

May 14, 1940.

C. R. SHULTZ

2,200,456

COMBINATION GAME APPARATUS

Filed June 3, 1938

7 Sheets-Sheet 1

Fig. 1

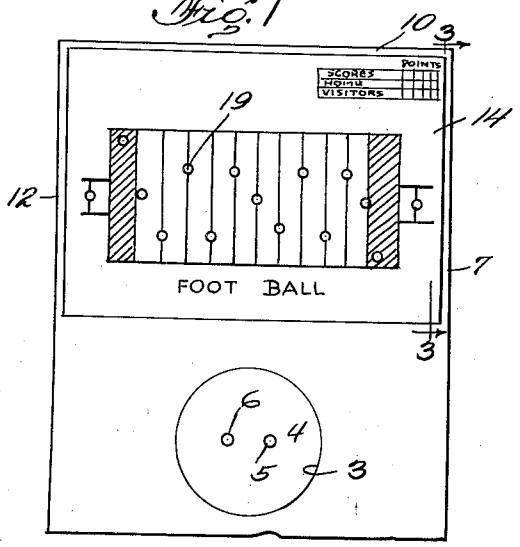


Fig. 2

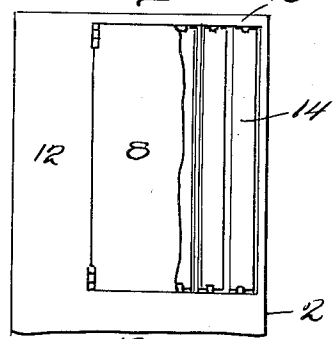


Fig. 3

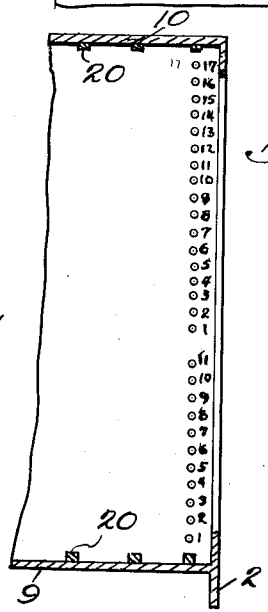


Fig. 4

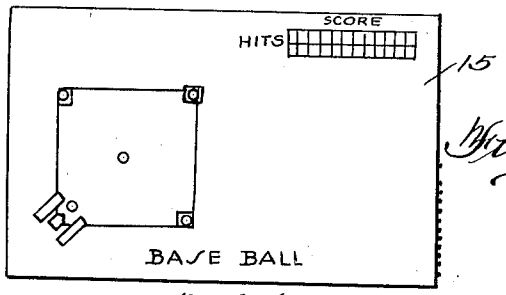


Fig. 5

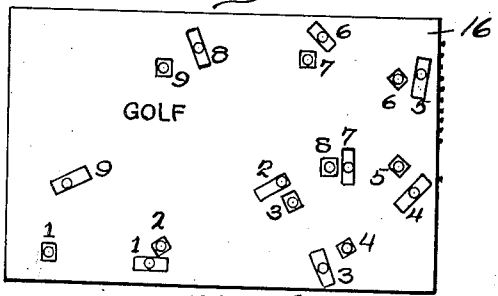


Fig. 6

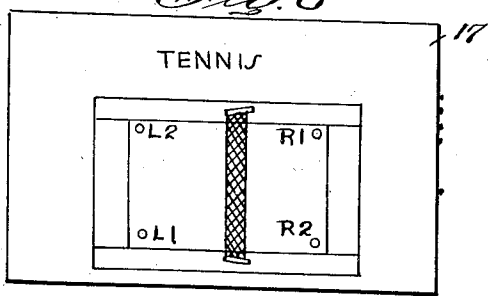


Fig. 7
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May 14, 1940.

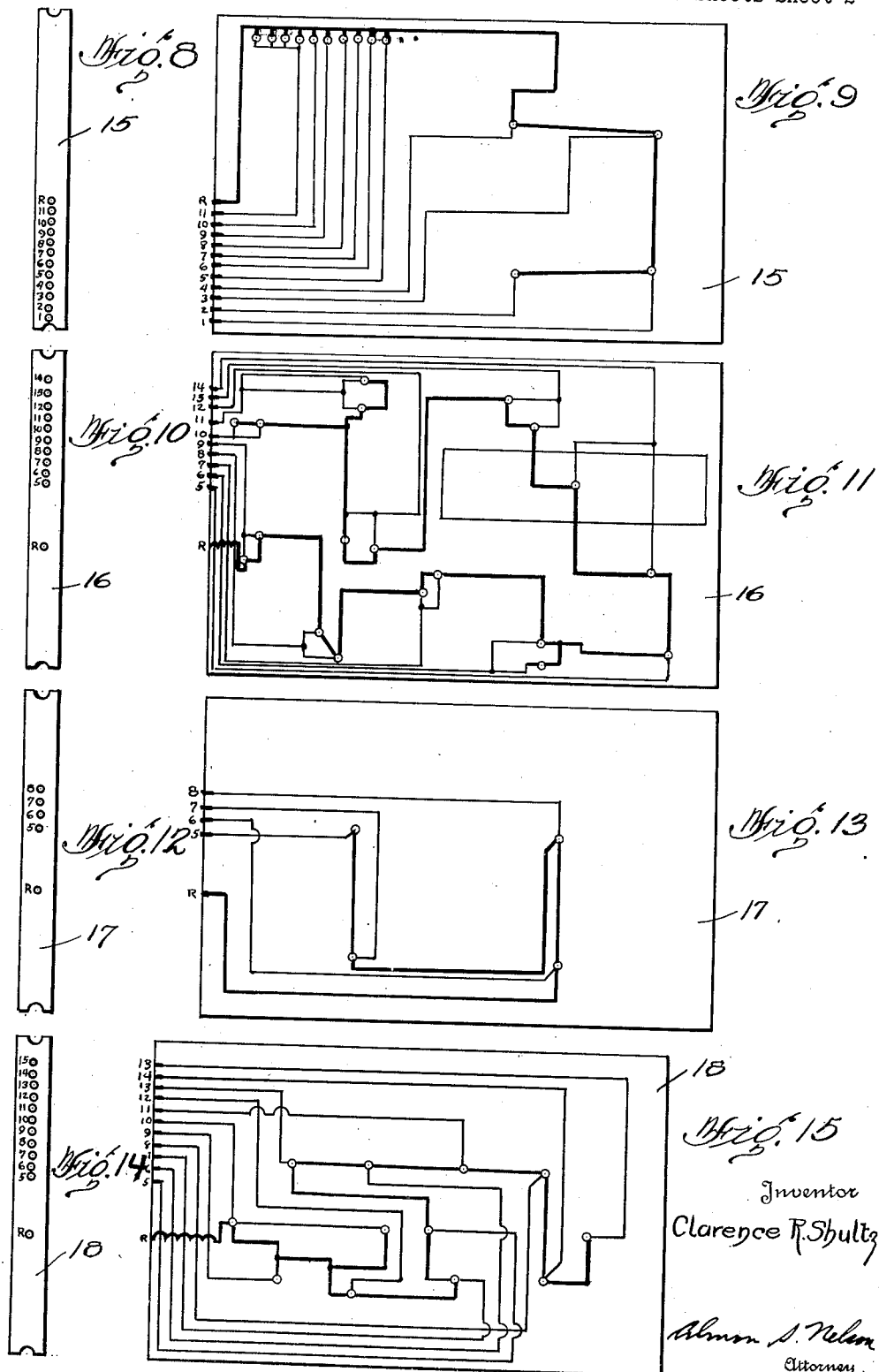
C. R. SHULTZ

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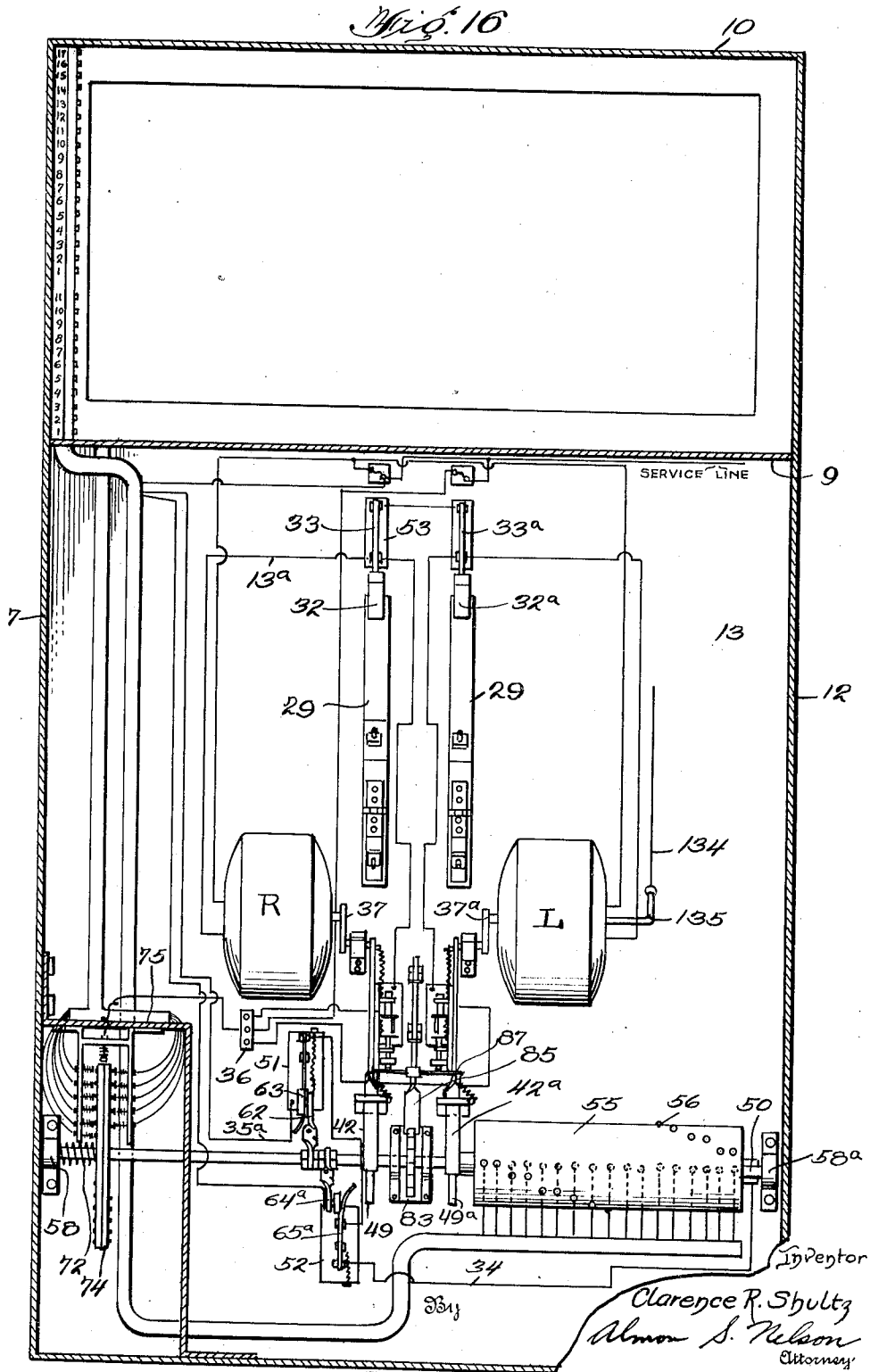
C. R. SHULTZ

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COMBINATION GAME APPARATUS

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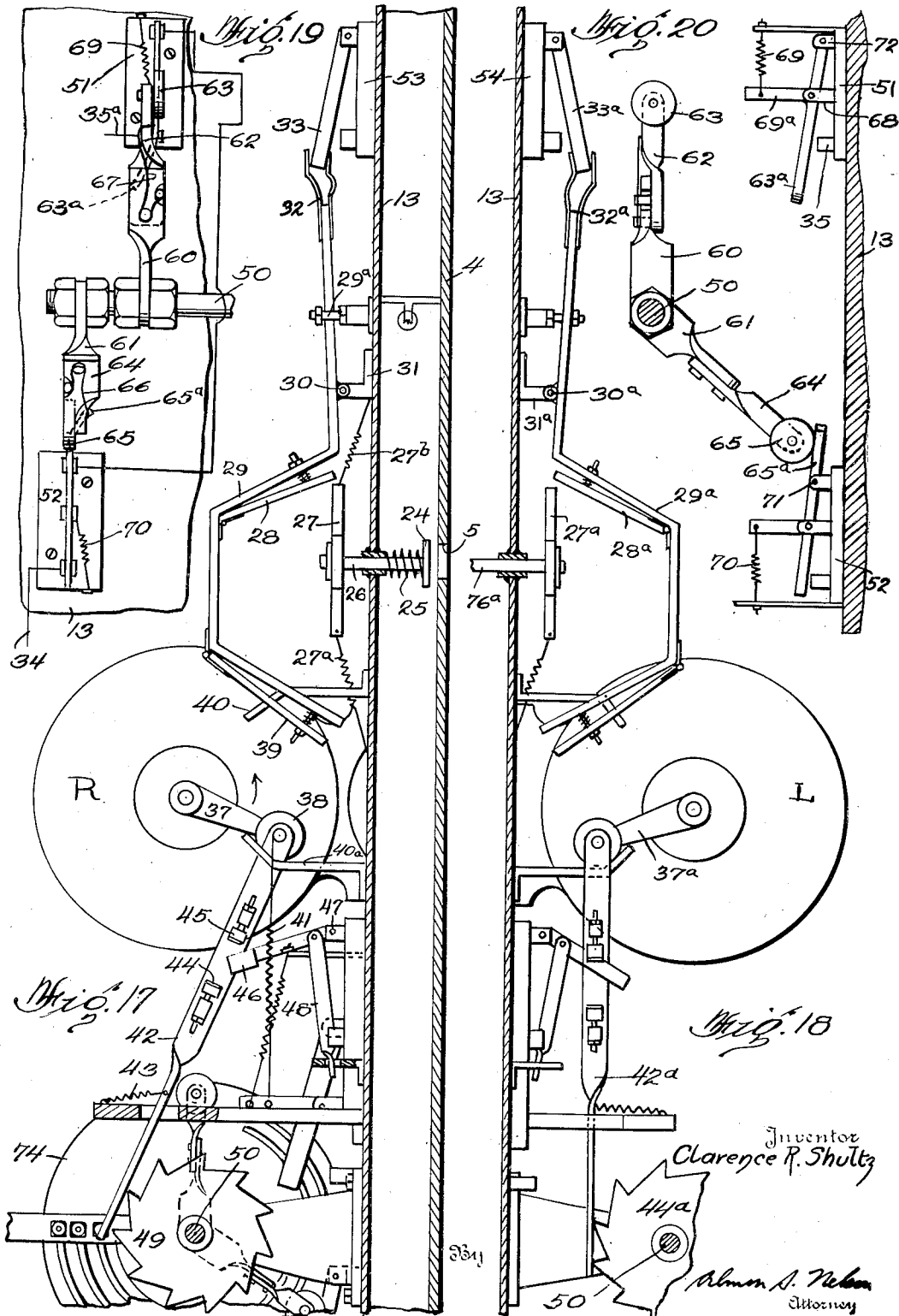
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COMBINATION GAME APPARATUS

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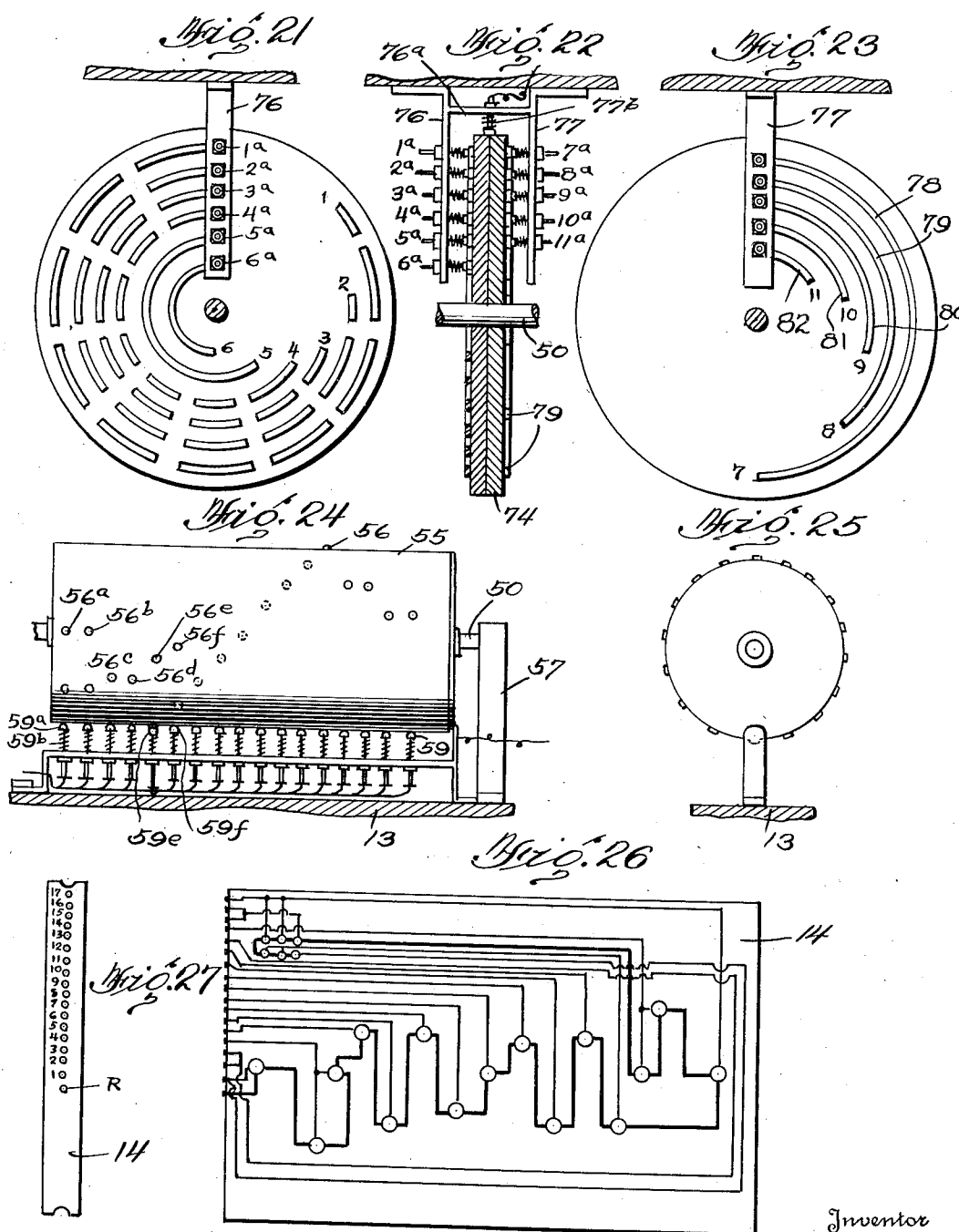
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COMBINATION GAME APPARATUS

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7 Sheets-Sheet 5



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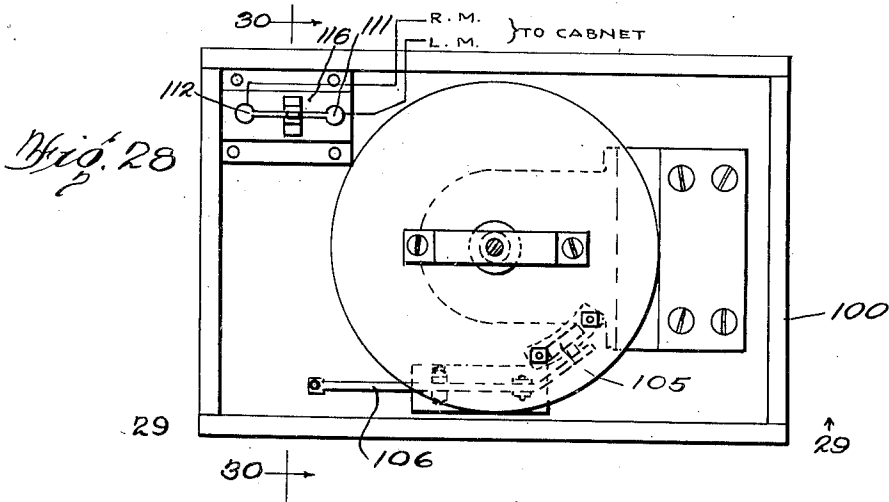
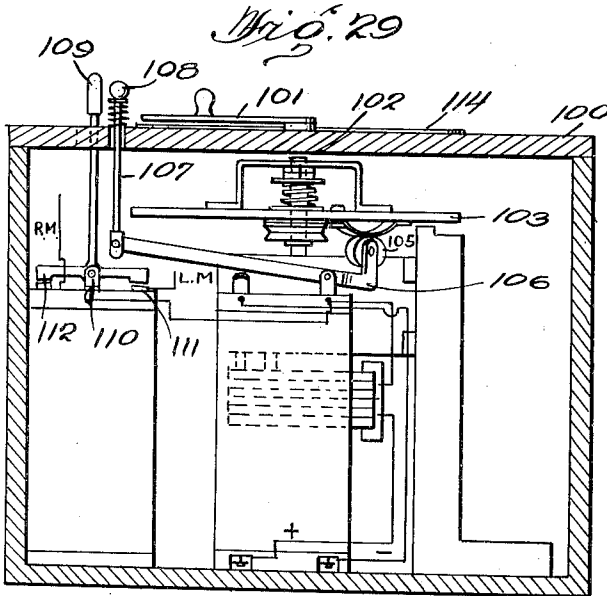
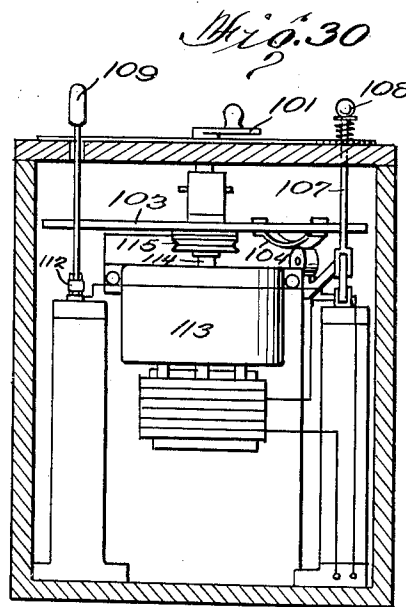
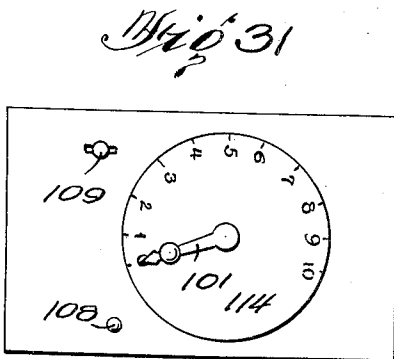
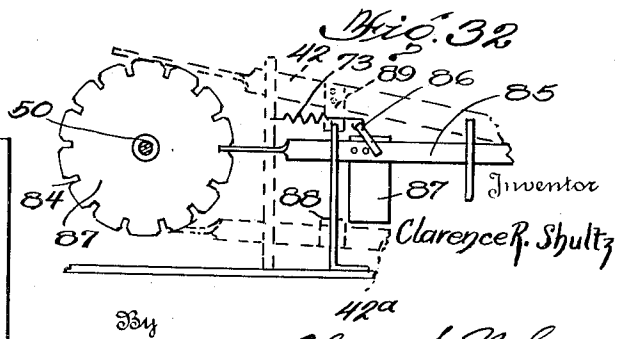
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COMBINATION GAME APPARATUS

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7 Sheets-Sheet 6



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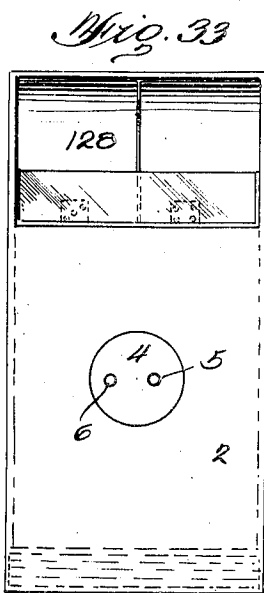
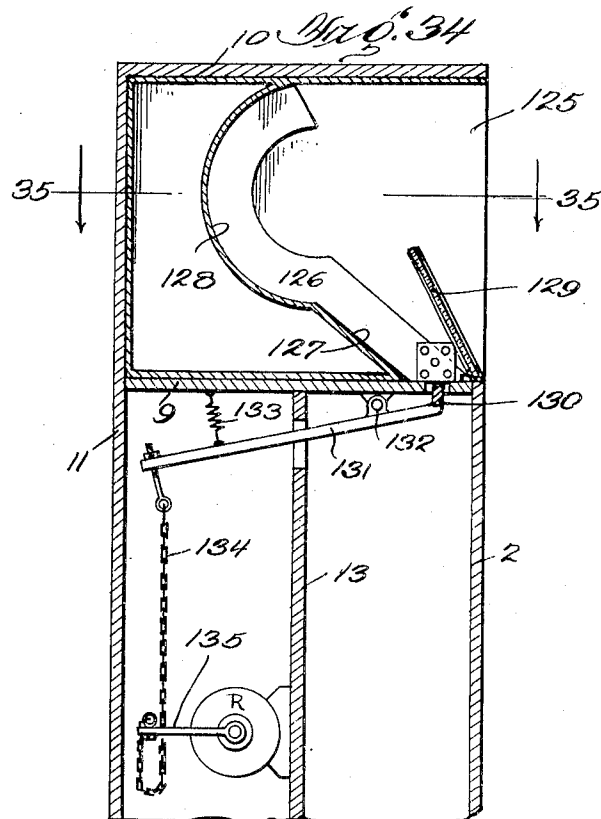
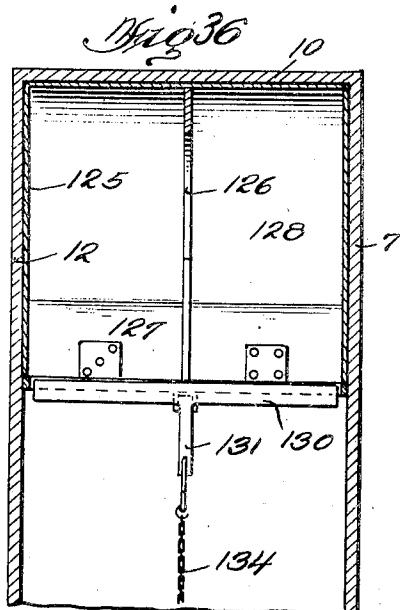
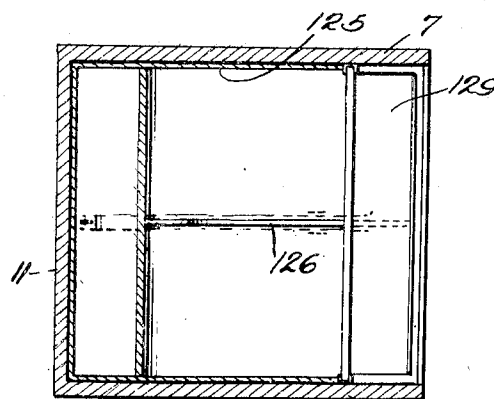
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COMBINATION GAME APPARATUS

Filed June 3, 1938

7 Sheets-Sheet 7



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UNITED STATES PATENT OFFICE

2,200,456

COMBINATION GAME APPARATUS

Clarence R. Shultz, Independence, Kans.

Application June 3, 1938, Serial No. 211,667

4 Claims. (Cl. 273—102.2)

This invention, relating as indicated to a combination game apparatus, is more particularly directed to a mechanism through the medium of which any one of a number of different games can be played by merely selecting the desired game.

A cabinet is provided for the reception of a game panel which may simulate the game of football, for example. In the event that another game is more desirable to the player the football game panel can be withdrawn and a different game, for example baseball, golf, tennis, or basketball, substituted in its place.

It is among the objects of the invention to play the games by means of impacting a target with a missile so that the success of a player depends upon his skill as a marksman.

A detailed object of the invention is to provide electrical means actuated by the target which in turn illuminate lamps on the playing field of the game to indicate the progress of the player as he successively strikes the target.

A further object of the invention is to provide a dice game which can be contained in the same cabinet with the athletic games so that almost every variety of entertainment is afforded a marksman according to his tastes.

A still further object of the invention is to encourage marksmanship, especially with rifles or other weapons of similar character, the marksman not only having the incentive of striking the target but in addition being urged to shoot accurately since he is engaged in a competitive contest.

Heretofore it has been known to play games by means of targets but my apparatus distinguishes from any previous game apparatus with which I am acquainted by providing a single target for each player, there being means associated with each target to completely imitate the playing of an actual game such as football, baseball and the like.

Another object of the invention is to provide one compact cabinet for holding six or more games so that the cabinet can be readily moved from place to place and the particular game, which is popular in the place where the cabinet is moved, may be employed.

To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims; the annexed drawings and the following description setting forth in detail certain structure embodying the invention, such disclosed structure constituting, however, but one of various structural forms in

which the principle of the invention may be used.

In the accompanying drawings.

Fig. 1 is a partial front elevation of the cabinet showing the football panel in position to be used.

Fig. 2 is a partial side elevation of Fig. 1.

Fig. 3 is a partial section taken on line 3—3 of Fig. 1.

Fig. 4 is a front elevation of the baseball game panel.

Fig. 5 is a front elevation of the golf panel.

Fig. 6 is a front elevation of the tennis panel.

Fig. 7 is a front elevation of the basketball panel.

Fig. 8 is an end elevation of the baseball panel shown in Fig. 4.

Fig. 9 is a rear elevation of the baseball panel shown in Fig. 4.

Fig. 10 is an end elevation of the golf panel shown in Fig. 5.

Fig. 11 is a rear elevation of the golf panel shown in Fig. 5.

Fig. 12 is an end elevation of the tennis panel shown in Fig. 6.

Fig. 13 is a rear elevation of the tennis panel shown in Fig. 6.

Fig. 14 is an end elevation of the basketball panel shown in Fig. 7.

Fig. 15 is a rear elevation of the basketball panel shown in Fig. 7.

Fig. 16 is a rear elevation of the cabinet shown in Fig. 1 with the football game panel removed.

Fig. 17 is a partial vertical section of the left hand portion of Fig. 16.

Fig. 18 is a similar section of the right hand portion of Fig. 16.

Fig. 19 is a detail elevation of a part of Fig. 16.

Fig. 20 is a side elevation of Fig. 19.

Fig. 21 is a side elevation of the right hand side of the disk shown in the lower left hand corner of Fig. 16.

Fig. 22 is a central section of Fig. 21.

Fig. 23 is a side elevation of Fig. 22.

Fig. 24 is a plan view looking from below of the lighting drum shown in the lower right hand corner of Fig. 16.

Fig. 25 is an end elevation of Fig. 24.

Fig. 26 is a rear elevation of the football game panel shown in the cabinet in Fig. 1.

Fig. 27 is an end elevation of Fig. 26.

Fig. 28 is a horizontal section taken just below the top of the cabinet shown in Fig. 29.

Fig. 29 is a vertical section taken on line 29—29 of Fig. 28.

Fig. 30 is a transverse vertical section taken on line 30—30 of Fig. 28.

Fig. 31 is a plan view taken from above of Fig. 29.

Fig. 32 is a detail of the lower central portion of Fig. 16.

Fig. 33 is a front elevation similar to Fig. 1 with the dice game received in the cabinet instead of the football game.

Fig. 34 is a central vertical section of Fig. 33. Fig. 35 is a horizontal section taken on line 35—35 of Fig. 34.

Fig. 36 is a section taken on a line adjacent the front portion 2 of Fig. 34.

Referring now to the drawings, and more particularly to Fig. 1, it will be seen that the cabinet has a front portion 2 with an aperture 3 therein behind which a vertical partition 4 is provided having openings 5 and 6. These openings lie immediately in front of the targets which will be subsequently described and are so designed that each shooter may hit his target and play the game until he misses, whereupon his opponent aims at the other target and shoots until he misses. The front portion 2 of the cabinet is provided with a window behind which the game panel 14 is received, which in this instance, is the football game. This panel is provided with a series of lamps 19 which are supposed to illustrate the position of the ball. The left hand side 12 of the cabinet, as viewed in Fig. 1, is provided with a door 8 and when the door is open all of the various panels may be slidably received, after which the opening is closed by said door. The upper part 10 of the cabinet may be provided with ribs 20 and the horizontal partition 9 (see Fig. 3) may be likewise provided with such ribs which engage grooves in the horizontal edges of the panels.

The baseball panel is generally indicated at 15 and has a representation of a baseball diamond thereon and is provided with lamps at first base, second base, third base, pitcher's box and home plate. This panel 15 also has a score board thereon to indicate the number of hits. On the right hand end of the panel, as viewed in Fig. 4, there are a number of electrical contacts, numbered 1 to 11 and R, which are designed to abut a similar set of contacts in the cabinet shown in Fig. 3. These cooperating contacts engage when the panel 15 is pushed into place and achieve the position of the football panel shown in Fig. 1. The contacts on the end of the panel 15 lead to the various lamps and to the score board.

The golf game shown in the panel, generally indicated at 16, contains a series of lamps, one on each green and each tee, the tees being indicated by squares and the greens being indicated by rectangles. In playing this game a player shoots until he hits the target which lights the lamp on green 1. He then marks down the number of shots necessary to get to the green. The other player then takes his turn and proceeds in the same manner. When both players have reached the ninth green the total scores are added much in the manner of the conventional game of golf.

The tennis game shown in Fig. 6 contains a miniature tennis court on the front face of panel 17 with lamps at each of the four corners of the court. One player shoots at one target, then the other player shoots at the other target and when a player misses the lamp across the net does not illuminate indicating a miss in exactly the same manner as the ordinary game of tennis.

The basketball panel is generally indicated at 18 and contains a miniature basketball court with a series of lamps which illuminate successively to indicate the progress of the ball. Each hit by the player advances the ball one position until the first basket is made, whereupon the lamp at the end of the court is illuminated and after which the lamp in the center of the court is illuminated to indicate return of the ball to the other center. The other player then shoots in the same manner and the process is repeated until the game is finished.

The wiring diagrams shown in Figs. 9, 11, 13 and 15 are believed to be sufficiently clear as not to require any further description. Suffice it to say that as the ball proceeds in basketball, tennis, golf and football lamps successively become illuminated indicating the position of the ball. In baseball, of course, the lamps indicate the position of a man.

In Fig. 16 I have shown the mechanism by which the various lamps are illuminated. Two motors L and R are provided, both of which operate in exactly the same manner, the purpose being to change the direction of play on the game panel after a player misses so that as his opponent starts to shoot, the ball or man, depending upon the game being played, will travel in the reverse direction. The actuating mechanism as shown more clearly in Fig. 17 comprises a rocker arm 29 mounted directly behind the target, pivoted at 30 to the support 31, such rocker arm having a bifurcated end 32 which moves the pivoted knife switch 33, thus making and breaking the circuit to the motor R. The rocker arm 29 is moved to close switch 33 when target 24 is impacted by a bullet passing through the aperture 5 in the vertical partition 4. This partition incidentally, may or may not extend the full height of the cabinet. The target 24 is normally held closely adjacent the opening 5 by means of coil spring 25, and the shaft 26 of the target has a striking disk 27 secured to one end thereof adapted to engage bumper plate 28. When the bumper plate is engaged, the rocker arm is moved to the left as viewed in Fig. 17 closing the switch 33 and starting motor R. Motor arm 37 then moves in the direction of the arrow and the roller 38 at the end of the arm engages bumper plate 39 which swings the rocker arm 29 and moves the knife switch 33 to the position shown in Fig. 17, thus breaking the circuit to motor R. A standard 40 is placed in position to receive the motor arm and to restrict its rotative movement. A lever or push rod 42 pivoted to motor arm 37 is adapted to engage the serrations in a star wheel 49 to rotate shaft 50. This is brought about by spring 41 which moves the motor arm adjacent the standard 40 since the current has been cut off to the motor R, and a second spring 43 aids in maintaining contact between the end of lever 42 and the star wheel 49. The lever or push rod 42 is also provided with adjustable stops 44 and 45 which engage the link 46 that is pivoted at 47 to a switch plate. The knife switch 48 is fixedly secured to the link 46 so that as the lever 42 reciprocates the switch blade 48 will make and break a circuit, which leads to clearing device 100 and is completed through same.

In Fig. 18 a duplicate mechanism is shown associated with the motor L. This mechanism operates in exactly the same manner as described with respect to Fig. 17 and need not be discussed in detail. As the levers 42 and 42a cause rota-

tion of the star wheels 49 and 49a the shaft 50 is rotated, which in turn rotates the lighting drum 55. This drum is provided with a series of contacts 56 which lead to the upper series of contacts 1 to 17, inclusive. These contacts are used to play the games of football, basketball, golf or tennis. As the drum 55 rotates the circuit is made to the various lamps, thus indicating the position of the ball on the playing field.

A further make and break device is shown in Figs. 19 and 20, the specific function of which is to permit the lighting of the lamps as the ball progresses and to then permit lighting of the score board lamps as the scores are made. This make and break device is mounted on shaft 50 and consists of levers 60 and 61, the lever 60 having an outer hinged portion 62 held in place by means of wire spring 67. The lever 61 has a similar outer portion held in place by a wire spring 66 and both levers are provided at their extremities with fiber rollers 63 and 65, respectively.

When the shaft 50 revolves in a counter-clockwise direction as viewed in Fig. 20, the roller 63 easily clears the knife switch 65a but as the shaft continues to revolve in this direction the roller 63 comes up beneath the knife switch 63a. In order to avoid disengagement or throwing of the switch I have curved the end of the plate 63a and hinged the outer portion 62 of the lever 60. The roller then, as it strikes the underportion of the blade 63, will cause the hinged portion 62 of the lever to swing slightly, thus permitting the roller 63 to slide by the blade 63a. The other roller 65, as the shaft continues to rotate counterclockwise, will engage the switch blade 65a and force it inwardly to break the circuit.

At the beginning of the game, this lever at first advance breaks circuit 34 (otherwise the total scores and point after touchdown lights would be lighted) the next advance this lever closes circuit 35a which leads to light on the forty yard line, (one from each end of roller to each forty yard line), which places the ball in position for the kickoff for the beginning of the game and these first two advances at the beginning are made by using resetting device 100 (see Figs. 28 and 29). When the shooter makes first hit (ball being on the forty yard line) and advances roller one point, the little roller on the end of hinged lever leaves the switch blade and the spring pulls switch blade back into contact on circuit 34 which lights lamp on the third advance point, or the ten yard line on opposite end of the field (which shows kickoff completed). The shooter continues to shoot as long as he does not miss and the ball, or light, will advance across the field ten yards at each hit. If he misses the bull's-eye, the other shooter then shoots at the other bull's-eye, which operates the other motor and carries the ball or light the opposite direction across the field. For example, supposing he misses on the ten yard line, in regular order, the next advance would be to touchdown (light also showing position for kick) the next advance would be kick completed and total scores. Now, in order for the roller to show this, the hinged levers must not interfere with this circuit on the reverse movement, and to accomplish this the levers 60 and 61 are hinged to allow them to pass alongside of the switch blade, the switch blade being curved slightly at a point to allow little roller on the end of hinged levers to pass alongside of switch blade 63a. This lever being

hinged allows it to pass alongside of switch blade and it does not affect either circuit, thus allowing the touchdown and point after touchdown contacts to function for ending the game. As soon as the little roller on the end of hinged lever passes switch blade, which requires one advance of the roller, it springs back in straight position read to show kickoff from that end of the roller should you want to start the game with the same motor, as explained above. Both rollers function the same, only from different ends of the field.

In Fig. 21, 22 and 23 I have shown the distributing disk for the baseball game. One side of the disk 74, which for convenience is composed of two metallic pieces, has five concentric wires 78 to 82, inclusive, thereon. The other side of the disk has six concentric wires, these being broken so that the lights will flicker, indicating a change from one base to another. Appropriate contacts are secured in the arms 76 and 77 and wires lead from these contacts to the various lamps on the baseball field. It will be observed that as shaft 50 revolves, due to a shooter impacting the target, the lamps will be successively illuminated.

In the event that it is desired to start at the beginning at any time I have provided a resetting device which will return the distributing disk 74 and the contact drum 55 to their original position so that a game may be started. This mechanism is contained within a small box or cabinet generally indicated at 100 in Figs. 28 to 31, inclusive. The top of the box has a dial 114 thereon and a pointer 101 which may be set to any position from zero to ten so that the mechanism will go back to its original position, depending upon the position it was in when the preceding game stopped. The cabinet 100 contains a small motor 113 which has a shaft 114 extending upwardly therefrom and a pulley 115. The pulley forms one side of a friction clutch with the disk 103 which is spring pressed as shown. The under surface of the disk 103 is provided with a cam 104 adapted to contact the roller 105 thus pivoting the bell crank 106 and breaking the circuit when the bell crank, which also is a knife switch, moves upwardly.

In operation the toggle lever 109 is moved so that either of the extremities 111 and 112 engage the jaws of the switch to actuate either the right or left motor. The handle 101 is then turned to the number of operations desired. The ball 108 is pushed downwardly, thus making the circuit and bringing the roller 105 up against the under surface of the disk 103. This starts motor 113 and it will continue to operate until the cam 104 engages the roller 105, which breaks the circuit to the motor 113. The wires leading from the switch plate 116 extend to the plate 36 shown in Fig. 16.

In Fig. 32 I have shown means for positively locking the distributing disk and contact drum in contact position. This means consists of a notched disk 83 secured to the shaft 50 and having notches 84 adapted to receive reciprocating lever 85. The lever 85 is moved out of any one of the notches 84 when the levers 42 and 42a move to the right as shown in Fig. 32. This is accomplished by means of the cross bar 86 which engages the small projection 89 on lever 42 and the dependent member 87 secured to lever 35 which engages the small projection 88 on lever 42a. From this it will be seen that either motor L or R may retract its lever 42 or 42a and that

the lever 85 is withdrawn at the same time, thus permitting rotation of the shaft 50 and its accompanying mechanisms. When the proper contact has been made by rotation of shaft 50 spring 73 causes lever 85 to move to the left as viewed in Fig. 32, whereby it engages a notch 84 and positively holds abutting contacts either on the contact drum 55 or the distributing disk 74 in fixed relationship. From this it will be seen that I have provided a means of locking the contacts in desired position which will avoid arcing and deterioration of the contacts. At the same time the intensity of the current which is being transmitted will not vary so that the lamps will shine brightly and not flicker.

In Figs. 33 to 35, inclusive, I have shown a dice game which may be incorporated in the same cabinet as used with the various game panels. Only slight modification need be made of the original cabinet such as providing a storage space for the game panels which are shown in dotted lines in Fig. 33. The dice apparatus comprises a box generally indicated at 125 which may be slidably received in the cabinet. This box has a small central partition 126 and an angular plane surface 127 which merges into a curved surface 128. The surfaces 127 and 128 extend completely across the box so that there is no difference in resistance offered to the two dice. A glass panel 129 is placed in the lower front portion of the box 125 and is inwardly inclined so as to force the dice to the left as viewed in Fig. 34. The dice are actuated by means of the cross arm 130 which is secured to the lever 131 pivoted at 132. Spring 133 holds the lever 131 so that the cross arm lies below the dice normally. A chain 134 connects lever 131 with an arm 135 on the shaft of motor R.

In operation the motor R is actuated when its target is impacted and this causes the arm 135 to move downwardly as viewed in Fig. 34, which exerts a pull on chain 134 and causes the cross arm 130 to sharply strike the dice which throws them upwardly. During the upward movement of the dice they rotate a number of times and finally fall to rest, as shown, whereupon the outward vertical faces can be read. The spacing of the glass panel 129 and the angular surface 127 insure the dice coming to rest in the position shown especially in view of the fact that the surface 127 is too steep to permit either one of the dice or both to come to rest thereon.

OPERATION OF PANEL GAMES

When the right motor turns lighting drum or distributor 55 forward and fixed contacts 59a and 59b, Fig. 24, are about to contact points 56a and 56b on rotating lighting drum 55, roller 63 of hinged lever 60 rides on blade 63a of switch 51 breaking circuit 34 to all lights. On the next advance the make and break lever 60 advances, pushing blade 63a of switch 51 in contact 35 closing switch 51 of circuit 35a, which leads to light on the forty yard line on left side of field only. Contact points 56a and 56b are now connected but do not function because of circuit 34 still being broken to lighting drum or distributor 55. On the third advance of sprocket 49a the make and break lever 60 leaves switch blade 63a allowing spring 69 to pull arm 69a back, breaking contact 35 of circuit 35a, and in the same operation switch blade 63a contacts contact points 72 completing circuit 34, which lights on the right ten yard line through point 59e of lighting drum 55. If the player continues to score a bull's-eye,

each hit shows a ten yard gain until he makes a touch down. The next and last hit to complete the game, registers the point after the touchdown is completed. Also, on the score board is shown touchdown scored, point after touchdown is scored and total score. If left motor L starts the game it works exactly the same from other end but just the reverse across the field.

If the first player, whom I shall designate R, fails to score a bull's-eye at any point in the game, L the second player takes the ball, shooting at the other bull's-eye, and each hit L makes shows a ten yard gain toward R's goal, thus it will be seen that L's bull's-eye turns the mechanism in the opposite direction to R. In other words one motor turns the lighting drum one way and the other motor turns the lighting drum just the reverse. Naturally if one motor causes the lights to advance across the field in one direction, if the other motor is employed by shooting at the other bull's-eye and this motor turns lighting drum just the opposite direction from the first motor the lights will naturally light in just the opposite order. If a football team is carrying the ball towards the north goal and loses possession of the ball on downs, and the other team takes the ball, they carry it in the opposite direction or toward the south goal. This same condition is obtained by turning the lighting drum in one direction by one motor and the reverse direction by the other motor.

Should R fail to score a hit at the ten yard position after the kickoff L would then shoot. If a hit is made hinged lever 60 having just left blade 63a of switch 51 which has just risen because of the spring 69, does not interfere or light on the forty yard line with reverse turn of lighting drum 55. As hinged lever 60 moves back it misses point of curved blade 63a, causing fiber roller 63 to slide along outer vertical side surface of blade 63a by reason of spring 67 allowing hinged arm 62 to bend outward. As soon as it has risen above switch blade 63a spring 67 pulls it back directly over blade 63a which places it in normal position. This operation has allowed backward movement of hinged lever not to interfere with the normal operation of the lights.

The same condition is true, of course, with the other motor.

A bullet is shot preferably from a standard firearm going through opening 5, Fig. 17, in the metal plate 4, which is illuminated by one or more lights. The bullet strikes plunger target 24 which works in its bushing and is tensioned by springs 27a, 27b and 25, causing disk 27 to strike bumper plate 28 on rocker arm 29 which in turn causes rocker arm to tilt up on pivot 30. Rocker arm 29 is limited in movement by adjustment 29a. This movement has caused fork 32 to be pulled, throwing switch 33 into contact, and closing the circuit to the right as viewed in Fig. 17, to motor R, causing motor arm 37 to turn backward (in direction of arrow, Fig. 17) tightening springs 41 and 43, pulling push rod 42 until spring 43 pulls it in mesh with sprocket 49. When roller 38 moves upwardly it strikes against bumper plate 39 of rocker arm 29, pushing it down on hinge bracket and lifting fork 32 which lifts blade 33 of switch 53, breaking circuit 13a to motor R. Motor arm 37 having been stopped by bracket 40 is then pulled against bracket 40a by spring 41 and 43, causing push rod 42 to advance sprocket 49 one tooth. When at rest the push rod projects past last advanced tooth of sprocket, allowing lighting drum to be turned

in either direction (see Fig. 17). Turning lighting drum 55 causes the shaft 50 to revolve in bearings 58 and 59a. There is also mounted on shaft 50 a tension spring 72.

Baseball

The game of baseball is mounted on a panel 15 approximately two feet by three feet, showing a miniature diamond and field, with lights at home plate, first base, second base, third base, also lights on score board showing scores 1, 2, 3, 4, 5, 6, a home run adding four additional scores.

On right end of panel, as viewed in Fig. 4, are twelve contact points, the top one R being the hot wire, and this is in the same position on all panels. These contact points are wired to lights on front of panel 15. When panel 15 is pushed in place in the forepart of cabinet these contacts connect a like number of contacts in the cabinet (see Fig. 3) which run to lighting disk 74, Fig. 16, on shaft 50. The lighting disk 74 is preferably composed of two metal plates. Copper wires 73 etc. of different lengths as shown in Figs 21 and 23 are fastened thereon and two fiber pieces 76 and 77, one having six contact points and the other five, which are spring tensioned, are supported adjacent the disk. A fiber piece 76a having a spring tensioned contact 77b, contacts lighting disk 74, thus supplying current to the lighting disk (Fig. 22).

Golf

The game of golf is mounted on panel 16 showing a miniature nine hole golf course, with scenery, hazards, etc., (not shown).

At the right end of panel 16, as viewed in Fig. 5, are eleven contact points, the point R being the hot wire, which contact the proper eleven points of the upper set of contacts on the right side of the cabinet when the panel 16 is placed in front position. These contacts are wired to small electric lights over the field and light when a hit is made showing progress of the game hole by hole.

The game is set for play by advancing lighting drum 55 by use of resetting device 100 and automatic switch 51, Fig. 16, as explained under football, until points are contacted. This closes circuit through contacts on end of panel and cabinet, lighting lamp at the tee-off position. The game is ready to play, using R motor unit and if a hit is made the unit advances lighting drum 55, causing points 56f and 59f to contact, showing a one hole advance, lighting lamps at No. 1 hole and No. 2 tee. Each successive hit advances drum and lights lamps in like manner and when the ninth hit is made, the light at the ninth hole is lighted. Also a number of small lights (not shown) spelling the word "golf" may be lighted in circuit with the ninth hole lamp.

Basketball

The game of basketball is mounted on panel 18, Fig. 7, showing a miniature basketball court. On the right side of panel as viewed in Fig. 7, are twelve contact points, the point R being the hot wire, which are wired to small lamps in different positions over the field. When the panel is placed in front position of the cabinet these contact points contact the proper points on the right side of the cabinet, closing the circuit to the lighting drum 55.

The ball is placed at center by use of resetting device 100 and automatic switch 51 by advancing

drum 55 until contact points 56e and 59a close circuit, lighting lamp at center position.

The game is operated by right motor unit explained under football. Each hit advances the ball one position until the first basket is made, which shows basket made and ball returned to other center, when same procedure is followed for balance of the game.

Tennis

The game of tennis is mounted on panel 17 showing a miniature tennis court. On the right side of panel, as shown in Fig. 7, five contact points, one of which is the hot wire R are wired to four small electric lamps in the proper position on the tennis court.

When the panel 17 is placed in the front portion of the cabinet, these five points contact corresponding points on the right side of the cabinet, closing the circuit to lighting drum 55. The game is placed in readiness to be played by advancing lighting drum 55 by use of resetting device 100 and automatic switch 51, as explained under football, until points 56e and 59e are contacted, thus closing the circuit through connections on the end of panel 17 and the cabinet, lighting light in R1 position. It will be noted that the tennis game is set up for the beginning of game by resetting device 100, and points 56e and 59e are contacted, this starts the game past the points that are broken by the make and break device used in football. R serves to L. If a hit is scored by R then L returns by shooting at L's bull's-eye. If L makes a hit the ball is returned to R1 position and repeats in this manner as long as hits are made. If R serves, but L misses on his shot then pin 108 on resetting device is employed which places ball in R2 position. If R makes a hit, the ball is shown in L2 position by advancing lighting drum one point and will continue in these positions as long as hits are made. Should L fail to hit in this position, the ball is returned to R1 position by changing current to L motor with switch 109, Fig. 29, setting pointer 101 at No. 3, and pushing pin 103 on resetting device. For R to then serve from his R1 position, change the current back to R motor by throwing switch 109 back to the R motor. The reverse of this operation will permit L to serve in the same manner as R. It will be noted that only four lights are employed on the tennis panel, and to get the light in proper position to start the game it is only necessary to advance or reverse lighting drum the proper number of contacts which is done as described by the resetting device.

It will now be seen that I have provided a cabinet which can contain a large variety of games any one of which may be played by one or more persons. An individual can play the games but the double target arrangement permits two persons to engage in the competition and not only obtain entertainment but at the same time improve their marksmanship.

The football game can be played much in the manner of a conventional football game, that is, a shooter can have four shots at the target corresponding to the four downs in an ordinary football game. If he misses then the other shooter may start and proceed in the same fashion. It will also be seen that the games closely simulate athletic games and present a wide variety so that the individual tastes of almost any person can be satisfied. In the event that a shooter is not athletically inclined the dice game

may be used. It will be observed that I have prevented arcing of the contacts and means to successively light the various lamps and then light the scoring lamps and in addition the sequence of lighting may be interrupted at any time, and by the use of my resetting device the game may be started over again. The apparatus may be connected to an ordinary house current outlet and it will be understood that the resetting device is to be placed adjacent the shooter so that it is not necessary to approach the cabinet containing the targets at any time, thus avoiding considerable danger.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the means and the steps herein disclosed, provided those stated by any of the following claims or their equivalent be employed.

I therefore particularly point out and distinctly claim as my invention:

1. A game apparatus comprising a representation of a playing field, lamps located at spaced intervals across said field, a target and means actuated by successive movements of said target to successively light said lamps and another target also connected with said means to light said lamps in a reverse direction.

2. A game apparatus comprising in combination, a cabinet, a panel having a simulated ball game playing field on one face thereof, a plurality of incandescent lamps positioned on said playing field to indicate successive positions of a ball employed in playing said simulated game, a plurality of electric contact members carried by said panel, conductors connecting respective contact members and said incandescent lamps, a plurality of contact members mounted in said cabinet and positioned to contact said panel contact members, means for mounting said panel in said cabinet readily removable therefrom, said mounting means being such as to effect positioning of said panel with respect to said cabinet contact members to make electrical contact between said cabinet contact members and said panel contact members, a projectile target, a source of potential, and means responsive to the impact of a projectile upon said target for connecting said source of potential with a cabinet contact member.

3. A game apparatus comprising in combination, a cabinet, a panel having a simulated ball game playing field on one face thereof, a plurality of incandescent lamps positioned on said playing field to indicate successive positions of a ball employed in playing said simulated game,

a plurality of electric contact members carried by said panel, conductors connecting respective contact members and said incandescent lamps, a plurality of contact members mounted in said cabinet and positioned to contact said panel contact members, means for mounting said panel in said cabinet readily removable therefrom, said mounting means being such as to effect positioning of said panel with respect to said cabinet contact members to make electrical contact between said cabinet contact members and said panel contact members, a projectile target, a source of potential, and means responsive to the impact of a projectile upon said target for connecting said source of potential with a cabinet contact member, said means including a distributor and a motor operatively connected to said distributor to actuate the same, the construction being such that successive impacts against the target will light said incandescent lamps in succession to indicate various positions of the ball during the playing of said simulated game.

4. A game apparatus comprising in combination, a cabinet, a panel having a simulated ball game playing field on one face thereof, a plurality of incandescent lamps positioned on said playing field to indicate successive positions of a ball employed in playing said simulated game, a plurality of electric contact members carried by said panel, conductors connecting respective contact members and said incandescent lamps, a plurality of contact members mounted in said cabinet and positioned to contact said panel contact members, means for mounting said panel in said cabinet readily removable therefrom, said mounting means being such as to effect positioning of said panel with respect to said cabinet contact members to make electrical contact between said cabinet contact members and said panel contact members, a projectile target, a source of potential, means responsive to the impact of a projectile upon said target for connecting said source of potential with a cabinet contact member, said means including a distributor and a motor operatively connected to said distributor to actuate the same, the construction being such that successive impacts against the target will light said incandescent lamps in succession to indicate various positions of the ball during the playing of said simulated game, and means to interrupt said succession and start the apparatus at the beginning of said game irrespective of what particular lamp is lit.

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