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Leonhart

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[54] **POCKET BILLIARD GAME APPARATUS**

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[52] **U.S. Cl.** ..... **273/122 R,** 273/5 B, 273/69

[51] **Int. Cl.** **A63d 15/00,** A63d 15/04

[58] **Field of Search** ..... 273/119 R, 119 A, 121 R, 273/121 A, 121 D, 121 E, 122 R, 122 A, 69, 129, 2

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[57] **ABSTRACT**

A spring projector assembly is connected on a turntable mounted at one end of the playing surface of a pocket billiard table, the turntable being rotatable about a vertical axis and the spring projector mounted inclined toward the playing surface and rotatable about its longitudinal axis relative to the turntable. The spring projector includes a hollow tubular body with a spring-loaded piston therein, the piston head having a plurality of annular grooves on its surface selectively engaging with a trigger release mechanism for selective loading of the piston spring. The piston rod protrudes from the end of the hollow tubular body adjacent the playing surface and the protruding end portion is offset from the axis of the piston rod and terminates in a cue ball engaging tip rearwardly of a ball holding impression disposed within a slot in the turntable. The portion of the tubular body in which the piston head is disposed comprises a compression chamber having plural holes through the sidewall thereof, the selective covering of which impedes the forward thrust of the piston rod ball projector upon release of the spring-loaded piston by the trigger.

9 Claims, 3 Drawing Figures

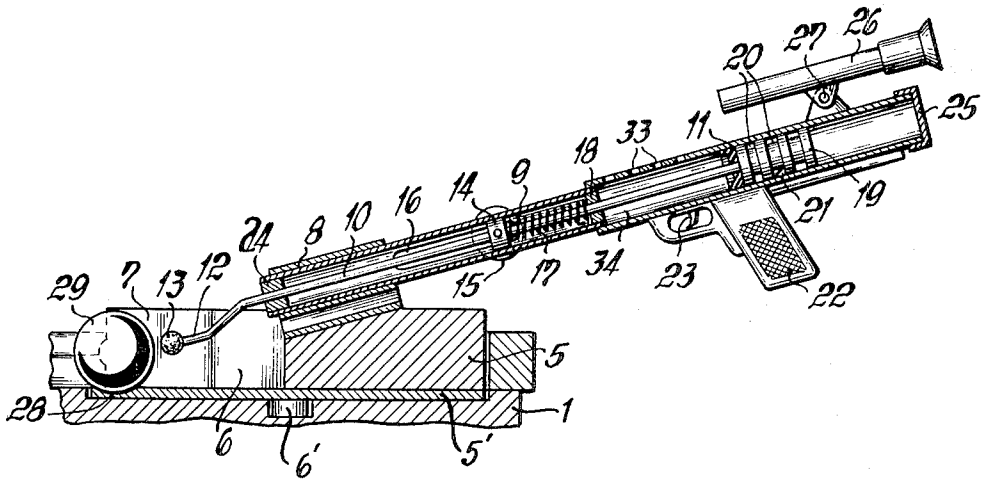


FIG. 1

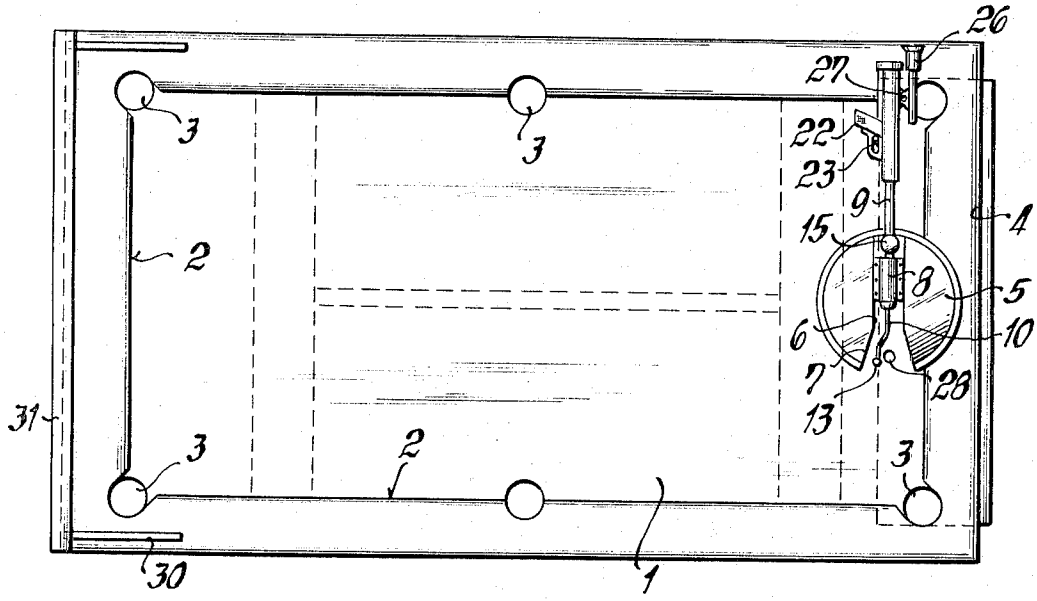


FIG. 2

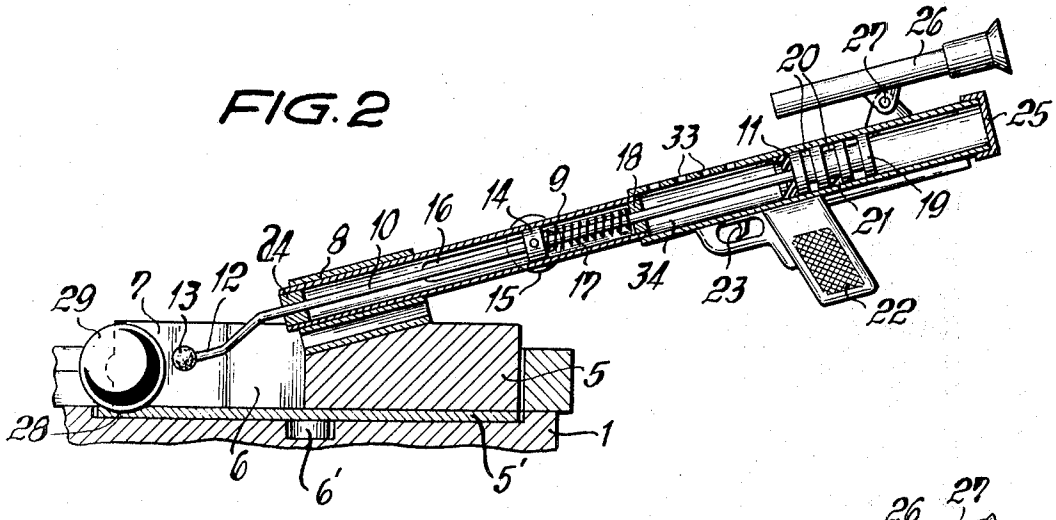
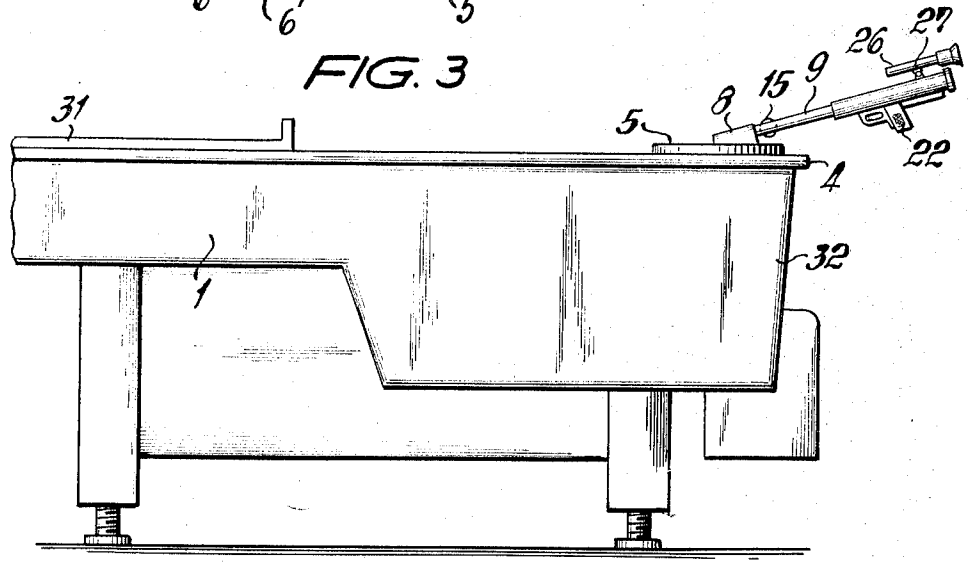


FIG. 3



POCKET BILLIARD GAME APPARATUS

BACKGROUND OF THE INVENTION

It is known from the prior art that in order to save valuable and expensive floor space in lounges and amusement centers, amusement games and the like can be hung on the walls very effectively. For the same reason, that is, to conserve valuable and expensive floor space, billiard tables are produced in smaller peripheral dimensions. However, the space requirement for the undisturbed operation and manipulation of the billiard cues by the players around the perimeter of the billiard table remains so large that the smaller design of the billiard table only reduces the value of the game and otherwise does not provide very much advantage with respect to conserving floor space.

SUMMARY OF THE INVENTION

This invention is directed to the problem of limiting the space required to set up a billiard table not only during playing billiards, but also during the inactive periods, to a minimum.

This problem is solved by this invention by providing a pocket billiard table wherein the cues are replaced by a spring projector for the cue ball disposed in the playing area in front of the center of one end edge of the table, the spring projector being freely rotatable about a vertical axis, and being inclined with respect to the playing area and being rotatable about its longitudinal axis. A piston or projector rod with a piston head sealing gasket at the rear end and a padded head or tip at the front end, which is offset in a stepped manner on the forward end portion, is connected for reciprocation in the bore of the tubular body of the spring projector. A disc is fixedly disposed on the piston rod behind the offset end portion and a handle extends therefrom toward the outside of the tubular body through an elongated slot in the sidewall thereof. A compression spring is connected with one end disposed against the disc fixed on the piston rod and the opposite end disposed against a guide bushing for the piston rod attached to the interior of the tubular body at a sufficient distance from the piston head sealing gasket. The portion of the tubular body rearwardly of the guide bushing comprises a compression chamber having a number of holes through the tubular sidewall, and the piston rod is in sliding contact with a bore through the guide bushing. Behind the piston head sealing gasket, a cylindrical piston member is disposed with a number of sharp-edged annular grooves therein which can be selectively engaged by a trigger lever connected to be actuated by a trigger in a pistol grip type handle attached to the tubular body.

The annular grooves in the cylindrical piston member behind the piston head sealing gasket make it possible to tension the compression spring by means of the handle extending laterally outwardly from the slot in the side of the tubular body, differently, depending upon the annular groove that is engaged, thus enabling the player to adjust the striking of the cue ball lying in front of the piston rod or its padded head with different forces of selected strength. The number of holes in the compression chamber of the tubular body can be covered as desired by one hand of the player thus damping the forward movement of the piston rod or projector rod, making it possible to retard the striking of the cue ball in a controllable manner, while the movement between the piston rod and the guide bushing sealing one end of the tubular body is held to a minimum.

The free movability of the tubular body of the spring projector about its inclined longitudinal axis permits a displacement of the offset front portion of the piston rod toward the left or toward the right or toward any other direction with respect to the center of the cue ball, and thus makes it possible to impart to the ball any desired special effect in projecting the ball, just as with one of the usual billiard cues. The above-described device of the present invention therefore enables one to vary the strike, just as if using a regular billiard cue, in any desired manner, yet saves the extraordinarily large amount of floor space otherwise absolutely required for affording the players the freedom of movement necessary in handling the regular long billiard cues. A player now requires only a space corresponding approximately to the size of a chair area at one end only of the billiard table since the spring projector device overhangs the end of the table only a slight amount. Additionally, no difficulties are encountered in mounting a cover panel at the end edge of the billiard table opposite to the ball projector device, which panel is flipped up during play and, in the folded-down condition, makes it possible to use the largest portion of the pocket billiard table of this invention for other purposes such as a guest table.

BRIEF DESCRIPTION OF THE DRAWINGS

The drawings illustrate one example of a pocket billiards game apparatus according to the invention, in which:

FIG. **1** is a top plan view of the pocket billiards game apparatus of the invention showing the projector for striking the billiard ball in a laterally pivoted position;

FIG. **2** is an enlarged view, partly in longitudinal section, of the ball projector shown in the playing position; and

FIG. **3** is a fragmentary side elevational view of the game apparatus of FIG. **1** but showing the cover panel folded down and the ball projector shown in the position for striking the billiard ball as shown in FIG. **2.**

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings in greater detail, FIG. **1** shows a top view of a known design of pocket billiard table with a playing surface **1,** peripheral side and end cushions **2,** and pockets **3,** four of which are provided at the corners of the playing area and the remaining two of which are disposed in the center of each longitudinal side in the conventional manner.

In contrast to the conventional pocket billiard table, a turntable comprising a thick disc member **5** secured on a disc **5'** is disposed in front of one of the end faces **4** of the billiard table, and the disc assembly, **5, 5',** is mounted for free rotative movement relative to the playing surface **1** about the vertical axis of journal **6'** which is engaged in the playing surface. Disc member **5** has a wide radial slot **6** therein which extends obliquely outwardly from the center of the disc and becomes wider toward the periphery of the disc due to the diverging sidewalls of the slot as shown at **7.** A type of rotary sleeve clamp **8** is fixedly inserted by screws or the like on the upper portion of disc **5** bordering the

inner end of groove 6 and a long tubular body member 9 is freely rotatably connected in the clamp 8 for rotative movement about the longitudinal axis of the tubular body relative to the clamp.

As shown in FIG. 2, a piston or projector rod 10 is disposed in the tubular body 9, the rear end of this piston rod carrying a piston head sealing gasket 11, and the front end portion denoted by 12 is bent in a stepped manner or is offset from the center axis of rod 10 and carries a padded head element or ball 13 on the end thereof. Furthermore, a disc 14 is attached to the piston rod medial of its ends and a handle 15 is connected to the disc 14 and extends outwardly therefrom through an elongated slot 16 in the sides of the tubular body and terminates in a head portion that can be grasped by the player and pulled back to spring-load the spring projector assembly for projecting the cue ball.

A compression spring 17 is positioned with one free end disposed against the disc 14 fixed on the piston rod 10 and with its other end disposed against a guide bushing 18 fixedly connected inside tubular body 9 and sealing one end of the compression chamber 34 on the outer end portion of the tubular body. A cylindrical piston member 19 is connected on the rear end of the piston rod 10, and the trigger lever 21, connected for actuation by trigger element 23 of pistol grip type handle 22, can be placed into a selected one of the plurality of sharp-edged annular grooves 20 around the outer surface of the cylindrical piston member.

The front end of the tubular body 9, at the rear of slot 6, is sealed by a guide bushing 24 with a central bore through which rod 10 extends, and the rear end of the tubular body 9 that is the end of compression chamber 34 opposite guide bushing 18, is sealed by a flat cap 25. A telescopic sight 26, pivotable about a bearing point 27 on the outer end of the tubular body, makes it possible to play the game from the hip or also by sighting on the ball through the telescopic sight. A small depression 28 is provided in disc 5' adjacent its periphery and adjacent the outer part of radial slot 6 in the disc 5 to indicate the firing point of and hold the cue ball 29 prior to it being projected out of the slot by the spring projector assembly.

When the billiard game is not in use, the cover panel 31, which is flipped up and held in a vertical position by toggle joints 30 while the table is in use as shown in FIG. 1, is folded downwardly into a position partly covering the playing surface 1 and cushions 2 as shown in FIG. 3. In accordance with FIG. 3, the billiard table is constructed so that guests can be seated at the left-hand end of the billiard table which is not used for the playing of the game and the cover 31 can be utilized as a table top.

In the front section 32 of the billiard table, the various ball guide channels are arranged in the usual manner which allow the played balls to roll toward the front side 4 and release these balls for playing only after a coin of a certain value has been inserted in a coin activated mechanism. Only the cue ball 29 which is a little larger than the other billiard balls rolls separately toward the front of the table and can be withdrawn from the ball return device at any time repeatedly until the game is finished.

In order to strike the cue ball 29, the spring 17 is pretensioned a selected amount by pulling back on the handle 15, compressing the spring elements 14 and 18, until the trigger lever 21 engages a desired one of the annular grooves 20 in piston member 19. Pulling the trigger releases piston 19 causing spring 17 to propel rod 10 forwardly until its tip 13 strikes the cue ball and projects it in the desired direction toward a billiard ball to which it is aimed to sink it in one of the pockets 3. Furthermore, it is possible, by covering holes 33 in the compression chamber 34, to reduce the forward thrust speed of the piston rod 10. By turning the handle 22, the padded projector head 13 can be pivoted with respect to the cue ball 29 lying in the depression 28 in such a manner that any desired effect can be obtained by striking the ball either on center or in any direction off of center.

The terms and expressions which have been employed herein are used as terms of description and not of limitation, and there is no intention, in the use of such terms and expressions, of excluding any equivalents of the features shown and described or portions thereof, but it is recognized that various modifications are possible within the scope of the invention claimed.

We claim:

1. A pocket billiard game apparatus comprising a billiard table having a playing surface having side and end peripheral walls and ball openings about the edges of the playing surface, a tubular body having a longitudinal axis inclined toward the playing surface, first means connected in the playing surface adjacent one end wall for free rotation relative to the playing surface about a vertical pivot axis, second means connecting said tubular body for rotation about its longitudinal axis relative to said first means, a spring loaded piston assembly mounted for reciprocation within said tubular body, a release mechanism connected with said tubular body and engageable with and releaseable from said loaded piston assembly, said piston assembly including a rod portion extending from one end of said tubular body, said rod portion terminating in a ball engaging tip adjacent said playing surface, and the end portion of said rod portion adjacent said ball engaging tip being offset from the axis of said rod portion extending from the end of said tubular body.

2. A pocket billiard game apparatus as set forth in claim 1 including a member fixedly secured to a medial portion of said rod portion within said tubular body, a longitudinally extending slot in said tubular body adjacent said member, and handle means for spring loading said piston assembly disposed outside said tubular body and extending through said longitudinally extending slot and connected to said member.

3. A pocket billiard game apparatus as set forth in claim 2 in which said spring loaded piston assembly includes a piston head on the end of said rod portion opposite said ball engaging tip, a transverse wall across said tubular body having an aperture through which said rod portion extends positioned between said piston head and said member, said spring loaded piston assembly including spring means connected between said member and said transverse wall.

4. A pocket billiard game apparatus as set forth in claim 1 in which said first means comprises a turntable including a ball retaining depression therein forwardly of the ball engaging tip of said rod portion.

5. A pocket billiard game apparatus comprising a billiard table having a playing surface having side and end peripheral walls and ball openings about the edges of

the playing surface, a tubular body having a longitudinal axis inclined toward the playing surface, first means connected in the playing surface adjacent one end wall for free rotation relative to the playing surface about a vertical pivot axis, second means connecting said tubular body for rotation about its longitudinal axis relative to said first means, a spring loaded piston assembly mounted for reciprocation within said tubular body, a release mechanism connected with said tubular body and engageable with and releaseable from said spring loaded piston assembly, said spring loaded piston assembly including a rod portion extending from one end of said tubular body, said rod portion terminating in a ball engaging tip adjacent said playing surface, a piston head on the end of said rod portion opposite said ball engaging tip, said tubular body having a closed upper free end, a transverse wall across said tubular body spaced in front of said piston head and having an aperture through which said rod portion extends and forming a compression chamber therein, and plural apertures through said tubular body in said compression chamber between said transverse wall and said piston head.

6. A pocket billiard game apparatus as set forth in claim **5** and plural annular transverse grooves on said piston head, and said release mechanism engageable with a selected one of said plural annular transverse grooves.

7. A pocket billiard game apparatus comprising a billiard table having a playing surface having side and end peripheral walls and ball openings about the edges of the playing surface, a tubular body having a longitudinal axis inclined toward the playing surface, a turntable connected in the playing surface adjacent one end wall for free rotation relative to the playing surface about a vertical pivot axis, first means connecting said tubular body for rotation about its longitudinal axis relative to said turntable, a spring loaded piston assembly mounted for reciprocation within said tubular body, a release mechanism connected with said tubular body and engageable with and releaseable from said spring-loaded piston assembly, said piston assembly including a rod portion extending from one end of said tubular body, said rod portion terminating in a ball engaging tip adjacent said playing surface, and said turntable including a ball retaining depression therein forwardly of the ball engaging tip and a disc member having a radial slot therein spanning said ball retaining depression and terminating substantially centrally of said disc.

8. A pocket billiard game apparatus as set forth in claim **7** in which said disc member has a top surface, and said first means is connected to the top surface of said disc member at substantially the terminating end of said radial slot.

9. A pocket billiard game apparatus as set forth in claim **8** in which said ball engaging tip of said rod portion is positioned in said radial slot.

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