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Rotolo

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[54] GOLF COURSE

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[52] **U.S. Cl.**.....**273/176 AB,** 273/176 G
[51] **Int. Cl.**.....**A63b 67/02**
[58] **Field of Search**.....273/176; D34/5

[56] **References Cited**

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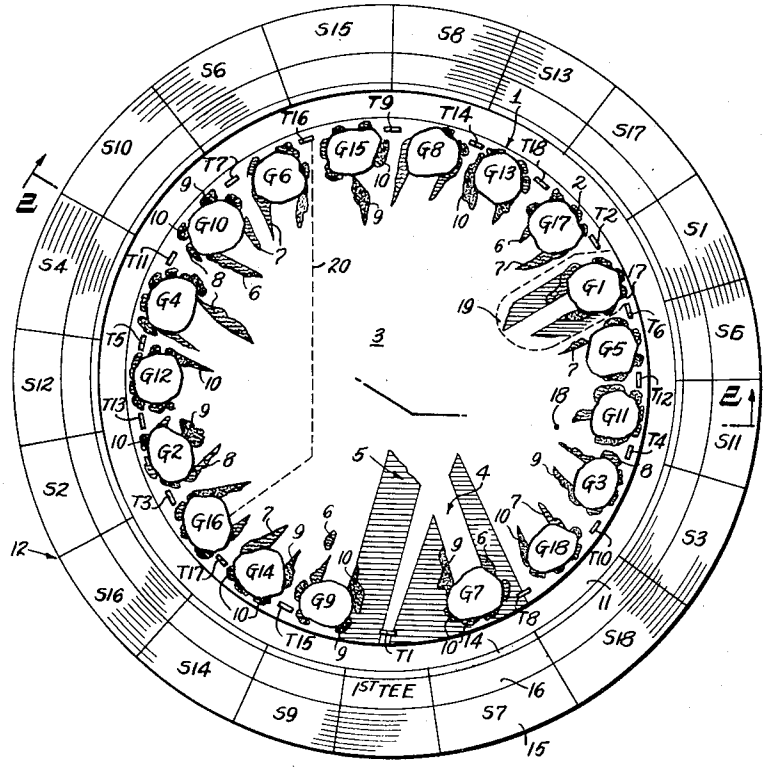
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[57] **ABSTRACT**

A golf course with an improved layout of tees and greens and including spectator stands extending along and at least partially around the golf course area. The layout of the course provides for regulation play on a relatively small area of ground compared to conventional regulation golf courses. The distance from tee to green for any hole is not greater than slightly more than the distance a tournament player can drive the ball from the tee. Players travelling from tee to green travel along a walkway surrounding the course and hence, the usual fairway and rough areas are unobstructed by players so several groups can tee off from the same tee in quick succession. Since each player plays the ball from its lie adjacent the green, play on the course is the same as play on conventional regulation courses. In the preferred embodiment, the course is of circular outline and the tees and greens are so arranged that the play is generally across the course along a diameter of the course. The course can also be elliptical, rectangular, polygonal or square in outline. Signal lights can be provided on each green to indicate to players on the tee that the green is clear and it is safe for them to hit their tee shots.

5 Claims, 4 Drawing Figures



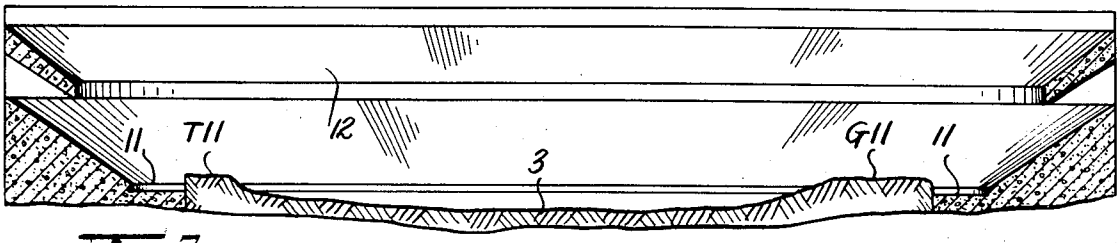


Fig. 2.

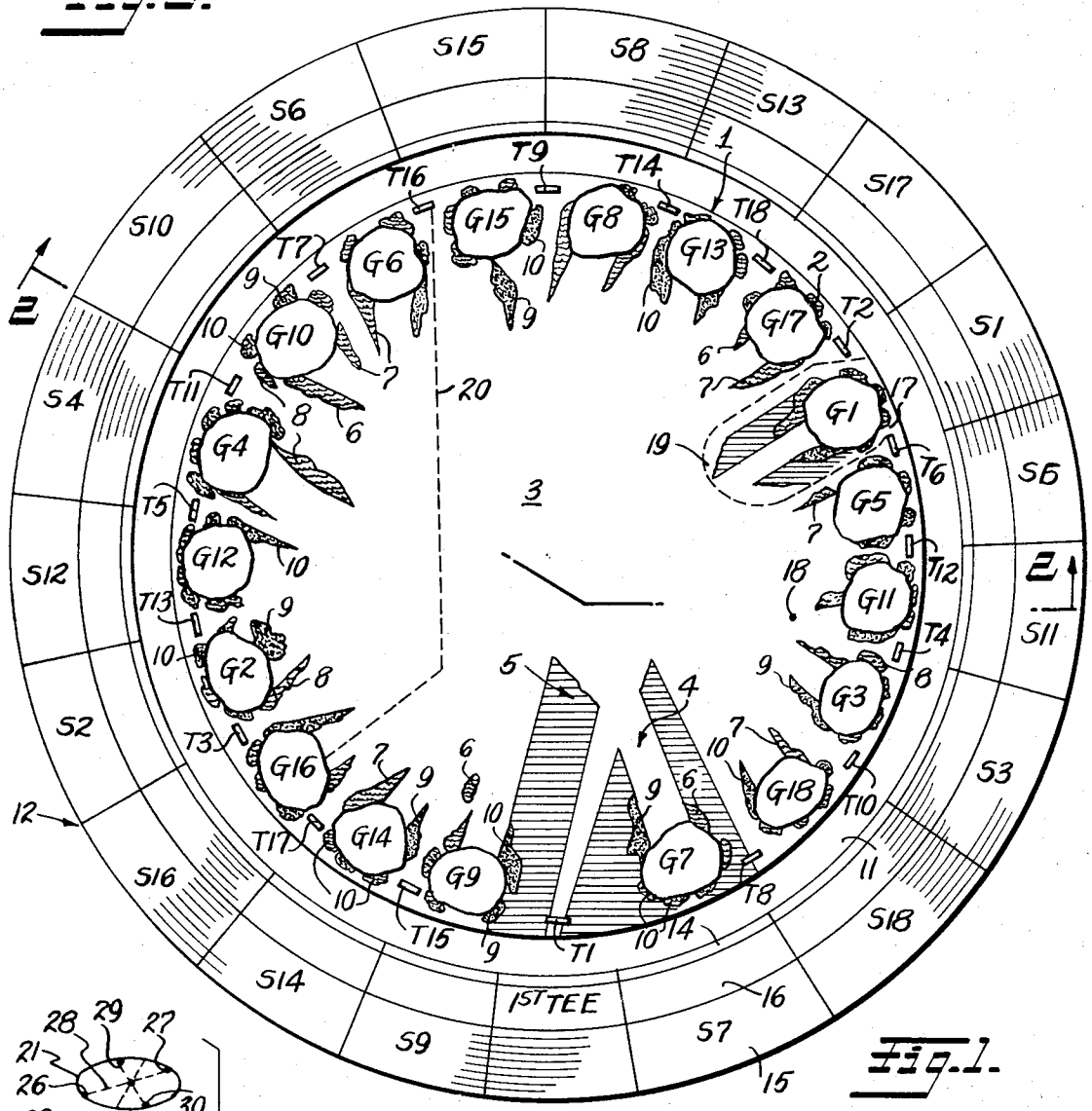


Fig. 1.

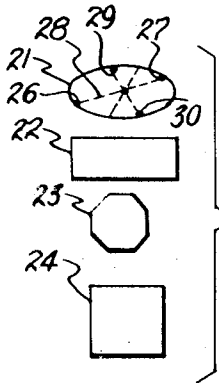


Fig. 3.

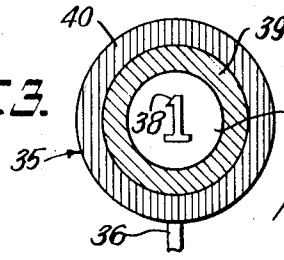


Fig. 4.

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GOLF COURSE

This invention relates generally to an improved golf course layout, and more particularly to an improved golf course layout with improved spectator viewing of tournament play.

More particularly, this invention relates to a golf course which is relatively compact compared with presently known championship or tournament type golf courses, and which enables spectators to view the play at several greens and tees from a single location. Advantageously, spectators at preferred locations relative to the golf course of this invention, can view the play at all greens or tees of the entire golf course.

Known regulation and championship type golf courses have a tee area, a fairway, and green for each hole to be played. In the championship type golf courses there are, of course, 18 holes to be played, and the fairways for each hole are completely separate and distinct from each other so there is no need to play across a fairway of another hole. While such a layout makes the play more interesting from the standpoint of the players, the associated rough, water hazards, and trees usually found on such courses make spectator viewing of the play extremely difficult, and seating for the spectators is usually provided only at the greens for certain holes, in most instances, only the 18th hole where the outcome of the tournament is frequently determined. Hence, even though existing championship courses require several hundred acres of area, spectators are frequently unable to view play on the course without rushing from one area to another to follow the play of a favored golfer. To facilitate viewing of play by as many spectators as is possible, the golf course of this invention is advantageously free of trees or other elevated obstructions which could interfere with spectator viewing of the golf course from elevated seating areas surrounding the course.

In accordance with the preferred embodiment of this invention, the golf course has a closed body like configuration which may be of any desired outline, for example, circular, elliptical, rectangular, square, or polygonal. The greens are arranged along the border or outside of the course and advantageously surround the course at least partially. Tee areas for the several greens (in the preferred embodiment there are 18 greens and 18 tees) are located generally between the greens and are adjacent the periphery or boundary of the course. Advantageously, the tee for a particular green is located across the course from the green to which the golfers will play. By virtue of this arrangement, there is in effect a common golf course area across which the tee shot of golfers at each tee will travel.

Advantageously, the distance from a tee to its green is only slightly further than the distance that the average tournament golfer can drive the ball from the tee. In the case of "Par 3" holes, the distance from tee to green will of course be somewhat shorter, so the average tournament golfer will be able to reach the green with an iron shot from the tee.

To avoid the danger of golfers on the course being struck by the tee shots of golfers on the tees, the golfers never walk across the course from tee to green. Instead, a cartway or walkway is provided around the course and the golfers use this walkway to travel from tee to

green via a route which requires them to travel around the course to the particular green they are playing to, and from the green, enter the course area to play the ball from the fairway or rough closely adjacent the green. Hence, each golfer plays a tee shot toward the green for that hole, and because the distance from tee to green is only slightly greater than the length of the drive of an average player on the tournament, all but very poorly hit tee shots will travel across the course to a location adjacent the greens on the other side of the course. Since the golfers do not travel along the same line as the normal flight of the ball from tee to green, play is speeded up considerably because a second group (and perhaps, a third group) of golfers can immediately tee off while the first group is enroute to the green for the hole being played.

To further speed up play on the course, signal lights are provided on each green. These signal lights are so positioned on each green that they face toward and are clearly visible from the tee for that green. In a preferred embodiment of the signal lights, the lights take the form of rings arranged concentrically around a sign which indicates the green number. The number sign itself can be illuminated. One of the rings is a green ring which shows a green light when illuminated, and the other ring is a red ring which shows a red light when illuminated. While golfers are chipping toward or putting on a green, the red light is turned on to warn golfers on the tee not to play their tee shots. As soon as the golfers finish putting on a green, the red light is turned off and the green light is turned on which indicates that it is safe for the golfers on the tee to proceed. The lights for a particular green are controlled by switches located adjacent the green. Additional signs can be used to indicate to the spectators that a group of golfers are ready to play their tee shots.

To more closely simulate play on a regulation tournament type course, the areas between tee and green are provided with the usual fairways and rough along the fairways, and to increase the interest of play at the greens, water hazards, as well as sand traps are strategically located at each green. By virtue of this arrangement, not only is the play speeded up for a particular green, but in addition, the rate of play on the entire course is increased with the result that tournaments can be played in far less time than that required for the present tournament play.

While the course of this invention is particularly useful in tournament type play, where the course is surrounded by spectator seats or stands, it will be appreciated that the same general course layout can be used in a compact golf course for amateur and weekend type players. For such an amateur course however, a so called "short course" layout, where the distance from tee to green is somewhat less than the 300–350 yards for the tournament type course will function to better advantage to avoid the need for players crossing the course as a result of a duffed or missed tee shot.

Correspondingly, an object of this invention is a compact golf course in which the tees and greens are located adjacent the outside of the course and the play is generally across the course from tee to green.

Another object is a golf course with a play area surrounded by tees and greens, and a spectator seating

area surrounding the course to facilitate spectator viewing.

A further object is a compact tournament type golf course which can be used in a relatively small space and which readily affords regulation play.

A still further object is a golf course surrounded by tees and greens in which the distance from tee to green is substantially the same as, or only slightly greater than the average distance a tournament player can hit the ball from the tee, and in which a walkway surrounds the course to permit golfers to move from the tee to the green area without crossing the course, and a spectator seating area surrounds the walkway, so other plays can immediately play from the same, as well as other tees of the course, without danger of striking either the players or the spectators.

A still further object is a regulation golf course on a relatively small area of ground in which the course includes the usual fairways, rough, sand traps and water hazards, in which play proceeds in the usual fashion by driving the ball from a tee, and the ball is played from its lie toward the green without the need for the golfers crossing the fairway or rough area during play, but instead requiring movement of the golfers to a location adjacent the green via a walkway surrounding the golf course, in order to enter the fairway area.

Numerous other features, objects, and advantages of the golf course of this invention will become apparent with reference to the drawings which form a part of this specification and in which:

FIG. 1 is a top plan view of the golf course showing the layout of tees and greens, as well as the spectator seating or stadium area extending around the golf course;

FIG. 2 is a partial view, in section, taken along line 2—2 of FIG. 1 showing the elevated tee and green areas characteristic of the golf course of this invention;

FIG. 3 is a plan view showing other geometric configurations for the course in schematic; and

FIG. 4 is a front elevational view of the red light-green light to indicate to players on the tee when they can play their tee shots.

Referring now to the drawings in detail, and particularly to FIG. 1, there is shown the layout for the golf course 1 of this invention. In this preferred embodiment of the invention, the golf course is of regulation eighteen hole type and the course is of generally circular configuration. Adjacent the outside boundary 2 of the course, but spaced slightly inwardly of the boundary are 18 green areas designated G_1–G_{18} which are spaced apart from each other. Also located adjacent boundary 2 of the course and spaced slightly inwardly thereof are eighteen tee areas designated T_1–T_{18}. For convenience, and to facilitate explanation of play on the course, the tee for a particular green is designated by the same suffix numeral as the suffix numeral of the green. Hence, play proceeds from the tee designated T_1 to the green designated G_1, then from T_2 to G_2, the from T_3 to G_3, etc. Within the region bounded by the greens and tees is the fairway and rough play area generally designated as 3 across which golfers play the balls from the tees to the respective greens. This centrally located play area includes plural fairway areas 4, as well as areas of rough 5, so the course has all the features of a conventional regulation course save that there are no trees or elevated obstructions to interfere with viewing the play on the course by spectators. Located adjacent each green are water hazards, such as the hazards 6–8, as well as sand traps 9 and 10, which provide for play in the area of the greens in a manner substantially identical to play on a conventional regulation course.

Extending around the course is a walkway or cartway 11, and radially outwardly of the walkway 11 is a spectator seating area 12, which surrounds the walkway. The walkway provides for movement of the golfers from tee to green without crossing the central fairway-rough area 3 in a manner which will subsequently be explained in detail. Where the seating area completely surrounds, or at least substantially surrounds the golf course area, as shown at FIG. 1, the course and seating area can aptly be termed a "Golf Stadium." This spectator seating may advantageously include a box seat area 14 at the front of the seating area, as well as grandstand sections, such as the upper section 15 and lower section 16 of the grandstand area. Advantageously, the stand areas are designated S_1, S_2, S_3, S_4, etc., and the stand designated with a particular numeral is located in the circumferential sector generally adjacent the green identified by the same numeral. For example, stand section S_4 is located in the sector adjacent green G_4.

PLAY ON THE COURSE

The play on the course originates at the starting tee area designated T_1 where the golfers tee the balls and drive them toward the green G_1. Since the players are tournament players, they will regularly drive the ball to a region adjacent the first green, G_1 and there will be few, if any, balls hit to an area other than an area adjacent the green G_1. The group of players then proceed to green G_1 by travelling along walkway 11, and hence, do not cross the fairway playing area 3. A second group of players can immediately play their tee shots toward green G_1, while the first group is walking or riding in carts to the green along the walkway 11. The first group of players will enter the fairway areas at a location adjacent green number 1 by travelling counterclockwise around the walkway to the location 17 closely adjacent green G_1, will then walk out to where the ball lies, and will play the ball from its lie to the green. As soon as the first group has finished, the second group enters the fairway area, and each player plays his ball from its lie to the green. Of course, while the second group of players if travelling along the walkway toward green G_1, a third group can tee off from the tee. The only restriction on play is that a player cannot tee off at T_1 while a preceding group of players plays from the fairway to the green G_1. After play on green G_1 is completed, the first group of players move to the tee area T_2, and play is toward green, G_2, which it will be noted, is generally diametrically across the play area from the tee area T_2. After the players have made their tee shots, they proceed to green G_2 around walkway 11 in a counterclockwise direction and again, do not cross the fairway play area 3. From a location adjacent green, G_2, the players enter the fairway for only the short distance necessary to play their iron shots toward green G_2. As soon as the first group of players finish the tee shots at T_2, a second group can of course play from T_2 toward green, G_2.

In a similar manner, play proceeds from the remaining tees, T_3–T_{18} to the remaining greens, G_3–G_{18}.

Should a player hit a very poor tee shot, which does not travel to a location adjacent the green being played, he will be required to traverse the walkway to a location as close to his ball as is possible, before entering play area **3**. While it will be necessary to temporarily suspend play from certain tees adjacent the ball, until the poorly hit ball is played, such short suspension of play will not materially delay play on the course. For example, suppose a player playing from T_1 drives his ball poorly to a location **18** near green G_{11}. He will then walk to a location adjacent the tee area T_4, will walk out to his ball, and will play the ball toward green G_1. However, since poor tee shots are quite rare in professional tournament play, play is rarely delayed on the course of this invention.

In the preferred embodiment shown and described in FIG. **1**, the diameter of the course is approximately 390 yards. In addition, the average size of a green is approximately 100 feet across, and the greens can, of course, be of any desired shape or configuration, even though the drawing shows the greens to be generally circular. By virtue of the size of the green, and the pin placement on a particular day, the distance from tee to pin for a particular hole may vary as much as 30 yards. The preferred distances from tee to green for the golf course for tournament and championship play are listed in the following table.

TABLE 1

HOLE	DISTANCE TEE TO GREEN
1	312 yards
2	342 yards
3	342 yards
4	348 yards
5	342 yards
6	348 yards
7	342 yards
8	348 yards
9	342 yards
10	342 yards
11	360 yards
12	348 yards
13	327 yards
14	342 yards
15	348 yards
16	294 yards
17	348 yards
18	306 yards

It will be noted with reference to Table **1** that the distance from tee to green is as short as 294 yards for the 16th hole, and as long as 360 yards for the 11th hole. For the 11th hole, it will be noticed from FIG. **1** that tee, T_{11} is substantially diametrically across the golf course from the green, G_{11}. However, for the 16th hole, the play from tee, T_{16} to green, G_{16}, is along a chord of the circular golf course, and the hole is advantageously played as a dog leg to the right along the path indicated by the dotted line **20**. A professional tournament golfer will of course, be able to play his tee shot to a location closely adjacent the green G_{16}, and will in many instances be able to place his tee shot on the green.

As shown at FIG. **2**, with reference to tee area T_{11} and green, G_{11}, each of the tee areas T_1–T_{18}, as well as each green, G_1–G_{18} is elevated above the level of walkway **11**. On the other hand, the fairway and rough area **3** is somewhat dish-shaped and is below the level of both the tee areas and the green areas. The elevated tees and greens provide for a course in which the play from fairway to green is quite similar to that of a conventional tournament golf course. In addition, since the tees and greens are all elevated, spectators in the stands **12** can see the play at each tee and green.

While a first preferred embodiment of the golf course of this invention is shown at FIGS. **1** and **2**, with the course of circular outline, the course can also take the shape of the geometric FIGS. **21–24** shown at FIG. **3**. As shown, the course can be in the shape of ellipse **21**, rectangle **22**, convex polygon **23** or square **24**.

Where the course takes the form of ellipse **21**, the tees and greens will be located around the periphery of the course, preferably with a tee area between each pair of greens as previously described for the circular course with reference to FIGS. **1** and **2**. The elliptical course will be arranged so that play on the course occurs across the course from one side to the other with the tee for a particular green being located along a line passing through the geometric center of the ellipse. For example, a green **26** will have its tee **27** located at the opposite side of the course and generally along the line **28** passing through the geometric center of ellipse **21**. Where play is across the long sides of the ellipse, for example, from a tee **29** to a green **30**, the hole will be a par 3. Hence, where the course takes the form of ellipse **21**, both par 5, as well as par 3 holes will be provided on the course.

Similarly, where the course takes the form of a rectangle **22**, the tees and greens will be spaced around the periphery of the rectangle and the play will be across the course from a tee at one side to a green at the other side of the course. Par 5, or long holes will be played diagonally across the rectangle whereas, par 3 or short holes will be played from one long side of the rectangle to the other, across the width of the course.

Where the course takes the shape of the convex polygon **23**, the play as well as the arrangement of holes will be substantially the same as for the golf course of circular outline described with reference to FIGS. **1** and **2**.

The course can also take the form of square **24** which provides some variation in the distance of play for particular holes, since some play will be across a diagonal of the square for the longer holes, whereas other holes will play from one side of the course to the opposing side.

Regardless of the outline of the course however, a walkway of a configuration similar to the configuration of the course will extend around the course and all players will use the walkway to travel from the tee to the associated green. The players will enter the fairway area from a location adjacent the associated green, in the manner previously described for play on the circular course of FIGS. **1** and **2**.

Where the course is not used for tournament play, for example, by amateur and weekend type golfers, the play can be somewhat different and may take place in the following manner. First, the golf course proprietor will supply balls for the players to use from the tee. Then, an area adjacent each green, such as the area enclosed in dotted lines, designated **19**, and adjacent green, G_1 will be considered the only in bounds area for a ball played from the tee T_1. Any ball hit outside this

area will be considered out of bounds, and the ball will not be retrieved by the player. The player hitting out of bounds will be assessed a penalty stroke, but will be allowed to drop another ball in the in bounds area **19**. The players will traverse the walkway from the tee, T_1 to the area of the green, G_1 and those players who have successfully played their balls into the in bounds area will play the ball from where it lies. Those players who have gone out of bounds with their tee shot will drop another ball within the inbounds play area (but near its inner boundary) and will continue play to the green. It will be observed with reference to FIG. **1**, that the inbounds area for a particular green extends only a short distance radially inwardly of the green,so players in the in bounds area will be in little, if any, danger of being struck by balls driven from the other tees of the course.

Alternatively, when the course is used by amateur or weekend type golfers, a common tee, for example, tee, T_1 could be used for play to several greens, for example G_5, G_1, G_{17}, and G_{13}, and players would not be permitted to use the tees T_6, T_2, and T_{18} between these greens. In addition, tee, T_9, for example, could be used to play to four or five greens on the opposite side of the course, and by so controlling the play from only several tees, the danger of players being struck by a stray tee shot by an amateur is substantially reduced.

Where it is desired to use a similar, but smaller golf course layout for amateur or weekend type golfers, the course could well be a par 3 course where the distances between tee and green are substantially less so the players, particularly weekend type golfers, who do not regularly hit a good tee shot will be able to drive the ball to an area quite close to the green. In this instance, the course may measure 200 yards across, and play to various holes of the par 3 short course will correspondingly be shorter than for the championship tournament course.

To provide for rapid play on the course, as well as to provide for the safety of players adjacent and on a green, each green is provided with a sign, like the sign **35** shown at FIG. **4**. This sign is advantageously located behind the green at a location adjacent the cartway **11**, as shown for the sign **35** for the green G of FIG. **1**. Sign **35** is mounted on a post **36** and faces toward the tee for the green.

As shown at FIG. **4**, the sign includes a central circular portion **37** which displays a numeral **38** indicative of the number of the green. Advantageously, the numeral has an amber color and is illuminated from inside the sign. Surrounding the central portion **37** of the sign are a pair of concentric rings **39** and **40**. Ring **39** is designated a green ring and can take the form of a green lens illuminated by lamp bulbs within the sign. The ring **40** is designated the red ring and takes the form of a red lens illuminated by lamp bulbs within the sign. The illumination of the lamp bulbs for the red and green rings is selectively controllable by suitable switches. When players are chipping toward or putting on the green, the lamps for the red ring are switched on to warn players on the tee that that green is in use and that they should not hit their tee shots. As soon as play on the green is completed, the lamps for red ring **40** are switched off and the lamps for green ring **39** are switched on, to indicate to the players on the tee that play on the green is completed and that they can safely hit their tee shots.

Signs **35** are indeed beneficial to the weekend type golfer in that the sign not only indicates when it is safe to play a tee shot toward a particular green, but also clearly indicates the location of the green.

During tournament play, the usual officials and spotters will be used. The official and spotters, communicating with each other by two-way radio, will indicate the position of the ball of each player. Then, each player proceeding to the green from the tee will know exactly where his ball is and can correspondingly enter the play area from the walkway **11** at a location closely adjacent his ball. Because a professional golfer will be able to drive the ball to a location closely adjacent the green, spotters will normally remain behind the green so they are in no danger of being struck by a ball hit from the tee. During tournament play, the signs will be operated by the officials. Of course, no spectators will be permitted on the play area.

To further speed up play on the course, the flags and pins for each green can be made retractable so there will be no need for anyone to hold the pin when a player attempts a long putt. Alternatively, the flags themselves can be eliminated and a retractable and extendable indicator, in the form of a long tube, can be used in place of the usual cup. This indicator tube will be extendable and retractable from a location adjacent the fringe of the green, and will of course be retracted whenever it is not needed.

The golf course and seating area may also include additional refinements, such as under the stand parking, which will be on a sector corresponding to the seats held by the spectator, as well as walkways within the stands to permit the spectators to travel around the course to selected greens where play of particular interest is occurring.

While a preferred embodiment of this invention has been shown and described in detail, it is to be understood that numerous changes and ramifications can be made without departing from the scope of this invention, as specified herein and as defined in the appended claims.

What is claimed is:

1. A golf course for tournament play requiring the use of conventional driving clubs, chipping clubs and putters, and including means for providing improved spectator viewing and increased speed of play comprising, in combination

a golf play area having a perimeter of predetermined configuration;

walkway means extending along and defining the perimeter of the play area for directing movement of golfers around the perimeter of the play area;

a multiplicity of golf putting greens including putting cups disposed along a substantial length of the perimeter in substantially uniformly spaced apart relation to each other and inside said walkway means;

a multiplicity of tees including tee area spaced from each other, adjacent said perimeter, inside said walkway means, and disposed respectively between said putting greens;

the tee for a particular putting green being generally across the play area from the particular putting green, whereby play on the course is generally from a tee at one side of the perimeter toward a green at the other side of the perimeter;

said play area within the region bounded by said tees and greens being completely devoid of additional tees and greens, having hazards, and forming a common play area for a substantial number of said multiplicity of tees and greens;

the distance from a tee to its corresponding green, for all said multiplicity of tees and greens, being such that all golfers playing said course will be capable of substantially always driving their first hit golf balls driven from said tees to areas on or adjacent their corresponding greens, whereby any golf ball shots subsequent to said first hit balls, which are necessary for said first hit balls to reach the putting cups, must take place only at locations on said greens, and areas adjacent the greens; and

said walkway means providing a way for golfers to travel from a tee to its corresponding green without crossing said play area, whereby, a substantial inner portion of the golf course may be maintained free of golfers.

2. A golf course according to claim 1 wherein

said multiplicity of golf putting greens includes 18 greens; and

said multiplicity of tees includes 18 tee areas.

3. A golf course according to claim 1 wherein

the perimeter of the golf course is circular; and

said multiplicity of tees and greens are arranged in a circular array along said perimeter; and

the tee for a particular putting green is generally diametrically across the play area from the particular putting green, for a substantial number of said multiplicity of tees and greens.

4. A compact golf course according to claim 1 wherein

means are disposed adjacent said perimeter for seating spectators and permitting seated spectators to view play on the golf course.

5. A compact golf course according to claim 4 wherein

said spectator seating means extends along a substantial portion of said walkway.

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