

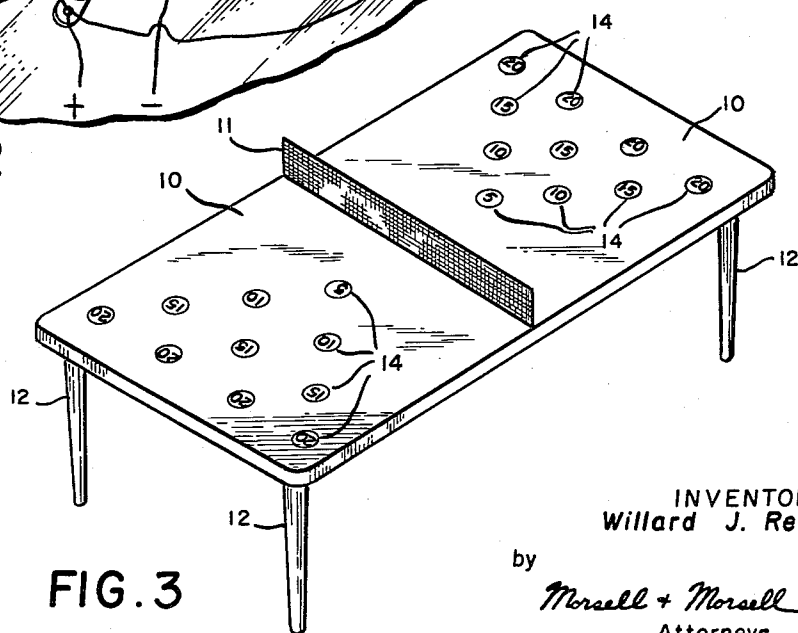
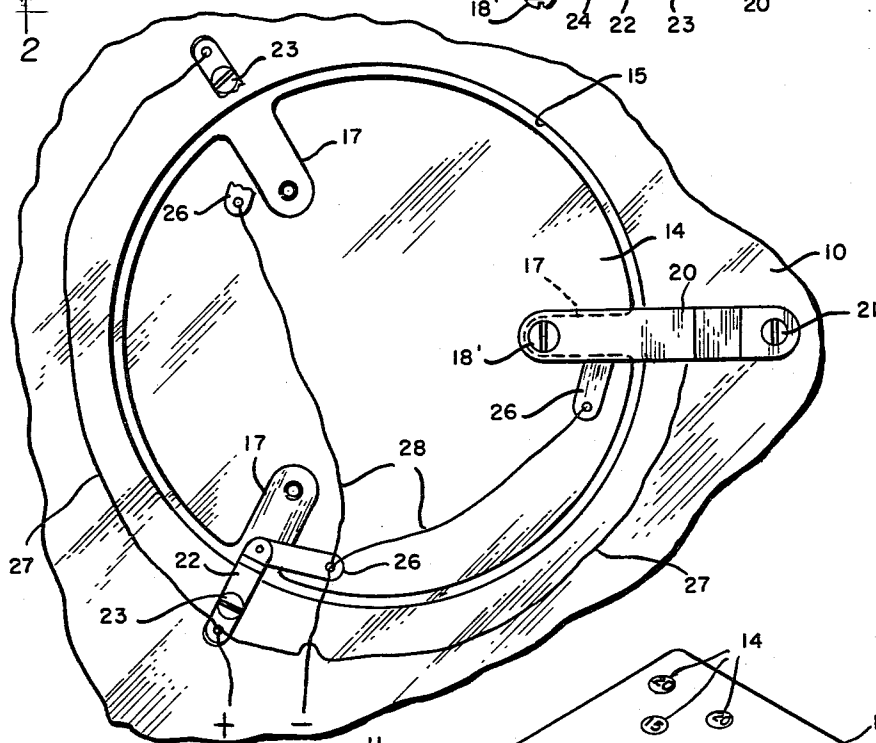
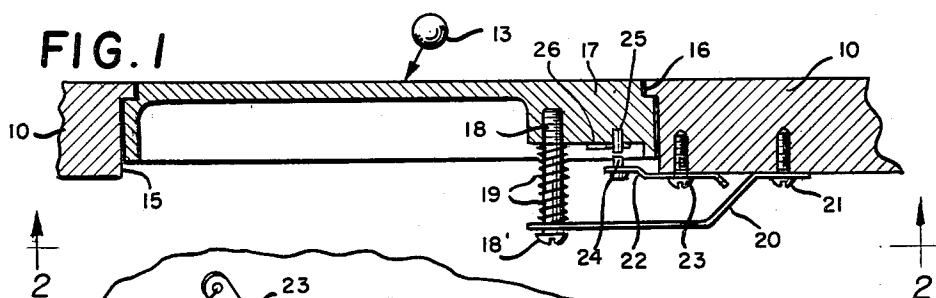
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GAME APPARATUS

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GAME APPARATUS

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4 Claims. (Cl. 273-39)

This invention relates to an improved game apparatus, and more particularly to a novel playing table for use in a game of the type wherein the players hit a ball back and forth over a net which extends across the table.

The principal object of the present invention is to provide a playing table for use in a game generally similar to table tennis or ping pong, but wherein when the ball bounces on a certain target area inset in the table surface a predetermined numerical point value is obtained. The player accumulating the most points within a designated time period, or the first player registering a certain number of points, is the winner of the game.

A more specific object of the invention is to provide a novel game table for the purpose described, wherein each of the target areas in the table surface is a unique, extremely sensitive electric switch which is adapted to be actuated by the impact of the ball striking the same, thus momentarily closing an electrical circuit.

A further object is to provide a playing table having a number of electrically actuated target areas as described which are so designed and mounted in the table surface that they will not interfere with the normal bounce of the ball while the same is in play.

A further object of the invention is to provide a novel game table as described which can be readily modified and adapted to provide various target designs and scoring systems to simulate other popular sports or games, such as baseball or football, or even card games or games of chance like poker or bingo.

With the above and other objects in view, which other objects and advantages will become apparent in the following specification, the present invention consists of the novel game apparatus for use either indoors or outdoors, and all of its parts and combinations as set forth in the claims, and all equivalents thereof.

In the accompanying drawings, illustrating one embodiment of the invention, and wherein the same reference numerals designate the same parts in all of the views:

FIG. 1 is a fragmentary vertical sectional view through the table top, showing one of the target members mounted therein;

FIG. 2 is a plan view of the under side of the target member illustrated in FIG. 1 with the electrical wiring connected thereto; and

FIG. 3 is a perspective view of one form of game table incorporating the novel features of the invention.

Referring now more particularly to FIG. 3 of the drawing, it will be seen that the game table comprising the principal form of the present invention is generally similar to a conventional ping pong table in appearance, including a flat table top 10 formed of wood or other non-conductive material, a transverse net 11 mounted intermediate the length of said top member, and a plurality of supporting legs 12. Ordinarily, said table is approximately nine feet long and five feet wide, but the dimensions thereof are not critical to the invention. Similarly, in the preferred form of the invention the corners of said table top 10 are rounded to minimize the possibility of injury to the players, but this is not an essential feature of the invention.

In playing a game on the present table the players position themselves at the opposite ends thereof and propel a small lightweight ball back and forth over the net 11. This can be done either by means of paddles, as in table tennis, or the players may merely use their hands to strike the ball.

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As is shown in FIG. 3, the table top 10 is distinguishable from a conventional ping pong table in that the present table is provided with a number of spaced target areas 14. In the illustrated embodiment of the invention said targets 14 are in the form of relatively small circles which are arranged in triangular patterns on each side of the net 11, and each of said target members has an arbitrary numerical value printed thereon, the different scoring values depending upon the relative ease of striking the same with the ball. In the illustration, for example, the circular target, or disc, forming the apex of each of said triangular patterns has a point value of 5, while the rows of discs therebehind have progressively higher multiples of 5 for point values. The object of the game, as mentioned, is to strike the target discs on the opposite side of the net with the ball as frequently as possible, and the player accumulating the most points during a specified period, or the first player obtaining a predetermined total, is the winner, thus providing a competitive contest to determine the skill of the opposing players.

In addition to the different numerical point values characterizing the several rows of targets or discs 14, it is also contemplated that said target rows will be of different colors, to more readily distinguish the same and to facilitate the marksmanship of the players. In the preferred form of the invention said target members will be formed of a translucent plastic or similar material, and will be illuminated to further enhance the attractive appearance of the table.

It is to be understood, of course, that the size, shape, or material of the target members 14 is by no means limited to the form described and illustrated in the drawing, nor must said targets be arranged in a triangular pattern as shown. In this respect, it is contemplated that other geometric configurations might be more economical to manufacture than the illustrated discs. Moreover, in place of the illustrated pattern it might well be preferred to arrange the several targets in the form of a baseball diamond, or in a pattern analogous to any other well known sport, such as football, basketball, bowling, or horseshoes, or the present table apparatus might be made to correspond to such games as bingo, poker, or other card games. It is even contemplated that the present apparatus might well be used in conjunction with games that have not yet been conceived. In short, the design and use of the present invention is subject to innumerable variations and is not to be confined to the exact structure and uses herein disclosed.

With reference now more particularly to the target structures or discs 14, attention is directed to FIGS. 1 and 2 of the drawing. As will be seen, each of said discs is designed to fit closely within a cylindrical bore 15 in the table top, there being an inwardly-projecting flange 16 (FIG. 1) on the latter which is fitted within a corresponding annular cutout around the top face of said target member. Due to the presence of the shoulder provided by said flange 16 the target disc cannot move upwardly beyond the position illustrated, wherein it is flush with the top surface of the table and wherein it will not deflect or impair the true bounce of a ball. Said disc member 14 has a cavity in its under side, and projecting radially into said cavity are three circumferentially-spaced disc bottom portions or ears 17 of substantial thickness. An elongated screw 18 is threaded upwardly partially into each of said portions 17, and encircling each of said elongated, depending screws is a compression spring 19 which is preferably formed of extremely fine spring steel or the like.

Mounted on the under side of the table top adjacent each of said target member bottom portions 17 is a rigid, flat metal arm 20, said arms being secured to the table by screws 21. Each of said arms 20 is deflected downwardly

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and thence radially inwardly as shown, and the inner ends thereof are provided with apertures through which the aforementioned screws 18 depending from the target members project, thus providing means whereby said discs are vertically movably maintained within the table bores 15.

Normally, said target discs 14 are maintained in a raised position by the force of the compression springs 19, and the presence of the annular shoulders 16 on the table top ensures that said discs are flush with the surface of said table. Said springs 19 are so designed, however, that they will yield in response to extremely light pressure, thus permitting said discs to be momentarily depressed by an impact as slight as that provided by a ping pong ball, the relatively thick table top forming a bushing within which said discs may reciprocate. With respect to said vertically movable target mounting, it is realized that other structural arrangements might also be utilized to accomplish the same purpose, and all of such equivalent mounting arrangements are intended to be covered herein as shall come within the spirit of the invention and within the scope of the claims appended hereto.

With reference still to FIGS. 1 and 2 of the drawing it will be seen that a metal contact arm 22 is connected to the table top adjacent each of the target member portions 17, by means of screws 23. Each of said contact arms projects radially inwardly and is provided with an upstanding stud forming a contact point 24 (FIG. 1) on its inner end which is positioned slightly below a metal contact member 25 mounted on the under side of the target disc. The latter contact member includes a laterally-projecting branch 26 and as appears in FIG. 2 an electrical wire 28 leading from a terminal interconnects all three of said contact branches 26.

A second electrical wire 27 interconnects the outer ends of the aforementioned fixed contact arms 22 mounted below the movable contacts 26, and the wires 27 and 28 are connected to any suitable, convenient source of electric current. Said wires are also operatively connected to a remote electrical scoreboard (not shown), and thus there is provided a circuit and switch arrangement whereby a complete circuit can be formed from the current source to the scoreboard by moving one of said discs 14 downwardly from its normal position to a position where the contact members 25 thereon engage the metal contact points 24. The several rows of targets on the playing table are each provided with their own parallel circuits, and each of said circuits is adapted to register a predetermined number on the scoreboard when said circuit is closed, corresponding to the point value of the discs in the particular row.

In the use of the novel table comprising the present invention, any time a ball 13 (FIG. 1) bounces on one of the target members 14, the impact momentarily forces said disc downwardly against the tension of the springs 19, bringing the switch contacts into engagement with each other. When the ball leaves the surface of the target the springs 19 return said disc to its normal, raised position where the switch contacts are again spaced from each other and the circuit is broken.

With respect to the particular electrical scoring apparatus employed in conjunction with the present invention, it is contemplated that any one of a number of commercial devices could be used, and the particular type employed is not critical to the invention. Moreover, because such automatic score indicating devices are well known in the art, a structural and operational description of the same is deemed unnecessary herein. What is novel in the present invention is the concept of a game table having target areas inset therein which form extremely sensitive electrical switches adapted to be momentarily actuated when a lightweight ball in flight strikes the same.

From the foregoing, it will be seen that the present invention provides a novel playing table which is adapted for wide use in connection with games of skill of the

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type described. Not only is the present apparatus adapted for use in the home, but it is well suited for use in amusement parks and other indoor or outdoor places frequented by the public, and where a variety of entertainment is desired.

It is to be understood, of course, that many other uses or modifications of the novel game apparatus comprising the present invention will undoubtedly occur to those skilled in the art, and all of such changes and modifications in the illustrated embodiment of the invention, either in the structural details or use thereof, are contemplated as may come within the spirit of said invention and within the scope of the following claims.

What I claim is:

1. A game apparatus comprising: a table top having a net extending transversely thereacross, said table top having a plurality of bores therethrough; means supporting said table top; a target member vertically-movably mounted in each of said table top bores; means on said table top positioned to prevent said vertically-movable target members from moving upwardly beyond a position where their top surfaces are flush with the surface of said table top; numerical values printed on said target members; a plurality of spaced rigid arms secured to the under side of said table top extending under said target members, and there being an aperture through the inner end of each of said arms; an elongated screw projected upwardly through each of said arm apertures and threaded partially into the under side of the target member thereabove; spring means positioned to normally maintain said target members in their uppermost positions but being yieldable to relatively slight pressure; a fixed electrical contact secured to the under side of said table and extending under each of said target members; an electrical contact mounted on the under side of each of said target members in alignment with said fixed contacts, said target member contacts normally being spaced above said fixed contacts but being engageable therewith when said vertically-movable target members are in a lowered position; and wire means connecting said electrical contacts to a source of electric current, those of said target members having different numerical values thereon being connected in separate parallel circuits.

2. A game apparatus comprising: a table top having a net extending transversely thereacross, said table top having a plurality of bores therethrough; means supporting said table top; a target member vertically-movably mounted in each of said table top bores; means on said table top positioned to prevent said vertically-movable target members from moving upwardly beyond a position where their top surfaces are flush with the surface of said table top; numerical values printed on said target members; a plurality of spaced rigid arms secured to the under side of said table top under said target members, and there being an aperture through the inner end of each of said arms; an elongated screw projected upwardly through each of said arm apertures and threaded partially into the under side of the target member thereabove; spring means positioned to normally maintain said target members in their uppermost positions but being yieldable to relatively slight pressure; a fixed electrical contact secured to the under side of said table and extending under each of said target members; an electrical contact mounted on the under side of each of said target members in alignment with said fixed contacts, said target member contacts normally being spaced above said fixed contacts but being engageable therewith when said vertically-movable target members are in a lowered position; and wire means connecting said electrical contacts to a source of electric current, those of said target members having different numerical values thereon being connected in separate parallel circuits.

3. A game apparatus comprising: a table top having a net extending transversely thereacross, said table top having a plurality of bores therethrough, and there being an

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inwardly-projecting annular shoulder adjacent the top of each of said bores; means supporting said table top; a target member vertically-movably mounted in each of said table top bores, said target members having annular cut out portions adjacent their top surfaces into which said annular shoulders fit to ensure that said vertically-movable target members cannot move upwardly beyond a position where their top surfaces are flush with the surface of the table top; numerical values printed on said target members; a plurality of spaced rigid arms secured to the under side of said table top around the periphery of each of said target members, and there being an aperture through the inner end of each of said arms; an elongated screw projected upwardly through each of said arm apertures and threaded partially into the under side of the target member thereabove; a compression spring surrounding each of said elongated screws between said rigid arm and the under side of the target member thereabove, said springs being adapted to normally maintain said target members in their uppermost positions but being yieldable to relatively slight pressure; a fixed electrical contact secured to the under side of said table and extending radially inwardly under each of said target members; an electrical contact mounted on the under side of each of said target members in alignment with said fixed contacts, said target member contacts normally being spaced above said fixed contacts but being engageable therewith when said vertically-movable target members are in a lowered position; and wire means connecting said electrical contacts to a source of electric current, those of said target members having different numerical values thereon being connected in separate parallel circuits.

4. A game apparatus comprising: a table top having a net extending transversely thereacross, said table top having a plurality of bores therethrough arranged in multiple rows on each side of said net, there being an inwardly-projecting annular shoulder adjacent the top of each of said bores; means supporting said table top; a disc verti-

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cally-movably mounted in each of said table top bores, said discs having annular cut out portions adjacent their top surfaces into which said annular shoulders fit to ensure that said vertically-movable discs cannot move upwardly beyond a position where their top surfaces are flush with the surface of the table top, and the discs in each of said multiple rows being of different colors and having different numerical values printed thereon; a plurality of spaced rigid arms secured to the under side of said table top around the periphery of each of said discs, said arms being deflected downwardly and extending radially inwardly under said discs, and there being an aperture through the inner end of each of said arms; an elongated screw projected upwardly through each of said arm apertures and threaded partially into the under side of the disc thereabove; a compression spring surrounding each of said elongated screws between said rigid arm and the under side of the disc thereabove, said springs being adapted to normally maintain said discs in their uppermost positions but being yieldable to relatively slight pressure; a fixed electrical contact secured to the under side of said table and extending radially inwardly under each of said discs; an electrical contact mounted on the under side of each of said discs in alignment with said fixed contacts, said disc contacts normally being spaced above said fixed contacts but being engageable therewith when said vertically-movable discs are in a lowered position; and wire means connecting said electrical contacts to a source of electric current, the contacts associated with the discs in each of said multiple rows being connected in separate parallel circuits.

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