Jan. 6, 1970 H. G. BRZOSKA 3,488,054

FIVE-POCKET POOL TABLE WITH COUNTERS

Filed Sept. 29, 1967 5 Sheets-Sheet 1

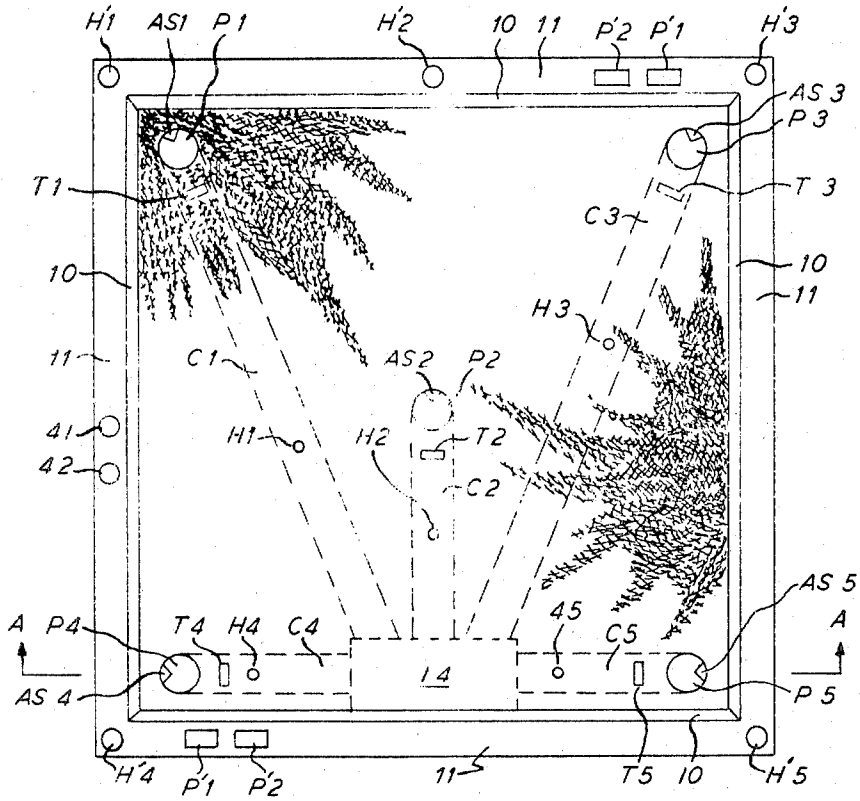


FIG. 1

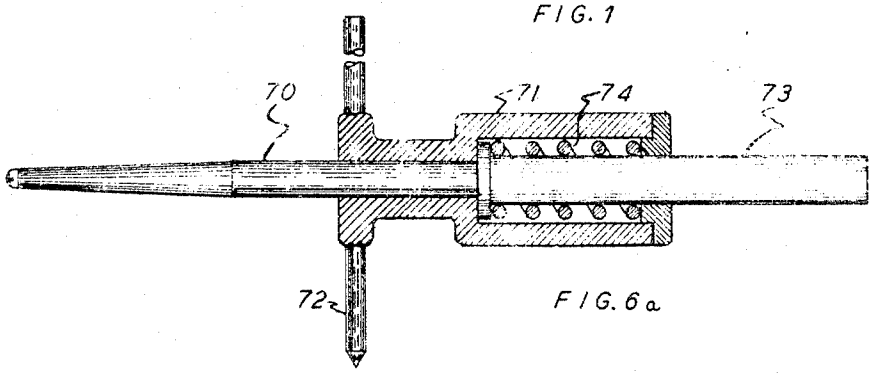


FIG. 6a

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FIVE-POCKET POOL TABLE WITH COUNTERS

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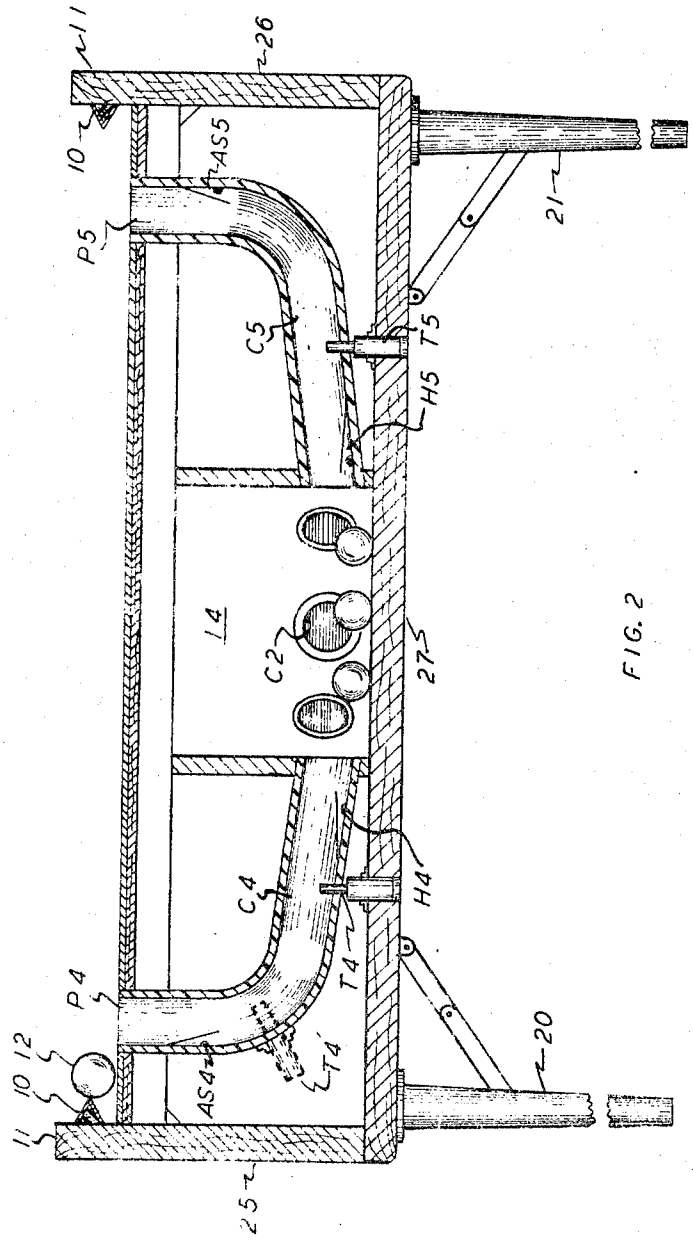


FIG. 2

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FIVE-POCKET POOL TABLE WITH COUNTERS

Filed Sept. 29, 1967 5 Sheets-Sheet 3

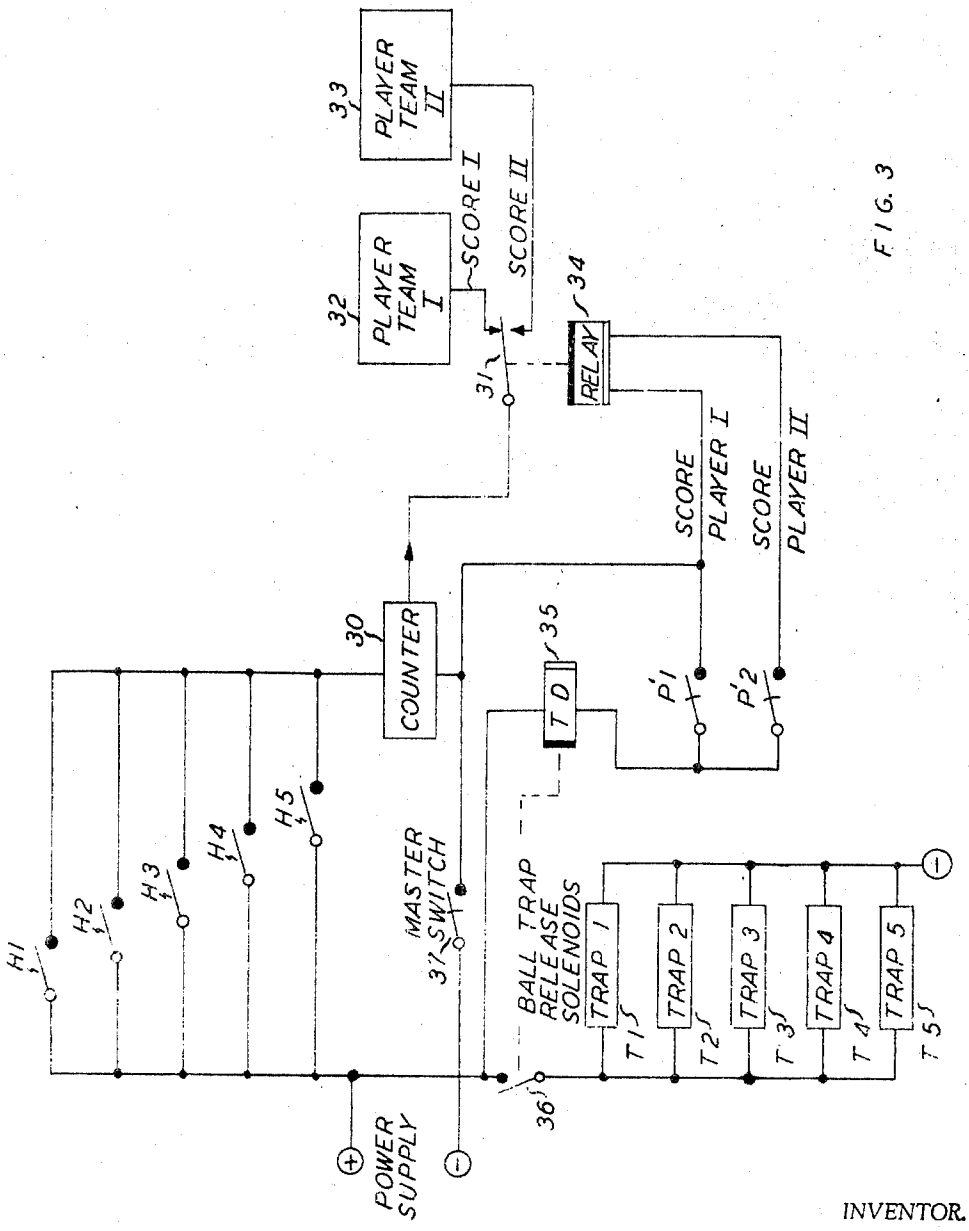


FIG. 3

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FIVE-POCKET POOL TABLE WITH COUNTERS

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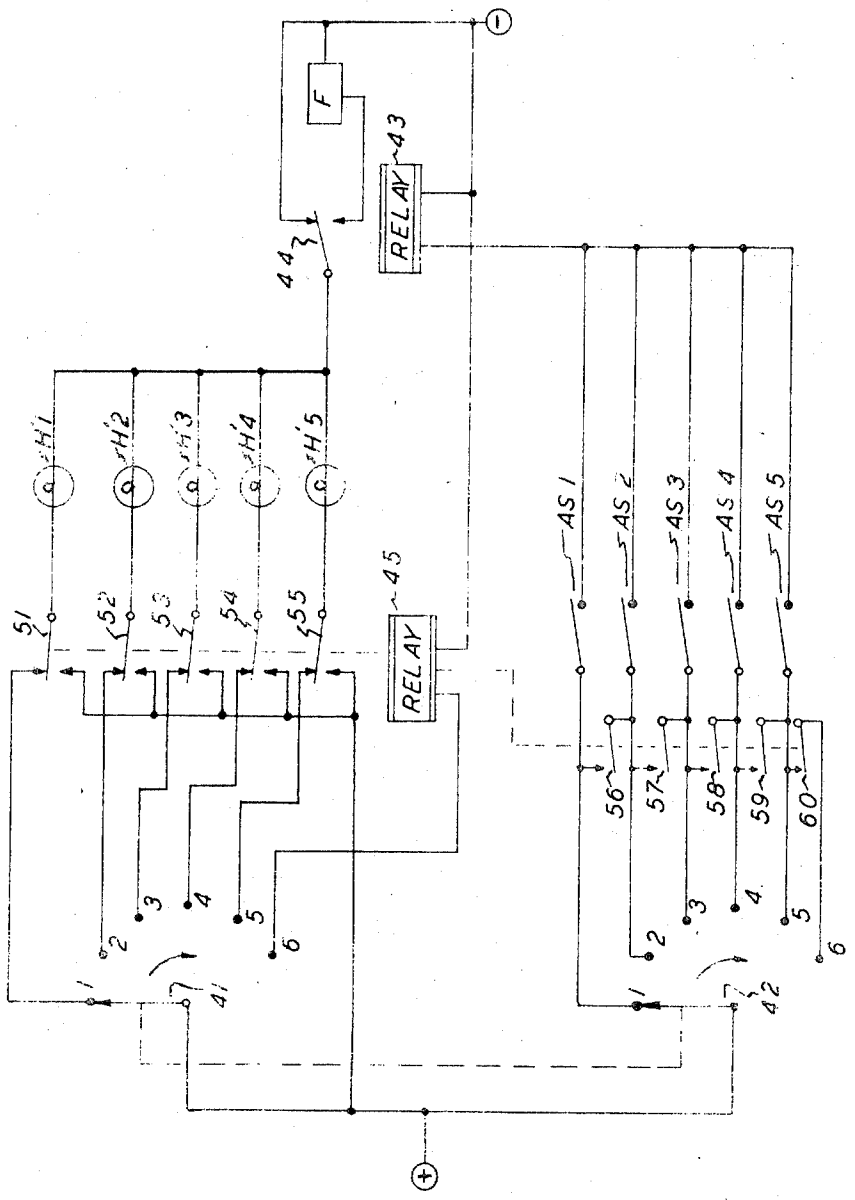


FIG. 4

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FIVE-POCKET POOL TABLE WITH COUNTERS

Filed Sept. 29, 1967 5 Sheets-Sheet 5

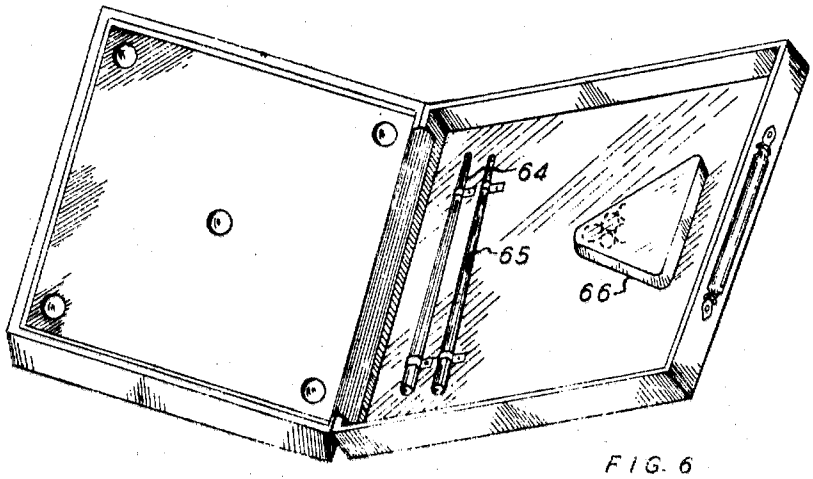


FIG. 6

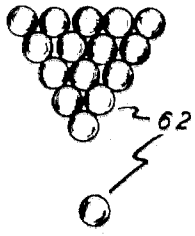


FIG. 5a

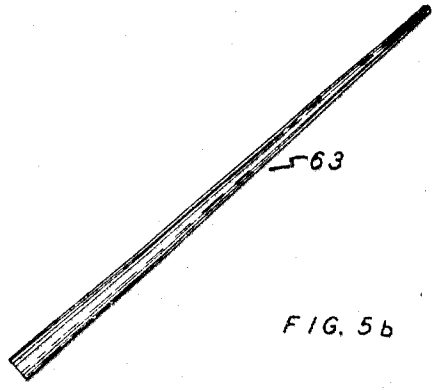


FIG. 5b

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3,488,054

FIVE-POCKET POOL TABLE WITH COUNTERS

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Int. Cl. A63d 15/20
U.S. Cl. 273—11 3 Claims

ABSTRACT OF THE DISCLOSURE

A square pool table having five pockets, four of which are positioned just out of the four corners of the table with the fifth pocket in the center of the table surface. Each pocket is connected to a ball return by a return channel. Each channel has a ball trap. A pocket selection and indicating circuit selects a pocket for play and a ball actuated switch closes a circuit indiating that a ball has been pocketed in the selected pocket. Release of the ball, by actuation of the ball trap, operates to provide automatic scoring.

The present invention relates to games and particularly a novel type of pool. My invention embraces a novel type of pool table which is substantially different from the conventional pool table and a novel game played on such table.

The conventional type pool table is rectangular in shape being substantially twice as long as it is wide. The pockets, of which there are six, are positioned in the perimeter of the table, one in each of the four corners and one each in the long side of the table equally spaced between the ends of the table.

My novel table is similar to the conventional type pool table in that each includes a flat table portion on which the game is played and each include a bumper or cushion around the perimeter of the table. However my novel table is rectangular, with sides of equal length so that the shape is square. In addition my novel table includes five (5) holes of sufficient size to accept the balls played thereon. The location of the holes on the table also differs substantially in that one hole is centrally located, in the surface of the table, being equidistant from the four corners. The other four holes are in the surface of the table and precisely positioned inside of each corner, respectively, the distance between the edge of the respective hole to the nearest edge of the bumper, in plane measurement, being no less than slightly more than the radius of the balls used and no more than the diameter of the balls so used.

The game played on my novel table requires a great amount of skill since direction of travel of a ball and speed of the ball become highly important because of the off-set pockets.

My novel game is played on my novel table and includes the use of sixteen balls of identical size, and a cue stick. Of the sixteen balls one ball is a cue ball, the fifteen remaining balls numbered consecutively from one to fifteen. This equipment is the same type of ball and cue stick as used in conventional pool.

The fifteen consecutively numbered balls would be "racket-up" in a triangle configuration on a spot on the table and the cue ball would be shot by use of a cue-stick from behind a "scratch" line on the table.

"Breaking" the triangular formed "racked" balls with the cue ball here offers problems overcome by skill because of the location of the center hole or pocket. In addition the object of the principal game played is to

"sink" or "pocket" through use of the cue stick and cue-ball, in conventional manner, a numbered ball in a specific hole. The use of a square, five holed table with one of the five holes in the center of the table surface and the other four holes each off-set out from one of the respective corners, with sufficient room for a ball to pass around the hole provides playing equipment which offers a great challenge to the player which is overcome by the use of skill. With this type of table "slamming" of the balls is to be avoided.

As described below the table itself has other features which provide a more novel game than heretofore possible. Included also are novel automatic score tallying and distribution features.

A particular advantage of this novel table and the games playable thereon is that the size of the table lends itself to home use and such table may easily be stored in the home and brought out for use in a relatively small room. It is anticipated that the novel table will be square having an inside dimension of approximately 50 inches and raised above floor level, such as by use of ordinary legs some 36 inches.

Such sports equipment maybe considered to define a living-room game, which is envisioned by the inventor.

Referring to the table construction, each hole is connected by an individual channel to a common ball return rack. Each channel, however has included therein an actuated trap, which serves as an aid in enhancing the skill required for playing the game.

It is thus an object of the present invention to provide a novel game table for playing a novel game using conventional pool balls and cue-stick.

Another object is to provide a novel game table having a flat surface of square configuration with five holes, one of which is positioned in the surface of the table equidistant from opposite sides of the table.

Another object is to provide a novel game table having a flat surface of configuration with five space holes in the surface of the table on which a novel game using conventional pool balls and cue stick are employed.

These and other objects will become more apparent from reading the following detailed description with reference to the accompanying drawings in which:

FIG. 1 is a plan view of the table on which the game is played;

FIG. 2 is a cross-section view of the table along line A—A of FIG. 1;

FIG. 3 is a diagram partly in circuit form and partly in block form for selective score tallying;

FIG. 4 is a circuit diagram of the pocket indicator circuit and ball actuatable flasher circuit;

FIGS. 5*a* and 5*b* illustrate the equipment used with the table for playing the game;

FIG. 6 shows a portable table on which the game may be played and

FIG. 6*a* illustrates a spring loaded cue which may be used when playing the game on a portable table.

Referring in more detail to FIG. 1, a layout of the surface of the table on which the novel game is played is presented. The table is square having a flat surface surrounded by elevated cushions. The cushions, more clearly shown in FIG. 2 are preferably of a resilient material such as rubber. The cushions **10** are elongated triangular shape strips mounted on the shoulders **11** of the table.

As seen in FIG. 2 the cushion **10** is mounted so that the apex of the triangle faces the inside of the table so that a ball **12** will strike the cushion on the apex. The apex is positioned above the surface of the table a distance

substantially equal to the radius of the ball used for playing the game.

Pocket indicator lights are mounted in the shoulder 11 and are represented as circles H'1,, H'2, H'3, H'4 and H'5. Each indicator light is associated with one of the pockets P1, P2, P3, P4 and P5 respectively. The pockets P1, P3, P4 and P5 are each located just off or just out of each of the corners, respectively on the table. The distance between the edge of the pocket and the apex of the cushion is no more than the diameter of the ball used to play the game and no less than the radius of the ball. Thus the ball may travel completely around any out-of-the-corner pocket. The pocket P2 is located in the center of the table surface. The size of the hole or pocket is larger than the diameter of the ball but no larger than 1½ times the diameter of the ball. Each pocket has associated therewith a ball return channel which terminates at a ball return chamber 14. The ball return channels are labeled C1, C2, C3, C4 and C5.

Each channel has included therein a ball actuatable switch represented as AS1, AS2, AS3, AS4 and AS5 respectively. The ball actuatable switches are positioned in the channel, close to the opening of the pocket and are located so that the switch will be actuated or closed when a ball enters the pocket and thus the channel.

The function of the switches AS1 through AS5 will be more fully explained with respect to FIG. 4.

Also included in each channel is a ball trap or arrester. The ball traps are represented as T1, T2, T3, T4 and T5 in FIG. 1 and a solenoid type trap is illustrated in FIG. 2 as T4 and T5 with another trap T4' illustrated in phantom form placed at another position in the channel. The function of the ball trap is to prevent the ball from actuating the scoring button in the channel until it is determined, according to the rules of the game played, which player is to be credited with the score made. The scoring buttons are represented as H1, H2, H3, H4 and H5 and are positioned in the respective channels, each at a different distance from the ball trap (the ball traps are preferably equally spaced from their respective pockets) so that actuation of two different scoring buttons at the same time will be avoided.

Also on the cushion 11 are a pair of manually operated buttons P'1 and P'2 (two pair shown). These buttons are used to direct the score of the automatic scoring system to the player to whom the score should be credited, and are used to release the ball traps. These functions will be more fully described with reference to FIG. 3. Also on the shoulder 11 are switch arms 41 and 42 which will be fully described below.

Referring to FIG. 2 the section through the line A—A shows a table supported on foldable legs 20 and 21. These legs could be fixed if desired. As seen, the resilient part of the cushion 10 and the shoulder of the cushion 11 are raised above the surface of the table as in a conventional pool table. The table surface is formed by laminated materials with a fabric, such as felt on the top and a plastic, preferably Plexiglass directly under the felt and a ply-wood support under Plexiglass. As illustrated the pockets P4 and P5 are off-the-edge or out-of-the-corner and each pocket leads to the ball return chamber 14 via a channel (C4 and C5). The ball actuated switches (AS4 and AS5) are illustrated close to the pocket with the ball traps (T4 and T5) located between the ball actuated switch and the scoring buttons (H4 and H5).

It may be desired to place the ball traps relatively close to the pocket as illustrated by the ball trap T4' shown in phantom form. It will be noted that the scoring button H4 is closer to its pocket than the scoring button H5 is to its associated pocket. Further, it will be noted that the ball traps are substantially the same distance from their respective pocket. This construction essentially positions the scoring buttons at different distances from the traps, which are uniformly spaced from their pockets, and avoids overlapping actuation of the several scoring buttons upon release of the balls by releasing the ball traps. The walls or sides of the table 25 and 26 connect with the bed of the table 27 which package the ball return chamber 14 and the ball return channels (C4 and C5).

Referring to FIG. 3, an automatic scoring system is represented in functional diagram. The automatic scoring system includes a counter 30 which is actuated by closure of any one of the scoring buttons H1 through H5. The counter 30 applies its count to a two contact relay actuated switch 31. According to the position of the pole of switch 31, the count is applied to the totalizer 32 of the player or team I or to the totalizer 33 of the player or team II as shown. Totalizer 32 totals the score for the player I and totalizer 33 totals the score for player II. Relay 34 is energized by closure of the player actuated switch P'2. With switch P'2 closed the delay-on-release relay 35 closes switch 36 and the ball traps T1, T2, T3, T4 and T5 are actuated to release any ball which had been "sunk" into a pocket and arrested by a trap. As the ball travels through the ball return channel a scoring button will be actuated or closed by the ball and the counter 30 sends a count pulse through the switch 31. Relay 34, which becomes energized when the switch P'2 is closed is preferably slugged so that it is necessary only to momentarily close switch P'2. The switch 31 will be in the "down" position and the count from counter 30 will be applied to the totalizer 33 for player or team II. After a time delay relay 35 releases its contact 36 and the ball trap solenoids again provide a stop for any ball thereafter falling into the pocket.

The closure of switch P'1 functions to energize relay 35 but relay 34 remains deenergized and the count from counter 30 is applied to switch 31 in its "up" position with the count directed to totalizer 32.

A reset button, which may be the master switch 37 may be operated to clear the system including totalizers 32 and 33 or each totalizer may have its own reset button.

FIG. 4 shows a pocket selection and indication circuit, used in association with one of the games played on the table. Although the table of the present invention may be used for playing several different games of skill using a cue stick and pool balls, the game preferably played with the equipment is one in which two or more players or two or more teams match skills, selectively "pocketing" or "sinking" pool balls by the use of a conventional cue stick and cue ball. The pocket is selected randomly as by use of the pocket selection circuit and if a ball is "pocketed" in the selected pocket the circuit will provide an indication of the same.

Rotatable switch contacts or arms 41 and 42 are linked so that they will rotate in unison. Although these switches are shown in manual manipulation form, a motor may be used to drive or rotate the switches which will stop at some position 1 through 6. The positions 1 through 6 would be equally spaced around a 360° circle. The switch arms 41 and 42 may each be associated with a contact (not shown) which opens the circuit lighting the indicator lamps H'1, H'2, H'3, H'4 and H'5 when the switch arm is rotating. This will avoid anticipation of the selected pocket during rotation of the switch arms.

The switch arm 41 will thus stop on one of the contacts 1 through 6. If the arm stops on contact 1 then indicator lamp H'1 will become illuminated thus indicating the selected pocket is pocket P1. Correspondly switch arm 42 will stop on its contact 1 and prepare a circuit for energizing relay 43 through the ball actuated switch AS1.

Let it be assumed that the switch arms 41 and 42 are rotated and the arms stop on contact 4. The indicator lamp H'4 will become illuminated thus indicating pocket P4 is the selected pocket into which a ball is to be "sunk." The switch arm 42 will provide power to the switch AS4, but the switch AS4 is open. Assume also that the player then "pockets" or "sinks" a ball in the pocket P4 and

the contact AS4 is closed. Closure of contact AS4 will complete a circuit to energize relay 43 which pulls the pole of switch H4 in a "down" position effectively inserting the flasher F in the indicator lamp illuminating circuit. Thus, when a ball is "sunk" or "pocketed" in the selected pocket the indicator lamp will go from a steady condition to a flashing condition.

If, on the other hand the rotating switch arms 41/42 stop on position or contact 4, as assumed and the player "pockets" a ball in one of the pockets other than pocket P4, for example pocket P3 then the relay 43 will not become energized and the indicator lamp will remain steady.

It will be seen that there are 6 positions on which the switch arms may stop. If the arms 41/42 stop on position 6 the switch arm 41 will supply power through position 6 to the relay 45. The relay 45 will act upon the relay contacts 51 through 55 thus reversing each contact thereby providing illuminating power to the five indicator lamps H'1 through H'5. In addition the relay contacts 56 through 60 are closed by the energized relay 45 thus preparing a bonus play whereby if the player "pockets" a ball in any pocket the indicator lamps will flash.

Thus it may be seen that the pocket selecting and indicating circuit and the score distributing circuit may be used in playing a game on the equipment which involves selection of a pocket in to which a ball is to be "sunk" and distribution of the score according to whether or not a ball has been "pocketed" in the proper or selected pocket.

FIGS. 5*a* and 5*b* show the balls 62 which may be conventional pool balls and a cue-stick 63 which may be a conventional cue-stick. The size of the balls depends on the size of the table used.

FIG. 6 shows a portable table in which the playing surface of the table is an inside part of a case. The cue-stick 64/65 are carried on the inside face opposite the table surface while the balls (shown in part in broken line form) may be held in a rack 66.

FIG. 6*a* shows another type of cue-stick which may be used with a portable table. If, for example, the portable table is small, the size of the conventional attaché case, a spring loaded cue-stick such as shown in FIG. 6*a* may be used.

The cue-stick 70 is mounted in a spring loaded number 71. A vertical supporting rod 72 is used to hold the cue-stick and position the stick while the handle of the stick 73 is used to pull the stick against the spring 74.

Thus I have shown and described new apparatus for playing a new game. It will be apparent that the games played with this novel table are not limited to games using the pocket selection and indicating apparatus and circuitry as any "house-rules" for playing a game may be made. Although I have shown the preferred form of table with return rack and built-in pocket selection and score distribution, with the switch arms 41/42 on the shoulder of the table other arrangements may be made for providing less complex apparatus which performs the same function. Thus, other forms of my invention may be made, as will be apparent to those skilled in the art, without departing from the spirit of the invention as defined in the appended claims.

What is claimed is:

1. A tale for playing a variation of pool thereon, with a plurality of pool balls, said table including;
- a surface having its length equal to its width,
- a cushion around the perimeter of the surface for defining the playing surface,
- said surface including only five pockets one of said only five pockets located in the center of the table surface,
- the other four pockets of said only five pockets associated one each with each of the corners of the table, each pocket of said four pockets identically spaced from the corner with which the respective pocket is associated, the distance between the edge of the respective pocket and the closest edge of said cushion being no more than the diameter of one of said pool balls and no less than one half the said diameter,
- a ball return chamber,
- ball return channels individual to each said pocket for connecting each said pocket with said ball return chamber,
- a ball trap individual to each said return channel for arresting a ball entering said pocket, said ball traps located within the respective channel and each spaced the same distance from the respective associated pocket,
- means for releasing said ball traps in unison and
- ball actuatable switch means positioned between the ball trap in the respective channel and the said ball return chamber, each said ball actuatable switch means off-set from its associated said ball trap a different distance for avoiding actuation of two said switch means by corresponding balls in different channels in unison.

2. A table for playing a variation of pool thereon, with a plurality of pool balls, said table including;
- a surface having its length equal to its width,
- a cushion around the perimeter of the surface for defining the playing surface,
- said playing surface including only five pockets one of said only five pockets located in the center of said playing surface,
- the other four pockets of said only five pockets associated, one each, with each of the corners of the table, each pocket of the said four pockets spaced from the corner with which the respective pocket is associated no more than the diameter of one of said pool balls and no less than the radius of said one of said pool balls measurable between the edge of the pocket and the closest edge of said cushion,
- a ball return chamber,
- ball return channels individual to each said pocket for connecting each said pocket with said ball return chamber,
- a ball trap individual to each said ball return channel for arresting a ball entering the associated said pocket, said ball traps located within the respective channel and each equally spaced from their respective associated pocket,
- ball actuatable switch means positions between the ball trap in the respective channel and the said ball return chamber, each said ball actuatable switch means offset from its associated ball trap a different distance,
- means for releasing a ball so arrested by said ball trap and
- means responsive to actuation of said ball actuatable switch means for counting the number of balls so actuating said switch means.

3. A table for playing a variation of pool thereon, with a plurality of pool balls, said table including:
- a surface having its length equal to its width,
- a cushion around the perimeter of the surface for defining the playing surface,
- said surface including five pockets, one of said five pockets located in the center of the table surface, and one pocket associated with one each of the corners of the table, and each pocket equally spaced from the corner with which the respective pocket is associated,
- a ball return chamber,
- ball return channels individual to each pocket and connecting each pocket with said ball return chamber,
- a ball trap individual to each said channel for arresting a ball entering said pocket,
- ball actuatable switch means positioned between the ball trap in the respective channel and the said ball return chamber,
- means for releasing a ball so arrested by said ball trap,

means responsive to actuation of said ball actuatable switch means for counting the number of balls so actuating said switch means and

second switch means for directing the count by said actuation responsive means to the player entitled to the count.

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U.S. Cl. X.R.

273—6, 23, 125