

[54] **GOLF GAME**

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[22] Filed: **Dec. 15, 1970**

[21] Appl. No.: **98,390**

[52] U.S. Cl. **273/176 A, 273/182 R**

[51] Int. Cl. **A63b 67/02**

[58] Field of Search..... **273/176, 182, 181, 184, 185**

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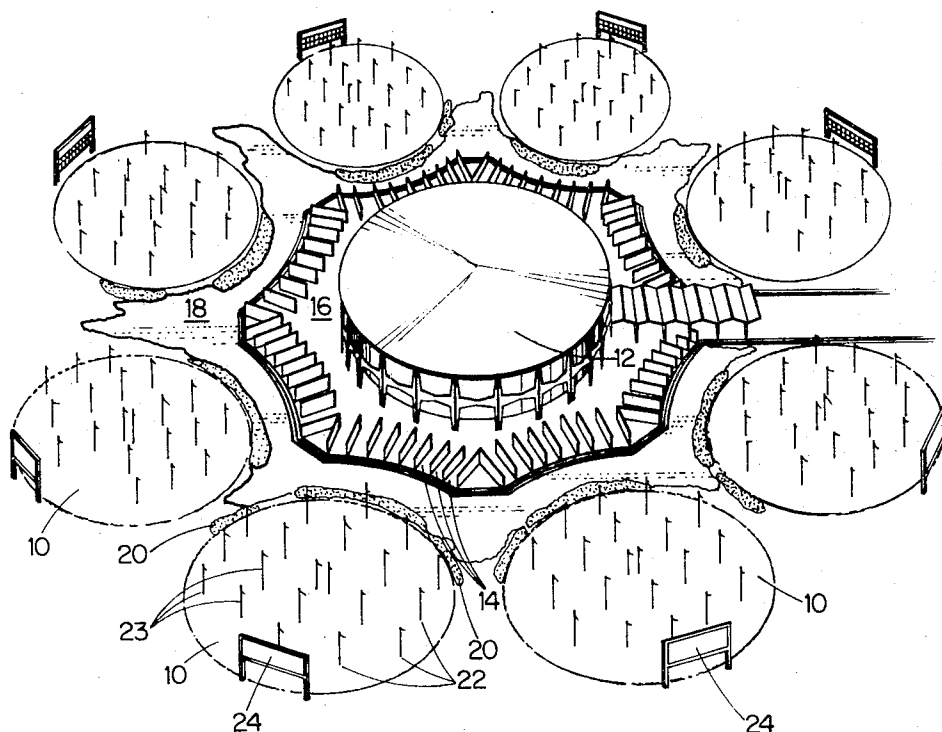
[57] **ABSTRACT**

A golf game adapted to accommodate a great number

of players and in which a player is automatically scored both with respect to the value of the hole into which a ball is played and the value of the ball selected.

A plurality of playing greens are arranged about a central building each green having a group of playing positions and a number of cups into which balls are played. The golf balls associated with each playing position are coded to designate the respective position as well as being coded to represent different designated ball values. Each cup also has an assigned scoring value and includes apparatus for sensing the entry of a ball therein. A scoreboard is associated with each green and is operative to display a score representing both the value of the cup into which a ball is played and the value of the played ball. The playing greens are separated from the central building by a moat. Golf balls may be retrieved from the cups and moved to a storage box by a system including negative pressure to draw balls along a pipe communicating with the cups.

5 Claims, 10 Drawing Figures



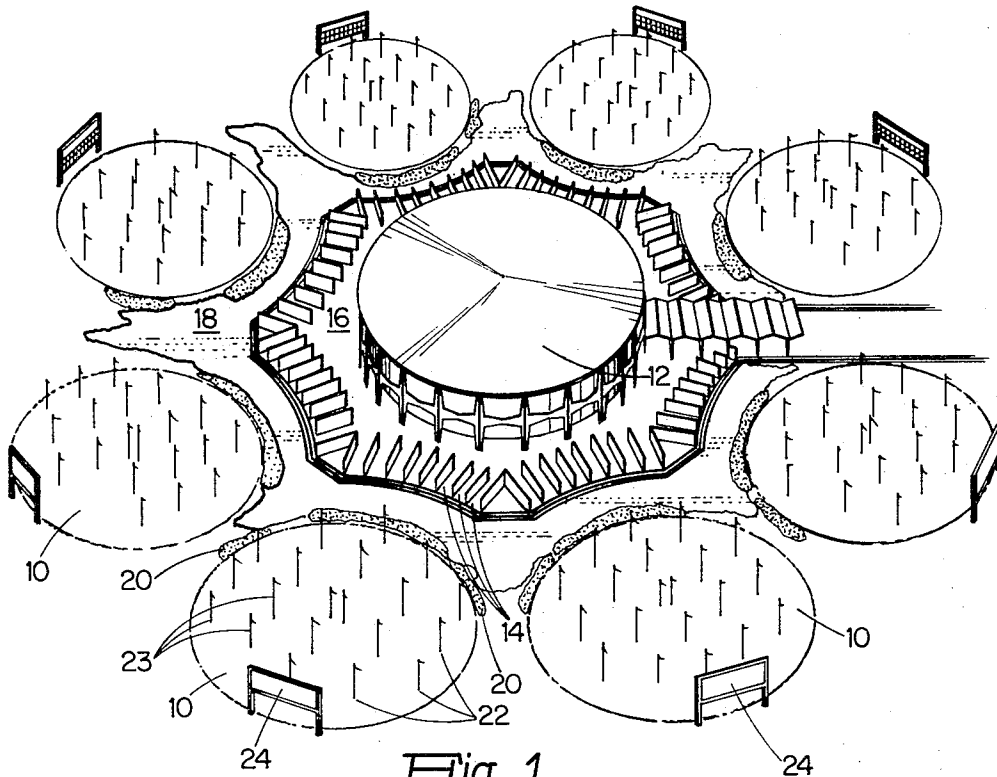


Fig. 1.

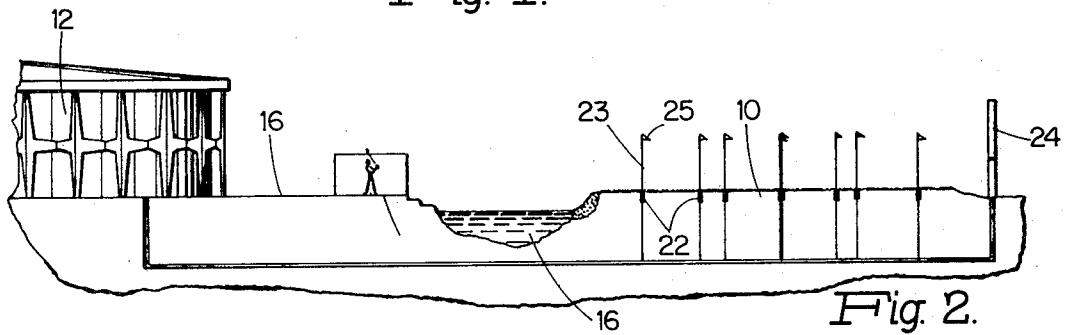


Fig. 2.

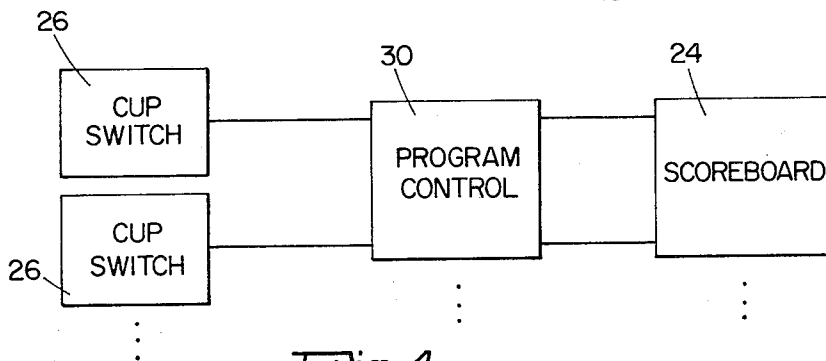
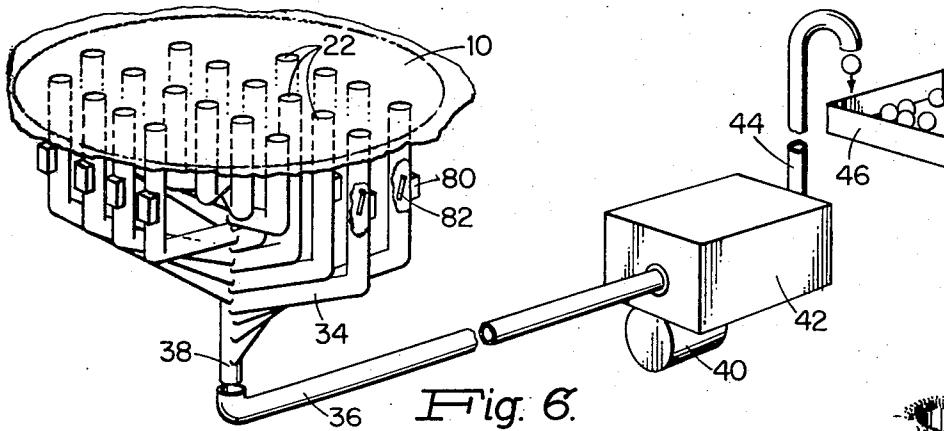
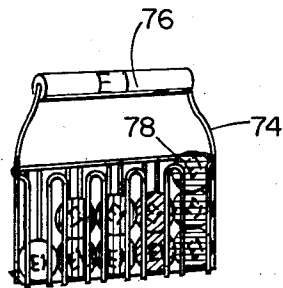
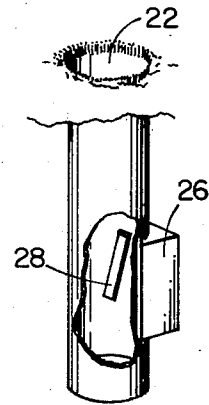
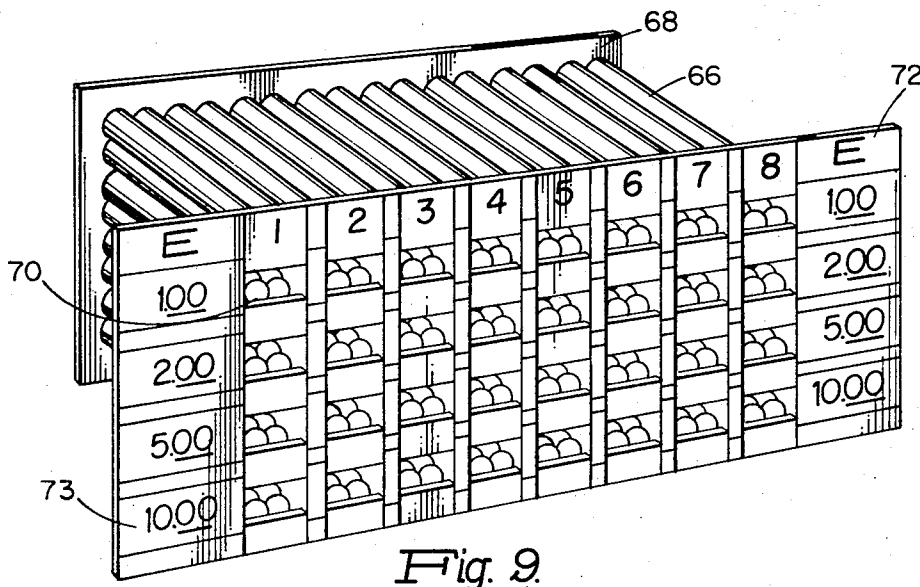


Fig. 4.

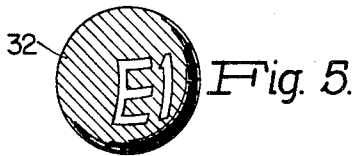
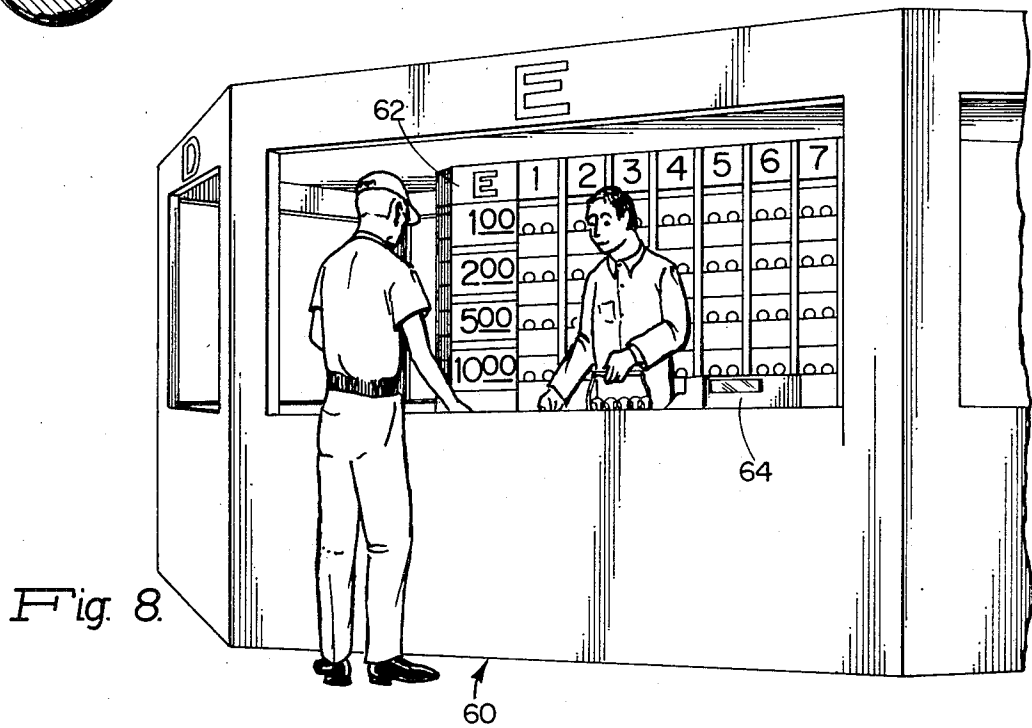
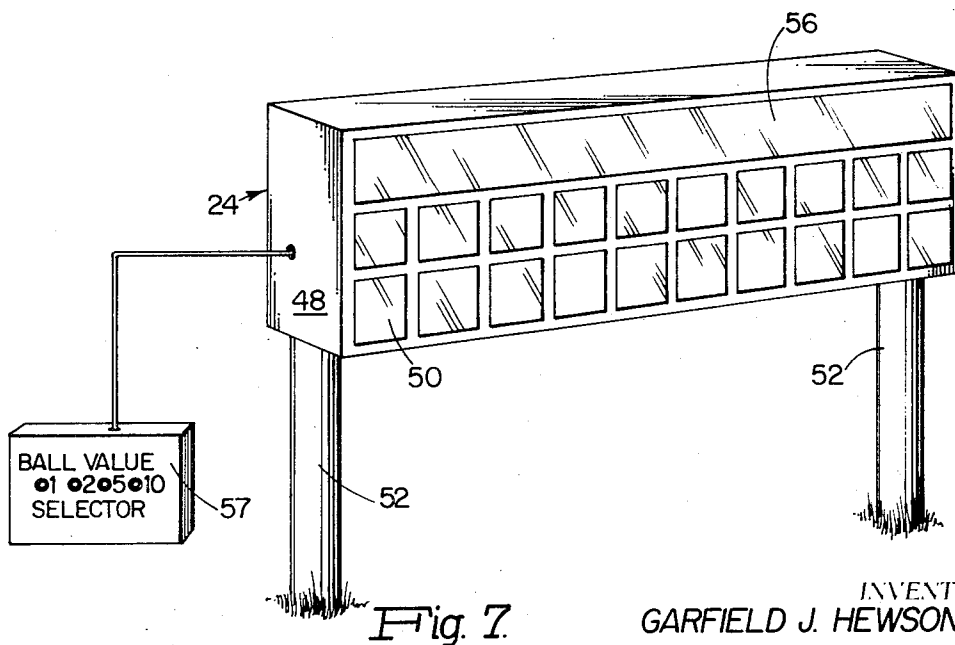
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GOLF GAME

FIELD OF THE INVENTION

This invention relates to golf games and more particularly to an automatically scored golf game in which a large number of participants can simultaneously play for respective scores representative of the skill of each player.

BACKGROUND OF THE INVENTION

The popularity of the game of golf has led to the development of golf type games and driving ranges in which a player can test his ability to drive a ball within selected areas. Most driving ranges, whether or not they include means for automatically indicating the sinking of a ball into a cup, lack the element of amusement and excitement necessary to provide an interesting and skillful game. Golf type games which have heretofore been devised generally provide amusement while detracting from the skill required to play the game.

SUMMARY OF THE INVENTION

In accordance with the present invention, a golf game is provided which is configured to accommodate a great number of players without interference with one another and in which an individual player is automatically scored both with respect to the value of the hole or cup into which a ball is played and the value of the ball selected by the player. Each player can select balls of different designated values to enhance the sporting aspects of the game and to enhance his ultimate score or winnings in playing the game.

Briefly, the invention comprises a plurality of greens arranged about a central building which may house associated facilities. A plurality of driving positions is associated with each green, each green having a plurality of holes into which balls may be driven. Each hole has an assigned scoring value commensurate with the distance and position of the hole relative to the corresponding driving position. The balls associated with each driving position are coded to designate this respective position and are also coded to represent different values. The value of respective holes can be viewed as the odds associated therewith which when combined with the value of the ball selected by a player provides a measure of the overall score for sinking that ball into the corresponding hole. A cash or other reward commensurate with the score can be employed to provide a tangible reward for respective scores achieved. A scoreboard is associated with each green and the plurality of holes in each green is operative to detect the entry of a ball therein and is coupled to the scoreboard which is arranged to indicate the score or winnings of each player.

DESCRIPTION OF THE DRAWINGS

The invention will be more fully understood from the following detailed description taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a pictorial representation of a multiple green golf range embodying the invention;

FIG. 2 is a cut-away elevation view of one of the golf greens of FIG. 1;

FIG. 3 is a cut-away pictorial view of an electrically actuable cup useful in the invention;

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FIG. 4 is a block diagram illustrating electrical connection of the cup switches to a scoreboard;

FIG. 5 is a pictorial view of a coded golf ball employed in the invention;

FIG. 6 is a pictorial view, partly cut-away, of a ball return apparatus which can be embodied in the invention;

FIG. 7 is a pictorial view, partly cut-away of a scoreboard embodied in the invention;

FIG. 8 is a pictorial view of a cashier counter embodied in the invention;

FIG. 9 is a pictorial view of a ball storage rack employed in the counter of FIG. 8; and

FIG. 10 is a pictorial view of a ball rack useful in the invention.

DETAILED DESCRIPTION OF THE INVENTION

The overall physical configuration of a multiple green golf range which is constructed and operative according to the invention is depicted in FIGS. 1 and 2 and is adapted to accommodate a number of players on each green without interference. A plurality of greens 10 are arranged about the perimeter of a central building 12. The building 12 contains cashier counters associated with each green and may also house associated facilities which may include for example a restaurant, pro shop and the like. Each green 10 has associated therewith a plurality of driving positions 14 at a driving pad arranged along a portion of an apron area 16 and confronting the respective green 10. A water filled moat 18 is provided between the greens 10 and apron 16 and is constructed and configured to enhance the degree of skill required in playing onto the respective greens, as well as providing enhanced aesthetic appeal. One or more sand traps 20 can be provided adjacent respective greens 10 near the driving positions to further enhance the skill of the game. Each green 10 has a plurality of holes or cups 22 into which balls may be driven from the driving positions 14 associated with each green. Each hole is identified by a corresponding flagstick 23 and flag 25 and has an assigned scoring value commensurate with the distance and position of the hole relative to the corresponding driving position. A scoreboard 24 is provided at each green 10 and is electrically coupled to the cups 22 of the respective green to indicate the score or winnings of each player. As will be described, the balls which are driven by a player onto each green are coded to represent different values to permit a player to increase his winnings according to the value of selected balls.

The arrangement of the greens around central sets of driving positions permits a large number of participants to play simultaneously without interference with each other. In the illustrated embodiment, eight greens are shown each having eight driving positions, thereby permitting play by 64 participants. Additional players can be accommodated if desired, by increasing the number of greens peripherally disposed around the central facility, or alternatively, by providing a second tier of driving positions arranged similarly to that illustrated. Typically, each green is 50 to 60 feet in diameter and is generally circular or oval in shape. The turf can be either natural or synthetic. The longest distance from the driving pad to the furthest hole is approximately 80 feet. The game is in terms of golf shots essentially a chipping rather than a driving or putting game. It will

be noted that there are no aids to decrease the skill required to sink various chip shots.

The cups 22 associated with each green 10 include means for sensing the entrance of a ball therein and are each coupled to the scoreboard 24 associated with the respective green for displaying the score of the players who have sunk shots on that green. A typical means for sensing the entrance of a golf ball into a cup is illustrated in FIG. 3 which shows a microswitch 26 mounted below ground on a wall of cup 22 and having an actuating arm 28 disposed within the cup and adapted to be actuated in the presence of a golf ball therein. Each cup switch 26 can be electrically connected to scoreboard 24 for actuation of a suitable display to indicate that a ball has been sunk. Typically the scoreboard 24 displays a score which has been assigned to the particular cup 22 into which a ball has been sunk. This scoring value may be permanently assigned to the particular cup, in which case the cup switch 26 associated therewith can be directly wired to the corresponding display of scoreboard 24. In some instances, it may be desirable to alter the valuation of each cup 22, in which case the cup switches 26 can, as illustrated in FIG. 4, be connected to scoreboard 24 by program control circuitry 30. Control circuitry 30 can be located within the housing of scoreboard 24 and can be a switch or plug matrix to permit the selective interconnection of each cup switch 26 to respective score displays of scoreboard 24. Such circuitry to permit the selective interconnection of a plurality of switches to a plurality of display elements is per se well known. By appropriate setting of the control circuitry, the valuation given each hole position can be readily adjusted as desired in particular instances.

As illustrated in FIG. 5, the golf balls 32 played from the respective driving positions are numerically coded to indicate the green and pad position from which they are played. For example the illustrated designation E1 denotes that the ball is associated with green E and pad position 1. The balls are also color coded to indicate the value thereof, four colors typically being employed; white, red, blue and gold, each designating a respective value, say one, two, five and 10. To enhance the sporting aspect of the game, the player has the opportunity to select ball valuations for corresponding cost commensurate with the value of the selected balls. The ball valuation in turn is a factor in determining a player's winnings.

Golf balls that are sunk into the cups 22 of each green can be removed by an attendant stationed on each green. Those that are not sunk are periodically cleared from the green so that they do not affect scoring by later hit balls. Spent balls can also be automatically removed from the cups by a suitable transport mechanism which can convey the spent balls to a central distributing station associated with each green where they are sorted and redistributed for use at the respective pad positions.

One such transport apparatus for removal of spent balls is illustrated in FIG. 6. Each cup 22 is in this embodiment communicative with a tube 34 which is coupled to a central pipe 36 by means of a manifold 38. A suction pump 40 is coupled to pipe 36 and provides a sufficient negative pressure to draw balls along pipe 36 and into a storage box 42. The inside diameter of pipes

34, 38 and 36 are dimensioned slightly larger than the diameter of the golf balls such that the balls within the pipes substantially occlude the pipes to serve as a moving fluid gate. It will be noted that tubes 34 are downwardly inclined to permit gravity to assist in the transport of golf balls from the respective cups. Pipe 36 can be similarly inclined toward box 42 to aid in the delivery of golf balls thereto. The positive pressure output of pump 40 can be coupled to a pipe 44 from which golf balls within box 42 are delivered to a storage tray 46, from which they can be sorted and redistributed to the playing areas. It will be appreciated that the illustrated pneumatic transport apparatus is merely exemplary of many conveyor systems which can be employed in the present invention.

The scoreboard 24 associated with each green is, in a typical implementation, illustrated in FIG. 7 and includes a generally rectangular housing 48 having a plurality of display windows 50 arranged on the side of housing 48 facing the playing green, each associated with a respective cup 22. The housing 48 is supported above ground by a suitable mounting such as a pair of mounting poles 52. In the illustrated embodiment 20 display windows 50 are shown each corresponding to a respective cup 22 on a particular green. A numerical score for each cup is displayed in each window 50, by well known means such as an illuminated lamp matrix or rear illuminated numerals. A visual message display 56 can also be provided and may be employed for example, to flash a notice that a particularly high score has been achieved by one of the players.

Each display window 50 is coupled to the switch 26 of respective cups 22, and as described, these switches may be selectively interconnected with the scoreboard to adjust the value assigned to each cup. Each ball is color coded to indicate its value, and the value of the coded ball is multiplied by the value of the cup into which it is played to determine the final score for that shot. Display of the final score can be accomplished in several ways. For example, the numerical value of the cup 22 into which a ball is played can be automatically displayed on scoreboard 24 in response to actuation of the switch 26 associated with the particular cup. An attendant stationed on the playing green can visually determine the color code and thus the valuation of the ball played into that cup, and can manually enter via selector 57 this information into scoreboard 24 for display along with the cup value. Alternatively, a final score, taking into account both the cup value and the ball value can be displayed. Multiplication of the cup and ball values to determine the final score can be automatically computed by well known arithmetic circuitry and appropriately displayed as a final score on the scoreboard. Or final determination of the score can be mentally calculated by an attendant and then displayed by manual actuation of the appropriate display on board 24.

In the event that a spent ball conveyor such as that of FIG. 6 is employed, it is preferable to provide means for retaining the sunk ball in the cup until an attendant can ascertain the color code of this ball. For example, in the embodiment of FIG. 6, the switch mechanism 80 can include an arm 82 which is actuable to sense the presence of a ball in the associated cup and also to retain the ball therein for a selected time sufficient to

permit an attendant to note the color code of the sunk ball.

In an alternative implementation, automatic color sensing apparatus can be provided to detect the color code of balls sunk into the cups 22. Such apparatus is per se known and can readily be adapted to detect the ball color coding and to convey information respecting the color code to the scoreboard.

A cashier's counter is disposed behind each driving pad and these counters can be centrally arranged within building 12 adjacent corresponding pad areas. Referring to FIG. 8, a cashier's counter 60 for green E is illustrated and is arranged on one face of a multifaceted structure in building 12, each face confronting a respective playing area. Each counter 60 includes a storage rack 62 for maintenance of a supply of golf balls of different values. A cash register can be provided for recording each transaction.

The ball storage rack is illustrated more particularly in FIG. 9 and includes a plurality of inclined tubes 66 supported on the back end thereof on a plate 68 and terminating on the front end in respective dispensing windows 70 from which balls can be withdrawn. The front plate 72 of the storage rack contains a letter designation, E in the illustrated embodiment, to denote the identity of the particular playing green. The playing positions are numbered 1 through 8 in respective columns and the golf balls numerically designated for these playing positions are contained with the supply tubes 66 associated with the respective columns. The color coded balls are respectively arranged within rows of each column and the value 73 of each row is appropriately designated on the side of plate 72 is illustrated. Thus, the storage rack provides for each playing position a complete supply of each value ball which may be selected by a player.

A rack of balls is sold to a player at the counter 60. A typical rack of 10 balls is illustrated in FIG. 10 and is formed of a relatively stiff wire 74 having a handle 76 which bears the identity, E1, of the playing position to be used. The rack is divided into five vertical storage areas each adapted to contain a column of golf balls 78, and is of free standing construction, the balls being easily removed by a player for placement on the tee at the associated pad position.

In playing the novel game, the player chips each ball toward the associated green and any ball that enters one of the plurality of cups 22 causes actuation of the corresponding cup switch, which, in turn, causes actuation of the scoreboard 24 to represent the scored value for the cup into which the ball was played. Since each cup has an assigned value, this value can be viewed as the odds associated with the particular cup position. The value of the coded ball multiplied by the odds of the cup determines the final score achieved by the player for the given shot.

While a preferred embodiment of the invention has been shown and described it will be appreciated that many alternative implementations and modifications will occur to those versed in the art. Accordingly it is not intended to limit the invention by what has been particularly shown and described except as indicated in the appended claims.

What is claimed is:

1. A golf game comprising:
a central building;

an apron area extending out from and surrounding said building;

a plurality of playing pads arranged in side by side relationship around the periphery of said apron area, each of said pads having a plurality of playing positions arranged in side by side relationship;

a plurality of playing greens disposed around the periphery of said apron area;

a moat surrounding said apron area and separating each of said greens therefrom;

a plurality of sand traps, at least one sand trap being disposed adjacent each of said greens in a position confronting the associated one of said playing pads to provide a hazard to play onto said green;

a supply of golf balls associated with each of said playing greens, each of said golf balls having a first code thereon identifying the associated playing position at which that ball is to be used and a second code thereon identifying the designated value of that ball;

a plurality of cashier counters within said central building, each counter being associated with a respective playing green and each having a multiple compartment supply rack for storage of said supply of golf balls for the associated green and arranged by respective playing positions and designated ball values;

each of said playing greens having;

a plurality of cups disposed therein in predetermined spaced arrangement, each of said cups having a predetermined scoring value;

a plurality of markers each disposed adjacent a respective one of said cups and having a marking identifying said predetermined scoring value;

a plurality of electrical switches each disposed in a respective cup and actuatable upon entry of one of said golf balls into said cup;

means for providing an indication of the value of a golf ball played into any one of said cups; and

a scoreboard coupled to said plurality of switches of the associated green and coupled to said value indication means, and having a plurality of score displays corresponding to respective cups of the associated green, said scoreboard being operative upon entry of a ball into a cup on said associated green to display a score representing the value of the cup into which a ball is played and the value of the played ball.

2. A golf game according to claim 1 wherein said means for providing a signal indication includes a selector for manually entering into said scoreboard said signal indication of the value of a golf ball played into any one of said cups.

3. A golf game according to claim 1 wherein each of said scoreboards includes switching circuitry coupling each of said plurality of electrical switches of the associated green to respective ones of said score displays and operative to permit selective interconnection of said switches and said score displays in accordance with intended valuations of said cups.

4. A golf game according to claim 1 wherein each of said playing greens includes apparatus coupled to all of said cups of the associated green and operative to convey balls played into said cups to a central station associated with the green for sorting and redistribution for use at said playing pads.

5. A golf game according to claim 1 wherein each of said golf balls of said supply includes a third code thereon identifying the associated green at which said golf balls are played.

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