

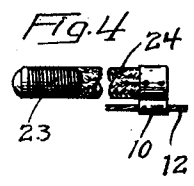
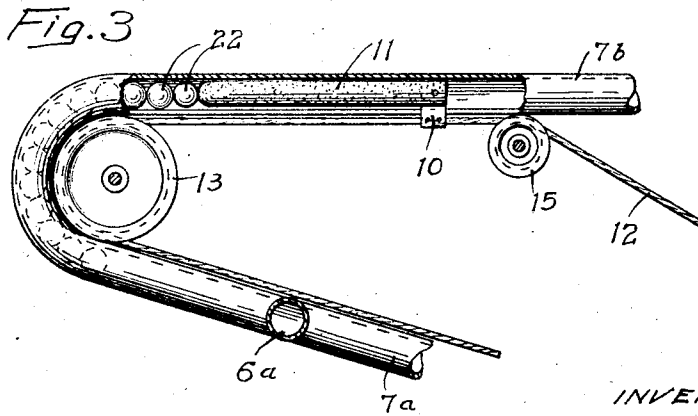
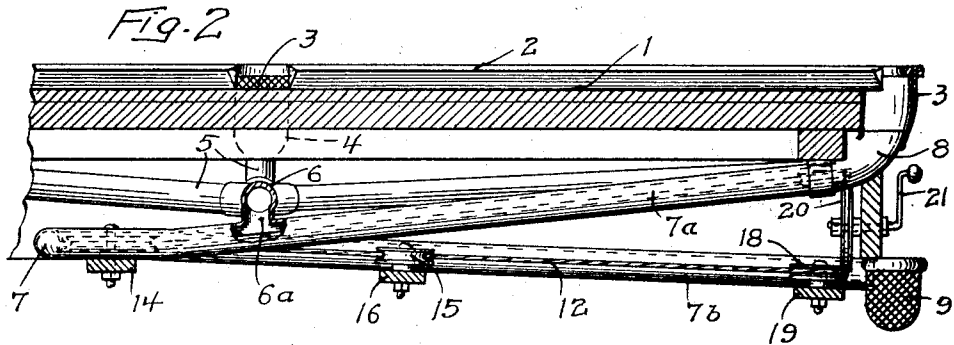
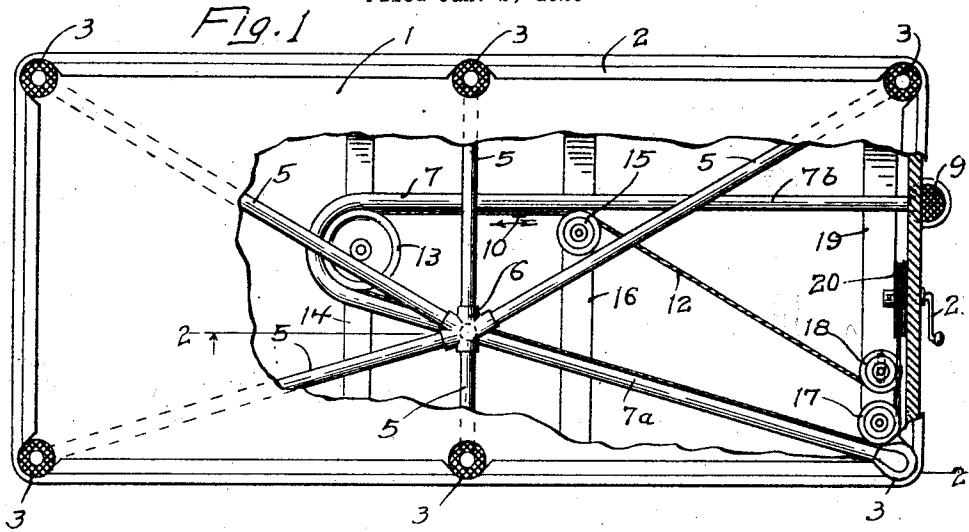
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POOL TABLE BALL COLLECTING AND RETURNING DEVICE

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POOL-TABLE-BALL COLLECTING AND RETURNING DEVICE.

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To all whom it may concern:

Be it known that we, EUGENE F. O'NEILL and ELMER L. KERN, citizens of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in a Pool-Table-Ball Collecting and Returning Device; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a pool table or game table provided with pockets, and particularly to a device used in connection with such a table for collecting the balls entering the pockets and returning the same to the top of the table. Pool tables used in public and other pool parlors are much in demand during certain busy hours of the day and if the attendant must collect the balls from the various pockets or a rack when the game is finished considerable time is lost in which the table is not in use and is producing no revenue. It is also desirable to have the balls collected automatically and to have means for quickly returning a scratch ball to the table in order to speed up the game and save time and effort on the part of the players.

It is an object of this invention therefore to provide a pool table or a game table having pockets with means for collecting the balls entering the pockets and means for easily and quickly returning said balls to the top of the table.

It is also an object of the invention to provide such a table having means for collecting the balls entering the pockets together with means for returning the last ball pocketed singly to the top of the table so that a scratch ball may be replaced on the table.

It is another object of the invention to provide such a table having a series of conduits communicating with the different pockets and also communicating with a member adapted to receive the balls from said conduits, together with means co-operating with said member to return the balls on top of the table.

It is a still further object of the invention to have a table with such a member for receiving the balls, as defined in the preceding paragraph, which member is in the shape of a conduit and has a plunger movable

therethrough, which plunger is connected to a flexible member, together with revoluble means for traversing said flexible member to move said plunger.

It is also an object of the invention to provide means in connection with the pool table for receiving the balls entering all of the pockets and to return said balls to the top of the table through one of said pockets.

These and other objects and advantages of the invention will be fully set forth in the following description made in connection with the accompanying drawings in which like reference characters refer to the same parts throughout the different views, and in which,

Fig. 1 is a top plan view of the device with a portion thereof broken away and other portions shown in vertical section;

Fig. 2 is a partial view in vertical section of the device taken substantially on the line 2-2 of Fig. 1;

Fig. 3 is a partial view partly in plan and partly in horizontal section of a ball receiving conduit and co-operating parts; and

Fig. 4 is a view of a modified form of the plunger used.

Referring to the drawings, a game table of the pool table type is shown comprising the usual flat top or surface 1, the surrounding rails or cushions 2 and the pockets 3 at the corners of the table and also at the sides thereof intermediate the ends of the table. The above mentioned parts are parts of the standard pool table and may be of any desired or standard form. Each of the pockets 3 has a depending casing or chamber 4 and a series of conduits 5 communicate with all but one of the pockets 3, which conduits converge and are connected to a common member 6 disposed beneath the top 1 and some distance below the chambers 4 so that the conduits 5 incline downwardly. Another conduit 7 is provided, one rectilinear portion of which extends centrally below the member 6 and is connected to said member by a short conduit 6^a. Said rectilinear portion of the conduit 7, which is designated 7^a, extends upwardly to the remaining pocket 3 and is connected thereto by an upwardly curved member 8, which member 8 forms a continuation of the usual pocket, said pocket and member having a smooth concave wall extending continuously from the inner wall of conduit 7. The conduit 7 extends downward a short distance

from the member 6 and then is formed with a semi-circular portion disposed substantially in a horizontal plane and said conduit also has a rectilinear portion 7^b extending downwardly at a right angle to one end of the table where it communicates with the upper end of a pocket or receptacle 9 disposed alongside of the table and some distance below the top thereof. Conduit 6, throughout its portion 7^a, and its semi-circular portion and a considerable length of the portion 7^b, has a lateral slot formed in its inner side through which projects a connecting member 10 secured to a flexible plunger 11 disposed in said conduit and also secured to a flexible member or cord 12 disposed immediately outside of said conduit and slot. A grooved sheave 13 is disposed substantially in a horizontal plane concentric with the semi-circular portion of conduit 7 and supported upon a suitable axle member secured in a cross piece 14 of the table over which sheave the cord 12 travels. Said cord also, at the point alongside of the portion 7^b of the conduit 7 runs over a grooved sheave 15 also supported in a horizontal plane carried on an axle member supported in a cross piece 16 of the table. It will be seen that cord 12 also extends alongside of and parallel to portion 7^a of conduit 7 and adjacent the end of said conduit runs over a grooved sheave 17 which, with a similar grooved sheave 18, is supported upon a cross piece 19 of the table. From the sheave 17, cord 12 passes over a larger sheave or pulley 20 supported upon a shaft journaled in one end of the table, which shaft is provided at its outer end with an operating crank handle 21. The pulley 20 is disposed in a vertical plane and has its upper edge in line with the top of pulley 17 and its lower edge in line with pulley 18. Cord 12 passes from pulley 20 over pulley 18 and thence to sheave 15, already described. The pulley 19 may be adjusted in cross piece 20 to provide the proper tension on cord 12.

In operation, the game, such as pool, will be played on the top of the table in the usual manner and the balls driven into the pockets 3. The balls entering any of the pockets will roll down the respective conduit 5 or 7^a. The balls passing into conduits 5 will be guided into member 6 and hence into conduit 7, and those passing into conduit 7^a, will, likewise, travel down into the lower portion of conduit 7. The balls will thus be collected in the curved and lower part of conduit 7, as indicated by the balls 22 shown in Fig. 3, the balls passing down into engagement with the front end of plunger 11 and the balls being held in a row in conduit 7 to which row they are successively added. When the balls have all been pocketed and have traveled down into the conduit 7 and it is desired to start a new game, the attendant will take his position at the end of the table adjacent the corner pocket 3 with which portion 7^a communicates and will rotate the crank handle 21 in a clock-wise direction. This will turn pulley 20 and cause cord 12 to travel in the direction of the arrow in Fig. 1. The plunger 11 is, as stated, made of flexible material, such as a solid piece of felt or a connected series of relatively movable blocks. When the cord 12 is traversed, as stated, the plunger will be moved through conduit 7 around the curved portion thereof and up through portion 7^a pushing the balls before it. The balls will thus be pushed up through portion 7^a into member 8 and will be guided and deflected by the curved surface of said member 8 to the top of the table, the end of the plunger projecting upwardly through member 8. The operator may place the rack for receiving the balls adjacent the pocket 3 so that all of the balls will be delivered into the rack. Pulley 20 will be made of such size that it will only take approximately a couple of turns of the pulley to traverse the plunger to return all of the balls to the top of the table so that the operation will be very rapidly performed. The balls thus being returned to the table the operator will turn crank 21 in a counter-clockwise direction and plunger 11 will be retracted to its normal position and the end of the slot in conduit 7. Should a ball escape from the rack or operator when the same are returned to the top of the table and roll into one of the pockets 3 or should a ball at any other time roll into one of said pockets when plunger 11 is disposed in the portion 7^a of conduit 7, it will be seen that said ball would be delivered to conduit 7 in the rear of the plunger 11. In this case, when plunger 11 is returned to its normal position, the ball will be pushed into portion 7^b of conduit 7 and will roll by gravity into pocket 9 from which it can be removed. Such a movement of the ball, however, will be only accidental and will rarely occur. It will be noted that balls will pass into and be arranged in conduit 7 in the order in which they are pocketed. If during the game therefore a scratch ball should be pocketed and it is desired immediately to replace the same on the table, one of the players can turn the crank 21 in a clockwise direction and said ball will be pushed up to the top of the table by plunger 11. The ball will be the first to be pushed to the top of the table as it was the last ball pocketed. A scratch ball can thus be quickly returned singly to the top of the table. When said ball is thus returned the crank 21 can be again returned to its position by a counter-clockwise movement of crank 21 and the remaining balls will roll back with the plunger.

In Fig. 4, a modified form of the plunger

11 is shown comprising a coil or helix 23 of wire having a fabric or other flexible covering 24 thereon. Such a plunger, it will be seen will be flexible and will easily travel in and conform to the shape of the conduit 7 and the member 8.

From the above description it is seen that applicant has provided a simple and efficient device for collecting the balls and returning the same to the table top. The device can be very quickly and easily operated and will save much time in re-setting the balls for playing. As set forth, the device can also be operated at any time to return one or more balls to the top of the table and this return movement can be performed in less time than if the player is forced to walk to some certain pocket and pick the ball therefrom. The device can be easily and inexpensively mounted on a standard pool table and will not in any way interfere with the structure of the table or the usual operation of the game. By the use of the device, the tables can be kept in use a greater portion of the time and more revenue will be realized therefrom. The invention has been demonstrated in an actual device and found to be very successful and efficient.

It will, of course, be understood, that various changes may be made in the form, details, arrangement and proportions of the parts without departing from the scope of applicant's invention which, generally stated, consists in a device capable of carrying out the objects above set forth, such as shown and described and defined in the appended claims.

What is claimed is:

1. In combination with a game table having pockets and balls adapted to be driven therein, of means for collecting the balls entering said pockets, and means combined with said last mentioned means for returning said balls successively to the top of the table.

2. A pool table comprising pockets having in combination, means for collecting the balls entering any of said pockets, and means for singly returning the last ball pocketed to the top of the table.

3. A pool table comprising pockets having in combination, means co-operating with all of the pockets for collecting the balls entering said pockets, and means for returning the balls to the top of the table through one of said pockets.

4. A pool or similar game table comprising pockets and balls adapted to be disposed therein, having in combination, means communicating with all of said pockets to collect the balls entering said pockets, means having a part movable in said means for returning said balls to the top of the table, and revoluble means for operating said last mentioned means.

5. In combination with a game table having pockets and balls adapted to be shot therein having in combination, a conduit in which all of the balls entering said pockets are collected, and a plunger moving through said conduit for pushing the balls therefrom back onto the table.

6. A pocket-equipped game table having in combination, conduits leading from each pocket, a member with which all of said conduits save one communicate, whereby articles entering said pockets will be directed to said member, said one of said conduits communicating with the bottom of said member and thus receiving all of the articles, and a member movable through said last mentioned conduit to return all of said articles to the top of the table.

7. A game table comprising pockets and balls to be received therein having in combination, means extending to and communicating with all of said pockets to receive the balls entering the same, a conduit for receiving the balls from said means and a plunger movable through said conduit and a portion of said means adapted to move the balls and return the same to the top of the table.

8. A game table comprising pockets and balls adapted to be received therein having in combination, a series of conduits extending to and communicating with all of said pockets save one, a conduit extending to and communicating with said one pocket and having communication with all of the said other conduits whereby the balls passing into the pockets will be received in said last mentioned conduit, a plunger movable through said last mentioned conduit adapted to push said balls therethrough and return the same to the top of the table.

9. A game table comprising pockets and balls adapted to be received therein having in combination, a member into which all of the balls passing into said pockets are collected, a portion of said member communicating with the top of the table, a plunger passing into said member and adapted to push the balls therein through said portion back onto the top of the table.

10. The structure set forth in claim 9, a flexible member connected to said plunger, and means for traversing said flexible member to move said plunger.

11. The structure set forth in claim 9, said member and said portion thereof having a slot therein, a member connected to said plunger and extending through said slot, a cord connected to said last mentioned member, and means for traversing said cord to move said plunger.

12. A game table comprising pockets and balls adapted to be received in said pockets having in combination, a member constructed and arranged to receive balls entering said pockets, a conduit extending from said

member to one of said pockets, a plunger movable into said member and through said conduit for pushing the balls back onto the table, and means for moving said plunger.

5 13. The structure set forth in claim 12, a cord connected to said plunger, and means comprising a manually operated pulley for traversing said cord to move said plunger.

10 14. The structure set forth in claim 12, a pocket alongside of said table, and a conduit connected to said member and communicating with said pocket.

15 15. In combination with a game table having pockets and balls adapted to be driven therein, of stationary means for collecting the balls entering said pockets, and a movable means associated with said stationary means for returning said balls to the top of the table.

20 16. A pool or similar game table comprising pockets and balls adapted to be disposed therein, having in combination, a member in which all balls entering said pockets are collected, said member having a conduit communicating with the top of the table, said member and conduit having a lateral slot therein, a flexible member guided to move substantially parallel to said member and conduit, means movable through said member and conduit connected to and moved by said flexible member to move balls in said member to the top of said table, and means for moving said flexible member.

30 17. The structure set forth in claim 16, said last mentioned means comprising a pulley over which said flexible member runs, and means for turning said pulley.

40 18. A game table having pockets and balls adapted to be shot therein having in combination, a conduit in which all of the balls entering said pockets are collected, and means including a member movable in said conduit for returning all of said balls to the table through one of said pockets.

45 19. A pool table comprising pockets hav-

ing in combination, means co-operating with all of said pockets for collecting the balls entering said pockets, and means including a member engaging a ball in said first mentioned means and movable to eject all of said balls from said first mentioned means back onto the table.

20. A pool table comprising a plurality of pockets and having balls adapted to be shot therein having in combination, a conduit in which all of the balls entering said pockets are received, said conduit having an end positioned adjacent the top of said table and means for ejecting all of the balls collected in said conduit through said end back onto the top of said table.

21. A pool or similar game table comprising pockets and balls adapted to be disposed therein, having in combination, a member in which all balls entering said pockets are collected, said member having a conduit communicating with the top of the table, means movable through said conduit in one direction for pushing the balls collected in said member therethrough, a receptacle carried by said table below said first mentioned members, and a conduit connecting said receptacle and member whereby when said means moves in the opposite direction it will push a ball in said first mentioned conduit or member into said last mentioned conduit and said ball will pass into said receptacle.

22. A pool or similar game table comprising pockets and balls adapted to be disposed therein, having in combination, a member in which all balls entering said pockets are collected, said member having a conduit extending upwardly therefrom, and means for moving balls collected in said member through said conduit.

In testimony whereof we affix our signatures.

EUGENE F. O'NEILL.
ELMER L. KERN.