently and a play made without supervision by the scorer and without introducing a legitimate coin in the coin collecting mechanism that is required in order that the balls may be taken out of the device, which balls would otherwise remain retained in the device.

A further object of the invention is that in the event of an attempt being made to make a fraudulent play with illegitimate balls, the pass of the balls through the device will be registered and the fraud checked by means of a registering mechanism connected with the balls passageway.

The invention is described with reference to the figures of the accompanying drawings, of which:

Figure 1 is a top plan view of a Chicago billiard-table embodying the device of my invention, the position occupied by the device beneath the billiard-table being indicated by dotted lines.

Fig. 2 is an enlarged vertical cross-section view on line 2—2 of Fig. 1, longitudinally showing the device.

Fig. 3 is a top plan view of the device alone.

Fig. 4 is an end elevational view of the device, as viewed from the right side of Fig. 3.

Fig. 5 is a transversal vertical sectional view on line 5—5 of Fig. 3.

Fig. 6 is a longitudinal vertical sectional view on line 6—6 of Fig. 3.

Fig. 7 is a horizontal sectional view on angular line 7—7 of Fig. 6.

Fig. 8 is a fragmentary longitudinal vertical sectional view on line 8—8 of Fig. 3, showing a modified position of the gate for an alternative passage of a ball when a play is to be repeated.

Fig. 9 is an enlarged horizontal sectional view on line 9—9 of Fig. 2, showing the casing containing the coin collecting mechanism.

Fig. 10 is a longitudinal vertical sectional view on line 10—10 of Fig. 9.

Fig. 11 is a transversal vertical sectional view on line 11—11 of Fig. 9.

Fig. 12 is an enlarged horizontal sectional view on line 12—12 of Fig. 11.

The device being the object of this invention is composed of a ball gathering funnel 1 which is secured by screws 2 through holes 3 on horizontal lugs 4 provided at its upper edge, beneath the two wooden crossed beams, one longitudinal 5 and another transversal 6, which superiorly support the billiard-table 7 the cushions of which are indicated by 8 and its pockets are indicated by 9, and in said funnel 1 end the channeled conduits 10 which are disposed in a slightly inclined position from beneath the opened bottom of pockets 9 and the function of which is to lead by gravity to the funnel 1 the balls dropping in each play in pockets 9.

To the funnel 1 is integrally secured the main casing of the device (Fig. 3) which is laid laterally to the funnel 1 and transversally to the billiard-table 7 (Fig. 1) and the inner space of which is divided by a horizontal partition 11' in two chambers. The upper portion 11 of the casing is adapted to enclose the coin collecting mechanism and the manual mechanisms for controlling the operation of the gates for giving pass to the balls gathered in funnel 1, and the lower portion 12 of said casing is adapted to gather and retain the balls after each correct play.

The upper portion 11 of the casing encloses at its more distant end from funnel 1 the coin insertion casing 13 which is of rectangular horizontal section (Figs. 9, 10 and 11) and has at a vertical plate 14 raised on its front end wall a vertical slot 15 for insertion of a coin, say a five-cent piece, which slot 15 is normally obstructed by the bolt 16 of a key operated lock 17 (Fig. 4), and to said plate 14 is secured at the vertical plane of said slot 15 the upper end of an inclined chute 18 situated interiorly adjacent a side wall of casing 13 and ending by its lower end in a recess 19 laterally formed in a horizontal slide 20 having its inner edge in the shape of a rack 21, and in the bottom of casing 13 is formed a slot 22 to vertically register the recess 19 in a certain position of slide 20, said slot 22 being adapted to give way to the inserted coin to fall in a small box 23 situated beneath the casing 13 and provided with a lock 24 at its front end wall for removal, when desired, of the coins collected in said box 23.

The slide 20 is guided inside by a guide 25 secured by screws 26 to the adjacent side wall of casing 13 and the rack 21 meshes with a gear wheel 27 loosely mounted on a vertical pivot 28 secured within a socket 29 on the bottom of casing 13 by means of a forelock 30.

Interiorly of the casing 13 and adjacent the opposed side wall of same is slidably mounted through openings 31 and 32 in the end walls of casing 13 a longitudinal slidable bar 33 which is integral with another horizontal rack 34 also meshing with gear wheel 27 opposite rack 21.

The bar 33 ends at its outer end in a handle 35 and at a shoulder thereof is secured by a screw 36 one end of a coil spring 37 having its

other end secured to an eyebolt 38 fixed on the inner end wall of casing 13.

The bar 33 has at a point of its length between rack 34 and the handle 35 a wedge-shaped cam surface 39 adapted to engage the head of a horizontal bolt 40 slidably mounted in alignment with another opposed horizontal bolt 41 in a supporting piece 42 of tubular shape interiorly, said supporting piece 42 being fixed to the bottom of casing 13 by means of screws 43 passing through holes formed in a pair of lugs 44 oppositely projecting from said supporting piece 42. The bolts 40 and 41 are connected together by a coil spring 45, the bolt 41 ending in a block 46 having an upper raised lug 47 connected by a coil spring 48 to another raised lug 49 projecting from the upper edge of guide 25 (Fig. 11), and said guide 25 having an opening 50 in alignment with block 46 to give way to the latter to engage the coin *c* inserted and occupying the recess 19 of slide 20, when the handle 35 is pulled out to cause the horizontal slide 20 to run until the coin *c* is positioned above the slot 22 in the bottom of casing 13. However, the block 46 is so adapted that when there is not a coin in recess 19 due to the fact that no coin has been introduced therein, said block 46 will penetrate into the recess 19 and lock the horizontal slide 20 (Fig. 12), thus preventing its movement and the operation of the mechanism for controlling the gates for giving pass to the balls, as will hereafter be explained.

The slidable bar 33 extends outwards the casing 13 and within the upper portion 11 of the cover and said bar 33 is pivotally connected at its upwardly bent end and by means of a horizontal pivot 51 with the forked end of an adjustable connecting rod 52 which is pivotally connected at its other end with the arm 53 fixed to a horizontal shaft 54 rotatably mounted on the side walls of the upper portion 11 of the cover beneath a raised portion 11'' of the partition 11', which raised portion 11'' is of trapezoidal shape in longitudinal section (Fig. 6) and is provided for the purpose of protecting the mechanism operating the ball passageway gate 55.

The arm 53 moves through a slot 56 formed in the higher portion of raised portion 11'' and to said shaft 54 is fixed another arm 57 directed oppositely the arm 53 and pivotally connected at 58 with an adjustable connecting rod 59 which ends in an eye coupled to the eye of an eyebolt 60 fixed to the end of gate 55 slidably mounted on the partition 11' on side guides 61 and adapted to obturate the horizontal opening 62 in the bottom of conduit 63 transversally extended to a side from the curved conduit 64 leaving from the lower opening of funnel 1. Said conduit 63 is in communication through aperture 62 with the longitudinal passageway 65 formed by the lower portion 12 of the casing and which terminates in an enlarged portion 65' provided with a low end wall 66 for retention of the balls to which is adjacent an upper aperture 67 for the removal of the balls *b* (Fig. 6). The longitudinal passageway 65 has at its start portion a curved-surface bottom which is slightly inclined to facilitate the passage of the balls toward the retaining place, as will be explained hereinafter.

The retention of the balls is attained by means of a gate 68 slidably mounted in an inclined position through the passageway 65 on inclined guides 69 fixed to the side walls of said passageway 65, the gate 68 being operated by means of a link 70 pivotally connected at its lower end to an angular arm 71 fixed to the middle portion of the upper edge of gate 68 and at its upper end to a lever arm 72 fixed on a horizontal shaft 73 supported on bearings 100 mounted through openings on the side walls of passageway 65, and at an intermediate point of its length the lever arm 72 is pivotally connected to an adjustable connecting rod 74 connected with the same horizontal pivot 58 serving as a pivotal connection between the arm 57 and the adjustable connecting rod 59.

In virtue of these connections, it will be understood that upon pulling out the handle 35 the gate 55 will be closed and will prevent the balls *b* from coming out through the conduit 63 into passageway 65, at the same time that the gate 68 will be raised and will give way to the balls *b* retained within passageway 65 into the enlarged end portion 65' whereat they can be removed through aperture 67.

The pass of each ball *b* through transversal conduit 63 is normally shut off by an obturator 75 slidably mounted on a supporting guide 76 fixed to the lower side wall of the upper portion 11 of the cover, the obturator 75 being pivotally connected at one end to a horizontal rod 77 slidably passing through holes 78 in the inclined portions of the raised partition 11'' and being guided through a hole in a supporting arm 79 depending from one side of casing 13, said rod 77 ending in a handle 80 and being connected at a point 81 of its length by means of a coil spring 82 to an eyebolt 83 fixed to the raised portion 11'' of the partition 11'.

Through openings 84 formed in the initial portion of the side walls of conduit 63 is slidably mounted on a solid portion 62' of the bottom of said conduit a small box 85 longitudinally channelled (Figs. 2 and 8) and divided at its middle portion by a vertical partition 86 whose function is to push the ball *b* having dropped into conduit 63 and being retained by obturator 75 on the hinged portion 85' of the bottom of box 85, toward one side of conduit 63 against the holding action of a gate 87 hinged at 88 on the upper edge of the side opening 84 until the hinged portion 85' of the bottom of box 85 is registering the inlet 89' of a side passageway 89 formed by a cover 90 laterally to main passageway 65 and which ends laterally adjacent an opening 91 of the enlarged end portion 65' of said passageway 65, whereby the hinged portion 85' will fall and let the ball *b* carried by said box 85 drop when the latter is pulled out by means of a rod 91' provided with a handle 92 and slidably guided on a supporting piece 93 fixed to the side of the main lower cover 12 (Fig. 2), against the elastic tension of a coil spring 94 secured at one end to the rod 91' and at the other end to an arm 95 fixed to the main upper cover 11. The hinged gate 87 is pivotally connected at 96 to a link 97 pivotally connected in turn to the end of an arm 98 fixed to a short horizontal shaft 99 oscillatably mounted on a bearing fixed through the side wall of passageway 65 and which rigidly carries at its other end another arm 101 directed oppositely the arm 98 and pivotally connected to a horizontal rod 102 slidably guided through an opening 103 of a vertical partition 104 which only closes the upper portion of passageway 65 and serves to prevent the introduction of a hand or any instrument for removal of the balls gathered at the retaining place behind the gate 68, the other end of the rod 102 being pivotally connected to the rotatable arm 105 of a counter 106 sup-

ported at the front of the lower portion 12 of the cover and which serves to indicate the number of balls *b* which have passed through side passageway 89.

At the front of casing 13 is mounted another counter 107 the rotatable arm 108 of which is pivotally connected to a connecting rod 109 which in turn is pivotally connected by means of a horizontal pivot 110 to an angular supporting piece 111 whose horizontal portion is fixed by screws 112 to the slidable bar 33 at a point of which near the cam surface 39. Thus, a number will be recorded in the counter 107 whenever a coin *c* enters into the box 23 and the mechanisms operated by the handle 35 make a correct movement.

The operation of this device is as follows: Assuming a five-cent coin is delivered to the scorer of billiard-table 7 as the price for a play, upon the scorer making sure that the coin is a legitimate one, he will operate with the key in his possession the lock 17 and will insert the coin in the vertical slot 15, the coin thus falling along the inclined passageway 18 into the recess 19 of the slide 20 wherein it will remain lodged. The scorer will then proceed to pull out the handle 35, whereupon the rack 34 secured to bar 33 will rotate the gear wheel 27 which by reason of its meshing with the opposed rack 21 will cause slide 20 to run in an opposite direction. As the cam surface 39 engages the head of bolt 40 it will push the latter into the supporting piece 42 and through the interconnection of the coil spring 45 the bolt 41 will be advanced in the same direction, whereupon the block 46 will penetrate into the slot 50 in guide 25 until its end engages the coin *c* inserted in the recess 19 of the slide 20, at the moment when the intermeshing gear wheel 27 and racks 34 and 21 will have caused slide 20 to run and carry along the coin *c*, until that upon the recess 19 being placed above the slot 22 in the bottom of casing 13, the coin will drop through slot 22 in the box 23.

As the handle 35 is pulled out and the effect above-described is produced, the gate 55 will be moved forward and close the opening 62 communicating the conduit 63 with the passageway 65 and the gate 68 will be raised thereby giving way to the billiard-balls *b* retained within said passageway 65, the balls passing beneath the partition 104 to the stop 66 whereat they will be taken out by the scorer through opening 67 and delivered to the players for starting on billiard-table 7 the previously paid play. Once removed the balls contained in passageway 65, the scorer will release the handle 35, whereupon the slides 20 and 33 will be returned to their normal position by the resiliency of spring 37, the bolts 41 and 40 will be restored to their normal position by the resiliency of springs 45 and 48, and the gate 55 will likewise be returned to its normal position to open the passage of conduit 63 into passageway 65, and the gate 68 will descend again and obturate the outlet passageway 65.

During a play on billiard-table 7, the balls *b* dropping into pockets 9 will pass through channels 10 into the funnel 1 and will be retained at the initial portion of the transversal conduit 63 and at the curved conduit 64, because the first dropping ball will strike the obturator 75 and will be retained on the hinged portion 85' of the box 85 being disposed in horizontal position on the horizontal solid portion 62' of the bottom of said conduit 63.

Once a play has been terminated, if same was a correct one, the scorer will pull out the handle 80, whereupon the obturator 75 will be moved back and allow the free passage of the balls *b* through conduit 63 and the balls will drop through opening 62 in the passageway 65 whereat they will gather behind the inclined gate 68.

In turn, if a ball has been incorrectly used and it is desired to withdraw such determined ball to repeat the play, this will be attained by the scorer by pulling out the handle 92, whereupon the box 85 will move forward to the position indicated in Figure 8 of the drawings, whereby the same ball *b* will raise the hinged gate 87 at the same time that the hinged portion 85' of the bottom of box 85 will swing downwards by its own weight upon registering the inlet opening 89' of passageway 89 lateral to passageway 65 and the ball *b* will drop into this side passageway 89 and pass therethrough and through opening 91 to the enlarged end portion 65' of passageway 65 whereat it can be removed by the scorer through the upper opening 67 and delivered to the players for use in repeating the play previously made incorrectly.

Assuming the scorer is absent, if any other person should try to introduce a coin in the slot 15 for the purpose of taking out the balls retained in passageway 65, such person will be unable to do so if he does not possess the key to operate the lock 17.

If an attempt should be made to operate the device without introducing a coin in the passageway 18, upon pulling out the handle 35 the slides 33 and 20 will operate as above explained, but, upon the bolt 41 being pushed transversally, the block 46 carried by same will penetrate through the slot 50 of guide 25 into the recess 19 of slide 20, and will lock the latter, thereby preventing the operation of the mechanisms connecting the slide 33 to the gate 68, whereupon the latter will not ascend but obstruct the passage of balls *b* and therefore these would not be removed from passageway 65.

If illegitimate balls should be used with a view to make a fraudulent play and the obturator 75 should be operated to give way to the balls being retained in funnel 1, the balls would pass down to passageway 65 wherefrom they could not be removed as the gate 68 would prevent it. If the box 85 would also be operated by means of the handle 92, the balls would enter into side passage 89, but on account of the mechanism connecting the hinged gate 87 to the counter 106, their passage would be marked by the latter and the fraud would thus be checked.

It is obvious that changes may be made in the shape of the device and the construction details of same, without that by this reason it may be considered as altered the essential character of the invention which is such as claimed hereinafter.

What I claim is:

1. In a device of the character described, the combination of a bowl secured to a non-accessible portion of a billiard table, means for conducting balls to said bowl, a passageway having an inlet at the bowl and extending to an accessible portion of the table, means for opening said passageway adjacent the accessible portion and for simultaneously closing it adjacent the bowl, a second direct passageway having an inlet adjacent the bowl and leading to an accessible por-

tion of the table, means for controlling the transfer of balls from said bowl to said second passageway, and separate selectively releasable means for normally obstructing the transfer of balls from said non-accessible bowl to the inlets of said passageways respectively.

2. In a device of the character described, the combination of a bowl secured to a non-accessible portion of a billiard table, means for conducting balls to said bowl, a passageway having an inlet adjacent the bowl and extending to an accessible portion of the table, means for opening said passageway adjacent the accessible portion and for simultaneously closing it adjacent the bowl, a second passageway having an inlet adjacent the bowl and leading to the same accessible portion of the table, means for controlling the transfer of balls from said bowl to said second passageway, and separate selectively releasable means for normally obstructing the inlets to said passageways respectively.

3. In a device of the character described, the combination of a bowl secured to a non-accessible portion of a billiard table, means for conducting balls to said bowl, a substantially straight passageway extending from an inaccessible portion of the table and terminating at an accessible portion of the table, a conduit between the inlet of said passageway and the bowl, means for opening said passageway adjacent the accessible portion and for simultaneously closing it adjacent the bowl, a second substantially straight passageway having a non-accessible inlet adjacent the bowl and leading to an accessible portion of the table, means for controlling the transfer of balls from the bowl directly to said second passageway, and separate selectively releasable means for normally obstructing the transfer of balls from said bowl to said conduit and to the non-accessible inlet of said second passageway adjacent the bowl respectively.

4. In a device of the character described, the combination of a bowl secured to a non-accessible portion of the billiard table, means for conducting balls to said bowl, a substantially straight passageway terminating at an accessible portion of the table, a conduit beneath the table between the inlet to said passageway and the bowl, a gate in said conduit, a second gate in the passageway adapted to obstruct said passageway adjacent the accessible portion, coin-controlled means for moving said conduit gate to closing position and the passageway gate to open position to permit removal of the balls and their return to the bowl while preventing a second transfer of the balls to the passageway, a second substantially straight passageway interposed between the bowl and an accessible portion of the table, means for controlling the transfer of balls from said bowl to the inlet of the second passageway, and separate selectively releasable means for normally obstructing the transfer of the balls from said bowl to said conduit and second passageway respectively.

5. In a device of the character described, the combination of a bowl secured to a non-accessible portion of the billiard table, means for conducting balls to said bowl, a passageway between the bowl and an accessible portion of the table, means for opening said passageway adjacent the accessible portion and for simultaneously closing it adjacent the bowl, a second passageway interposed between the bowl and an accessible portion of the table, separate means selectively releasable from said accessible portion of the table for normally obstructing the transfer of balls to said passageways respectively, and means operable from said accessible portion for exerting a pushing force on a ball and for transferring a ball from said bowl to the second passageway after the obstructing means for said second passageway have been released.

6. In a device of the character described, the combination of a bowl secured to a non-accessible portion of a billiard table, means for conducting balls to said bowl, a substantially straight passageway between the bowl and an accessible portion of the table, means for opening said passageway adjacent the accessible portion and simultaneously closing it adjacent the bowl, a second passageway interposed between the bowl and an accessible portion of the table, means adjacent the bowl for preventing discharge of balls from the bowl to the passageways, said means being selectively operable for releasing a ball to discharge from the bowl directly to the first and second passageway respectively, and means for restoring said last named means to discharge preventing condition after operation.

7. In a device of the character described, the combination of a bowl secured to a non-accessible portion of a billiard table, means for conducting balls to said bowl, a passageway between the bowl and an accessible portion of the table, means for opening said passageway adjacent the accessible portion and for simultaneously closing it adjacent the bowl, a second passageway interposed between the bowl and an accessible portion of the table, means adjacent the bowl for controlling the transfer of balls from said bowl to said second passageway, separate selectively releasable means for normally obstructing the transfer of balls from said bowl directly to said passageways respectively, and means for automatically restoring each of said last named means to obstructing position after each operation.

8. In a device of the character described, the combination of a bowl secured to a non-accessible portion of the billiard table, means for conducting balls to said bowl, a passageway extending from a location adjacent the bowl to an accessible portion of the table, means for opening said passageway adjacent the accessible portion and for simultaneously closing it adjacent the bowl, a second passageway substantially parallel to the first passageway and interposed between the bowl and the same accessible portion of the table, said second passageway terminating in said first named passageway between the accessible free end of said passageway and the means for closing said passageway adjacent the accessible portion, means for controlling the transfer of balls from said bowl to said second passageway, and separate selectively releasable means adjacent the bowl for normally obstructing the transfer of balls from said bowl to said passageways respectively.

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