May 11, 1926. 1,584,093

R. HARRIS

GOLF PRACTICE GAME APPARATUS

Filed June 25, 1925 2 Sheets-Sheet 1

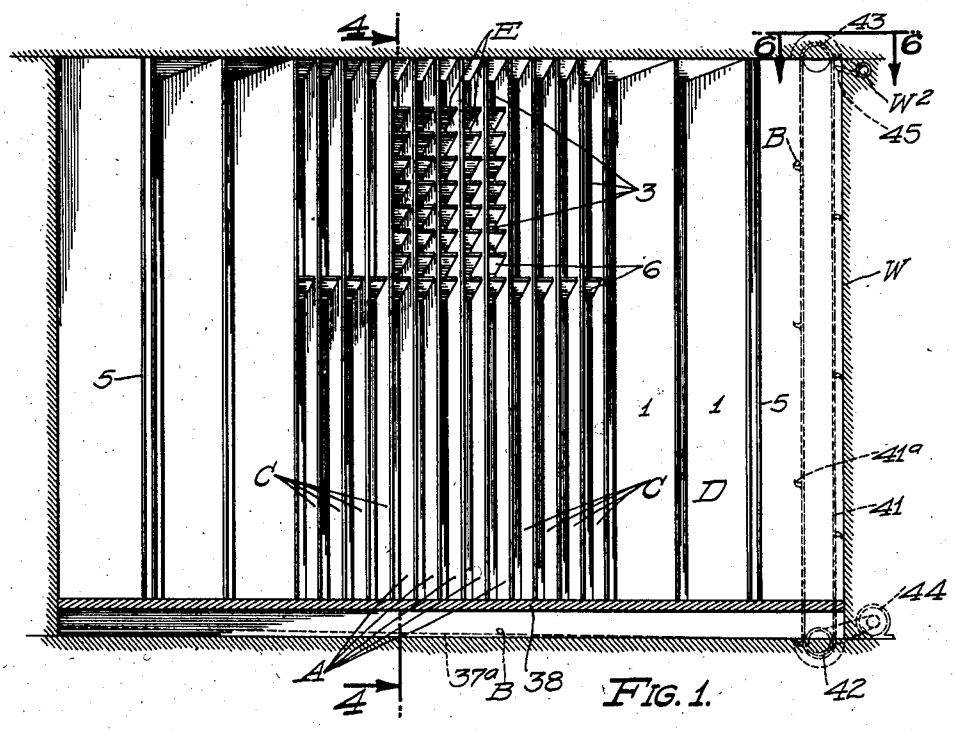


FIG. 1.

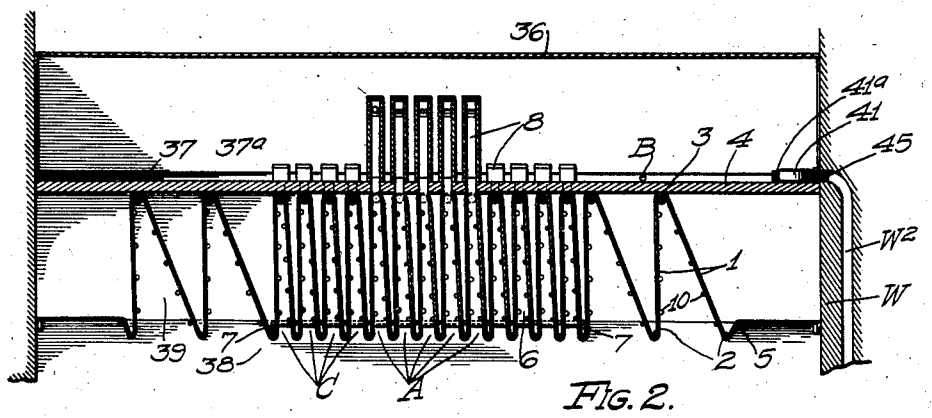


FIG. 2.

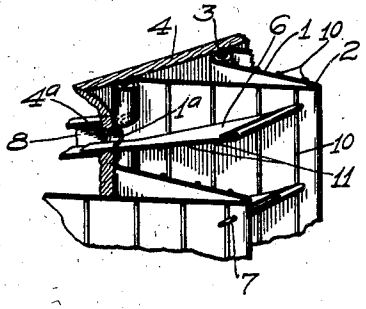


FIG. 3.

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GOLF PRACTICE GAME APPARATUS

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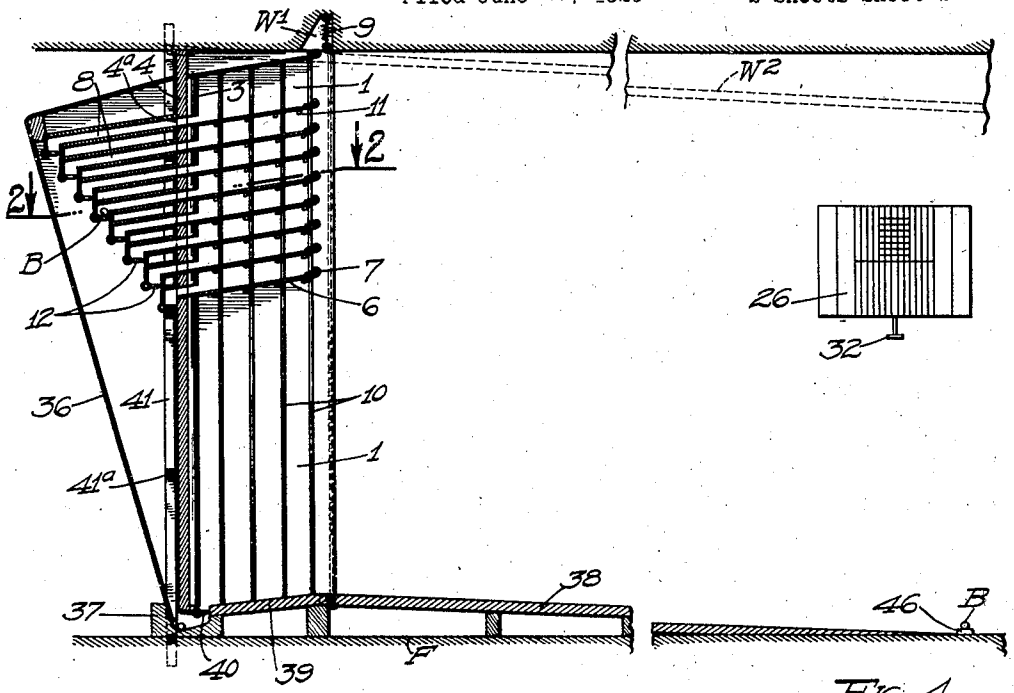


FIG. 4.

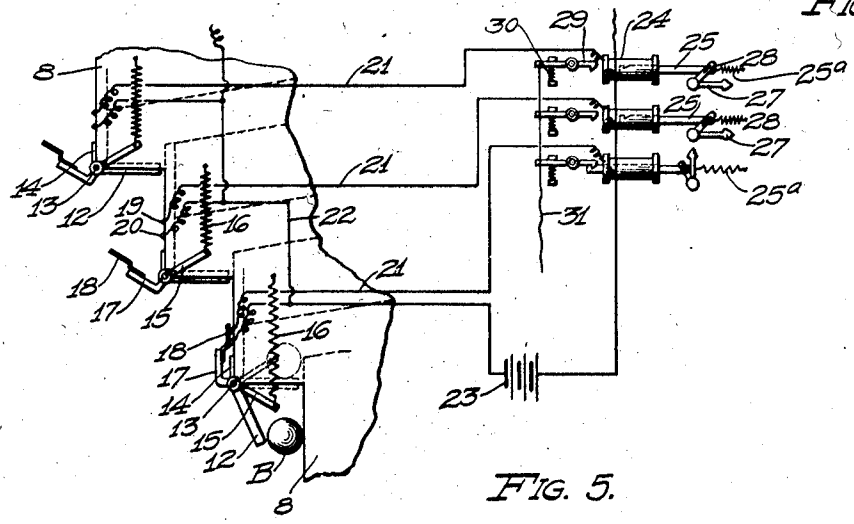
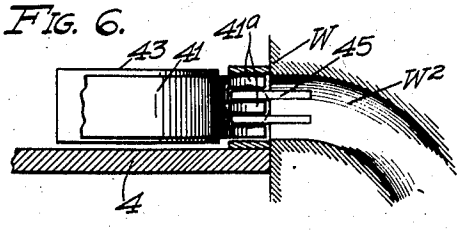


FIG. 5.

FIG. 6.



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UNITED STATES PATENT OFFICE.

REX HARRIS, OF SAN DIEGO, CALIFORNIA.

GOLF PRACTICE GAME APPARATUS.

Application filed June 25, 1925. Serial No. 39,496.

My invention relates to a game apparatus, particularly adapted for practicing golf and the like, and the objects of my invention are: First, to provide a novel target for a game apparatus of this class, having a plurality of variously spaced pockets, recesses or compartments of various sizes for receiving balls thrown or struck toward the same by the person playing the game; second, to provide a novel means for registering or recording the pocket, recess or compartment in which the ball is thrown or struck; third, to provide a novel means for returning the balls from the target to the opposite end of the room, in which the apparatus is installed, or to the end normally occupied by the player; fourth, to provide a vertically, horizontally and backwardly yieldable target for an apparatus of this class; fifth, to provide a target of this class having vertically extending compartments diverging inwardly from the front side, certain of the vertical compartments being horizontally subdivided to form smaller compartments; sixth, to provide a target of this class having vertically extending compartments made from a continuous piece of fabric, the inner walls of the vertical compartments being vertically reinforced, the reinforcing means providing also obstructions for the balls thrown or struck into the pockets or compartments; seventh, to provide a target of this class having backwardly extending and downwardly inclined discharge chutes for receiving the balls thrown or struck into the various pockets; eighth, to provide ball discharge chutes for an apparatus of this class, having electric switch means in connection therewith operable by the balls passing through the chutes for registering or recording in an indicator means or box the pocket, recess or compartment into which the balls are thrown or struck; ninth, to provide a game apparatus of this class which may be readily installed in almost any building without materially changing the original construction thereof; tenth, to provide as a whole a novelly constructed game apparatus of this class, and eleventh, to provide an apparatus of this class which is simple and economical of construction proportionate to its functions, durable, and which will not readily deteriorate or get out of order.

With these and other objects in view, as will appear hereinafter, my invention consists of certain novel features of construction, combination and arrangement of parts and portions, as will be hereinafter described in detail and particularly set forth in the appended claims, reference being had to the accompanying drawings and to the characters of reference thereon, which form a part of this application, in which:

Figure 1 is a front elevational view of the target of my game apparatus, shown constructed in a building on a slightly elevated and inclined secondary floor; Fig. 2 is a sectional view thereof in plan, taken through 2—2 of Fig. 4; Fig. 3 is an enlarged fragmentary perspective view showing the detail of construction of the target; Fig. 4 is a fragmentary longitudinal sectional view of my game apparatus, with the section taken through 4—4 of Fig. 1; Fig. 5 is a diagrammatic view of a portion of the ball controlled switch mechanism and registering means, and Fig. 6 is an enlarged fragmentary sectional view taken at 6—6 of Fig. 1, showing in plan the arrangement of the ball conveyer relatively to the ball return passage built in the wall of the building.

Like characters of reference refer to similar parts and portions throughout the several views of the drawings.

My target is provided with a plurality of variously spaced vertically extending pockets, recesses or compartments, certain of said pockets, recesses or compartments being subdivided into smaller compartments or pockets. The vertical walls forming said pockets, recesses or compartments diverge inwardly from the front side of the target, as shown best in Figs. 2 and 3. These vertical walls are constructed of a continuous sheet of yieldable material, such as canvas, and extend in a zigzag manner around vertically extending wires 2 at the front portion of the target and around yieldable rubber tubes 3 at the rear portion of the yieldable target. The wires 2 are secured at their lower ends to the floor 38 and at their upper ends to tension springs 9 positioned in recesses W^1 in the ceiling of the room in which the apparatus is positioned. The recesses W^1 are considerably enlarged permitting the wires 2 to yield backwardly. The yieldable rubber tubes 3, of slightly larger diameter than the diameter of the balls used, are secured through the canvas 1 to the supporting wall 4 extending transversely across the room. The middle narrower pocket, indicated by A and C in Figs. 1 and 2, are divided intermediate their upper and lower ends by partition

members 6 also made of canvas or other fabric. The front ends or edges of the partition members 6 are supported around a wire member 7 extending through all of the narrow pockets and spaced some distance from the front side of the target or the front edges of the partition material 1, as shown in Figs. 2, 3 and 4. The rear ends of the partition members 6 extend preferably through the openings 1^a and 4^a at the rear loop portion of the vertical partition material 1 and the support 4, respectively, as shown best in Fig. 3. The pockets of the middle vertical pockets or compartments A above the horizontally extending partition members 6 are again subdivided into a plurality of smaller compartments, designated by E. These pockets E are similarly formed by fabric partition members 6 secured at their front ends over horizontally and transversely extending supporting wires 7, as previously described. The transversely extending partition members 6 are slightly inclined downwardly toward the rear portion of the target, as shown best in Figs. 3 and 4, to permit the ball when thrown or struck into one of the pockets to roll backwardly through the holes 1^a and 4^a, previously described, into the backwardly and downwardly inclined chutes 8 secured at their forward ends to the supporting wall 4 at the holes or openings 4^a in said supporting wall, as shown best in Fig. 3.

The yieldable rubber tube or hose sections 3, positioned in the pockets D, extend from the top to the bottom of the pockets as well as those in the lower pockets, designated by A and C. The rubber tube or hose sections 3 in the upper pockets are spaced at their lower ends from the partition members 6 to provide openings for the balls from said pockets into the chutes 8, as shown best in Figs. 3 and 4. Said yieldable rubber hose sections perform a triple function, namely, that of supporting the rear loop portions of the vertical partition wall material 1 to the supporting wall 4, that of spacing the rear portions of the material 1 as to provide access of the balls to the rear portions of the pockets to permit the same to pass through the openings into the chutes 8 of the upper pockets and into the trough 37 from the lower portions of the pockets A and C and the larger pockets D, and that of serving as a bumper for the balls as they are thrown or struck into the various pockets.

The vertical walls, forming the various pockets, are reinforced at their inner sides by vertically extending cords 10 secured to the material 1. The partition members 6 are similarly reinforced at their under sides by cords 11. Said reinforcing cords also serve as retarding means for the balls as they are thrown or struck into the pockets and tend to force said balls from one side of the pocket to the other, or from the under sides of the partition members 6 downwardly, thus breaking the glancing blows of the balls against the walls forming the pockets.

The front edges of the partition members 6 are spaced from the front edges of the vertical walls so as to increase the chance of directing a ball into one of the pockets.

The rear ends of the chutes 8 are directed downwardly and provided at their lower ends with trapdoors 12 secured to pins 13 pivotally mounted in brackets 14 secured to the rear ends of the several chutes. At the one ends of the pins 13 are secured arms 15, the outer ends of which arms are connected to the one ends of tension springs 16 secured to the respective tubes, as diagrammatically illustrated in Fig. 5, for holding the trapdoors 12 in a horizontal position. To said pins are also secured arms 17 which are provided at their outer ends with yieldable contact members 18 which are adapted, when the trapdoors 12 are rotated about their pivotal supports by the balls B being discharged from the various chutes, to engage contact members 19 and 20 secured to the rear ends of the chutes. The contact members 20 are connected, by means of conductors 22, to a source of electrical energy such as a battery 23, the other terminal of said battery being connected to a plurality of electro-magnets 24 positioned in a register box 26 supported on the wall W in the room in which the apparatus is located, there being provided one electro-magnet for each trapdoor 12 and other trapdoors 40 mounted at the lower ends of the large pockets D and the lower ends of the lower portions of the pockets A and C. The other contact members 19 are connected, by means of conductors 21, with the respective electro-magnets 24 in the register box 26. Said electro-magnets are provided with reciprocable armatures 25 which are pivotally connected at their one ends to slotted portions at the outer ends of arms 28 which are secured at their opposite ends to pivotal indicator arms 27 adapted to indicate the score or the pocket in which the ball is thrown or struck. Near the opposite ends of the armatures 25 are provided notches which are adapted to be engaged by pawl levers 29 pivotally mounted intermediate their ends and retained in a position to engage the notched portion of said armatures by compression springs 30. The armatures 25 are normally held in a disengaged position relatively to the pawl lever 29 by tension springs 25^a connected to the ends of the armatures 25 pivotally connected with the arms 28, as shown in Fig. 5. As the ball B passes backwardly through the chutes and drops downwardly at the rear ends of said chutes, the trapdoors 12 are forced downwardly, as shown in the

one instance in Fig. 5, short-circuiting the contacts 19 and 20, causing a current to flow to the electro-magnets, attracting the armature against the tension of the spring 25ª so as to permit the pawl lever 29 to engage the notched end of the armature 25 rotating the indicating fingers 27 from the horizontal to the vertical position. The armatures are retained in said attracted position by the pawl lever 29 until tripped by a cable 31 connected to the outer ends of the pawl levers. Said cable 31, together with other similar cables connected to other electro-magnets corresponding to the several pockets in the target, is connected to a trip member 32 extending downwardly and beyond the indicator box 26, as shown in Fig. 4.

The upwardly and backwardly inclined floor 38 terminates at a portion just beyond the front face of the target, as shown best in Fig. 4, from which portion the floor is inclined downwardly, as indicated by 39, terminating at the front portion of the trough 37 in which all of the balls roll toward the conveyer 41. The floor is inclined downwardly, as indicated by 39, to facilitate the directing of the balls backwardly when the same are thrown or struck into the lower portions of the pockets A and C and the wider pockets D at the ends. The trapdoors 40, at the rear portions of the lower ends of the pockets last mentioned, are positioned at the rear edge of the floor 39 from which the balls roll down to the trapdoors 40, which are actuated similarly to the trapdoors 12 described above.

At the rear side of the upper end of the supporting wall 4 is secured the one end of a ball directing screen or wall 36, preferably made of canvas, which extends backwardly from the supporting wall to beyond the chutes 8 and thence downwardly at an angle and is secured at its lower end to the trough member 37 for directing the balls, as they fall from the trapdoors, into the trough 37.

At the one end of the trough 37 is positioned a vertical continuous conveyer 41 which extends around sheaves 42 and 43, the former extending into a recess in the floor and the other extending into a recess in the ceiling of the room in which the apparatus is constructed. Said conveyer is provided with a plurality of ball carrying pocket members 41ª which are preferably longitudinally slotted, as shown in Fig. 6, the slots in said pocket members permitting the conveyer to pass by a plurality or pair of arms 45 extending toward said belt conveyer for receiving the balls as they drop from the pocket members at the upper end of the conveyer. Said arms 45 are inclined at an angle to guide the balls toward the wall and into a recess or tube W² constructed in the wall, as shown in Figs. 1, 4 and 6, the other end of the tube terminating at the end of the room or of the apparatus occupied by the player in any suitable receptacle. The sheave 42 is preferably rotated by an electric motor 44, as shown in Fig. 1.

At the end of the room or apparatus occupied by the player is provided a mound 46 on which may be placed the ball as in the conventional golf game.

Though I have shown and described a particular construction, combination and arrangement of parts and portions, I do not wish to be limited to this particular construction, combination and arrangement, but desire to include in the scope of my invention the construction, combination and arrangement substantially as set forth in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a game apparatus of the class described, a yieldable target provided with a plurality of vertically arranged pockets variously spaced and subdivided.

2. In a game apparatus of the class described, a yieldable target provided with a plurality of vertically arranged pockets variously spaced and subdivided and a trough at the lower end of said target for directing balls to one side thereof.

3. In a game apparatus of the class described, a yieldable target provided with a plurality of vertically arranged pockets variously spaced and subdivided, a trough at the lower end of said target for directing balls to one side thereof, a conveyer positioned at the one end of said trough for raising the balls therefrom, and a passage means extending from said conveyer to a point in front of said target near the player.

4. In a game apparatus of the class described, a yieldable target provided with a plurality of variously arranged pockets, switch means arranged behind the target in connection with the several pockets, and an indicator board in connection with said target and similarly arranged provided with indicating means connected with the several switch means of the various pockets.

5. In a game apparatus of the class described, a yieldable target provided with a plurality of vertically arranged, inwardly converging pockets variously subdivided, the vertical walls of said pockets being formed of fabric and the subdividing walls thereof being also formed of fabric.

6. In a game apparatus of the class described, a yieldable target provided with a plurality of vertically arranged, inwardly converging pockets variously subdivided, the vertical walls of said pockets being formed of fabric and the subdividing walls thereof being also formed of fabric, wires extending from the lower to the upper end

of said target supporting the front edges of the fabric forming the vertical walls of said pockets, and other wires extending horizontally through the vertical walls of said pockets supporting the front ends of the fabric subdividing partition walls.

7. In a game apparatus of the class described, a yieldable target provided with a plurality of vertically arranged, inwardly converging pockets variously subdivided, the vertical walls of said pockets being formed of fabric and the subdividing walls thereof being also formed of fabric, wires extending from the lower to the upper end of said target supporting the front edges of the fabric forming the vertical walls of said pockets, yieldable rubber tube sections positioned in said vertically arranged pockets at the back portions thereof for supporting the fabric forming said vertical pockets at the rear portion of the target, and other wires extending horizontally through the vertical walls of said pockets supporting the front ends of the fabric subdividing partition walls.

8. In a game apparatus of the class described, a yieldable target provided with a plurality of vertically arranged, inwardly converging pockets variously subdivided, the vertical walls of said pockets being formed of fabric and the subdividing walls thereof being also formed of fabric, said subdividing walls being inclined backwardly and downwardly from the front portion of the target and spaced at their front edges from the front face of the target.

9. In a game apparatus of the class described, a yieldable target provided with a plurality of vertically arranged, inwardly converging pockets variously subdivided, the vertical walls of said pockets being formed of fabric and the subdividing walls thereof being also formed of fabric, and chutes secured at their one ends to the rear portion of said target above said partition wall members and inclined backwardly and downwardly therefrom.

10. In a game apparatus of the class described, a yieldable target provided with a plurality of vertically arranged, inwardly converging pockets variously subdivided, the vertical walls of said pockets being formed of fabric and the subdividing walls thereof being also formed of fabric, chutes secured at their one ends to the rear portion of said target above said subdividing walls and inclined backwardly and downwardly therefrom, trapdoors arranged at the rear ends of said chutes, switch means in connection with said trapdoors, and an indicator board having subdivisions corresponding with said target and provided with indicators connected with said switch means.

11. In a game apparatus of the class described, a yieldable target provided with a plurality of vertically arranged, inwardly converging pockets variously subdivided, the vertical walls of said pockets being formed of fabric and the subdividing walls thereof being also formed of fabric, chutes secured at their one ends to the rear portion of said target above said subdividing walls and inclined backwardly and downwardly therefrom, trapdoors arranged at the rear ends of said chutes, switch means in connection with said trapdoors, an indicator board having subdivisions corresponding with said target and provided with indicators connected with said switch means, an inclined screen arranged below said trapdoors, a trough positioned at the lower portion of said target in which said screen terminates, and means for returning balls from said trough to the end of the apparatus near the player.

12. In a game apparatus of the class described, a yieldable target provided with a plurality of vertically arranged, inwardly converging pockets variously subdivided, the vertical walls of said pockets being formed of fabric and the subdividing walls thereof being also formed of fabric, wires extending from the lower to the upper end of said target supporting the front edges of the fabric forming the vertical walls of said pockets, and other wires extending horizontally through the vertical walls of said pockets supporting the front ends of the fabric subdividing partition walls, said fabric forming the vertical walls of said pockets being provided on its inner side with reinforcing cords, and the fabric forming the horizontal partition walls being provided at its under sides with reinforcing cords.

13. In a game apparatus, a target provided with a plurality of vertically arranged pockets, a base for said target inclined downwardly toward the front and rear from near the front face of said target, and a trough arranged at the rear portion of said target below said vertical pockets into which balls from said downwardly and backwardly inclined portion of said base are adapted to roll.

14. In a game apparatus, a target comprising a plurality of parallel vertically arranged wires yieldably supported at their upper ends, a supporting means positioned backwardly from said wires, rubber tube sections supported by said supporting means in opposed relation to said wires, and a continuous, vertically corded, fabric member extending around said wires and said rubber tube sections in a zigzag manner forming vertical, inwardly converging pockets.

In testimony whereof, I have hereunto set my hand at San Diego, California, this 23rd day of April, 1925.

REX HARRIS.