Feb. 11, 1969 L. C. WARD 3,427,030

MINIATURE GOLF COURSE

Filed April 4, 1966

FIG. 1

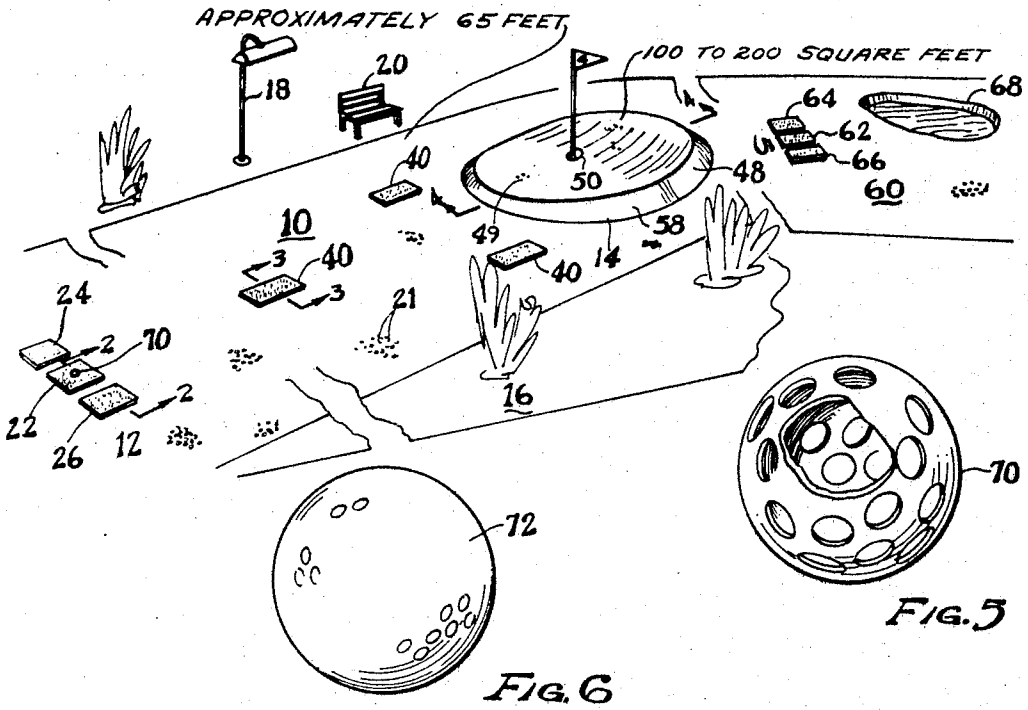


FIG. 5

FIG. 6

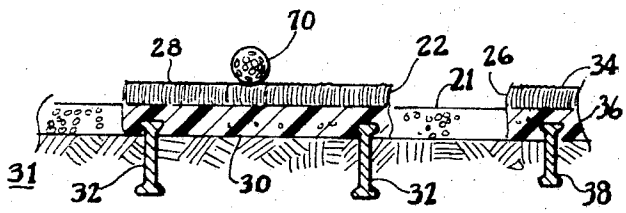


FIG. 2

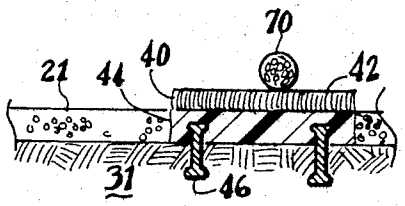


FIG. 3

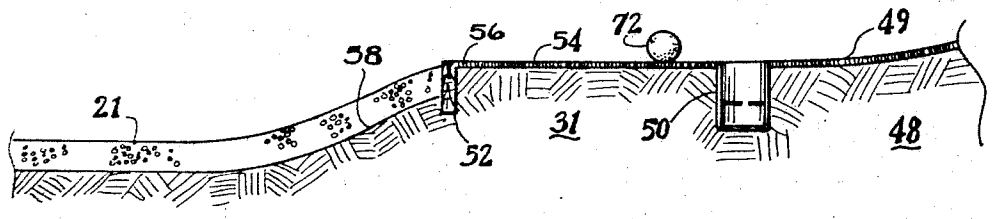


FIG. 4

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MINIATURE GOLF COURSE

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ABSTRACT OF THE DISCLOSURE

A miniature golf course incorporating two different types of balls, a solid plastic ball for putting and an open hollow ball for driving and chipping. The fairways are terminated by a tee and a green spaced apart by approximately 65 feet of gravel-covered expanse. Brush mats are affixed to the expanse for intermediate golf shots. The green is between 100 and 200 feet square and includes a hole defined in a continuous turf-like surface. "Rough" members defining triangular shapes are disclosed to define the fairway.

This invention relates generally to the sport of golf and more particularly to a novel game system which realistically simulates golf in all respects except that long driving distances are substantially eliminated.

Although the present invention finds particularly advantageous application in the field of simulating certain aspects of the traditional nine-hole golf course and although, in the cause of providing what is believed to be the most concise and useful description of the invention, most of the following discussion of examples of the invention is directed thereto, it is to be expressly understood that the advantages of the invention are equally well manifest in other golf-like games which are not particularly simulative of the traditional sport of golf.

The interest in golf has always been relatively high since its original invention in Scotland in 1100 A.D. In fact, the game was banned for a time because it was replacing archery as the national pastime, and practice of the latter was deemed essential to the national defense. However, in recent years, the interest in golf has grow continuously exponentially and at present is played by more Americans, for example, than is any other outdoor sport.

In spite of this intense interest, however, and in spite of the obvious physical, psychological and social benefits of playing golf, the difficulties of providing an adequate number of golf courses and of traveling to these courses by the participants is becoming more and more a deterrent to the further spread of interest in the game. In this regard suitable land which is adequately close to dense population areas is rapidly becoming either non-existent for such use or extremely expensive. In addition the labor and materials cost, and their amortization, of constructing and equipping such courses along with the cost of maintenance over the years, causes the playing of the game to become a relatively expensive form of recreation. Other factors adding to the inherent expense are that a relatively small number of persons can play during a 24-hour period because the density of players on the fairways must be kept very low for safety; and the play is limited to daylight hours because golf course are not readily adaptable to lighting for night playing. This latter consideration is a result of the fact that the play on golf courses would require the lighting of a large number of acres of land and in order to maintain track of a driven ball, the flight of which may be very high, the lighting of the fairways would have to extend to a considerable altitude above the fairway.

As a practical matter, however, irrespective of the cost involved, it is commonly exceedingly difficult to obtain

reservations to play golf during weekends and holidays. Accordingly the expenses of playing, the relatively crowded courses, and other difficulties involved cause many people to fail to develop interest in the game wherein, but for these disadvantages, they would develop and retain a very high interest.

Accordingly, it is an object of this invention to provide a golf game system which is not subject to these and other disadvantages and limitations of the prior art.

It is another object to provide such a system which while being highly relatively simulative of the traditional golf course and game, requires land area only of the order of a few percent of that required for a conventional golf course.

It is another object to provide such a system which requires and develops all the skills and energies incumbent with the conventional game of golf.

It is another object to provide such a game system which permits a much higher density of players per acre on the course and which may readily be illuminated for night playing.

It is another object to provide such a game system in which there is practically no danger of injury from personal impact by a high velocity golf ball.

It is another object to provide such a system which can readily be constructed of relatively low cost materials and which requires only nominal maintenance because no lawns are used as fairways and greens and no divots are removed during play.

Very briefly these and other objects are achieved in accordance with one example of the invention which includes a sequentially interconnected, 9-hole course systematically arranged over a plot of approximately one acre of land. The holes of the course each include an elongate driving fairway of approximately 65 feet in length and which, in this example, is covered with a layer of small-screen pea gravel or crushed rock whereby to minimize ball roll and preclude any requirement of lawn maintenance. At one end of the fairway is disposed a tee-off brush secured to the ground with its ball-supporting bristles or nap extending upwardly.

Along the length of the fairway are disposed a series of similar ball-supporting brush mats from which pitching or chipping shots to the green are made.

The green includes a low mound elevated up to approximately one foot above the level of the contiguous fairway surface. The top of the putting green mound is a more or less level surface of approximately 12 feet diameter or 100–200 sq. ft., and is covered by a carpet of artificial, short nap turf. A ball-receiving cup may be installed in a central portion of the top surface of the green.

This system also includes a pair of playing balls: the first being an impact absorptive, hollow plastic ball having the general appearance of a conventional goft ball which may be foraminated; and the second being either a substantially conventional golf ball or a solid plastic, lightweight ball for putting. The first ball may be designated a driving ball and is adapted for driving from the tee-off brush and for all chipping and pitching shots. When struck with a conventional driver club the driving ball achieves a flight down the fairway of from 50–80 feet. The driving ball is then placed upon the nearest ball-supporting brush mat from whence by chipping or pitching shots it is driven to the green with an appropriate iron club. Once on the green, the driving ball is replaced by the putting ball and then putted in.

The play from the brush mats on the fairway is substantially identical to that of the traditional chipping and pitching portions of golf; while that portion of the play from the tee-off mat is highly simulative of the driving

portion of the traditional game of golf. As viewed from the tee-off location, the artificial green of the present invention subtends an angle approximately equal to that of a green viewed along the fairway from the tee-off location of a traditional golf course. Furthermore, the effects of hooking or slicing are realistically reproduced by the impact-absorptive driving ball.

In addition, the play of the system of the present invention is totally safe as regards the dangers of a high velocity golf ball and is relatively very inexpensive because of the small amount of capital investment required and because many more persons per day per acre may participate in the game and thereby further distribute the cost of the system. In addition, course maintenance costs are very low and the entire course may be readily and inexpensively lighted for night play.

Further details of these and other novel features and their principles of operation as well as additional objects and advantages of the invention will become apparent and be best understood from a consideration of the following description taken in connection with the accompanying drawing which is presented by way of an illustrative example only and in which:

FIGURE 1 is a perspective, somewhat schematic overall view of a portion of a golf game system constructed in accordance with the principles of the present invention;

FIGURE 2 is a fragmentary vertical sectional view, taken along line 2—2 of FIGURE 1;

FIGURE 3 is a vertical sectional view taken along line 3—3 of FIGURE 1;

FIGURE 4 is a fragmentary sectional vertical view taken along line 4—4 of FIGURE 1;

FIGURE 5 is a sectionalized perspective view of one ball as employed herein; and

FIGURE 6 is a perspective view of another ball as employed herein.

With specific reference now to the figures in detail it is stressed that the particulars shown are by way of example and for purposes of illustrative discussion only and are presented in the cause of providing what is believed to be the most useful and readily understood description of the principles and conceptual aspects of the invention. In this regard no attempt is made to show structural details of the system and its apparatus in more detail than is necessary for a fundamental understanding of the invention, the description taken with the drawing making apparent to those skilled in the arts of game systems and equipment therefor how the several forms of the invention may be embodied in practice.

In FIGURE 1 a typical hole of an example of the game system of the invention is illustrated which includes an elongate fairway **10** having a tee-off portion **12** at one end thereof and a putting green **14** at the other end. A planter rough **16** is disposed along the right side of the fairway and a lighting stanchion **18** and gallery bench **20** are shown on the opposite side of the fairway **10**. The rough **16**, as on a traditional course, provides isolation between contiguous fairways and constitutes a penalizing hazard during play of the game. In this example, the rough **16** associated, as shown, with the fairway **10** is an elongated triangular planter in which are disposed both real and artificial planting and other articles to provide landscaping effects and impediments to a poorly driven ball. The rough can be mounded for these purposes and may, when desired, be lowered for forming water or other hazards appropriate to a depressed land area.

The fairway proper is, in this example, covered with a layer **21** of pea gravel or crushed rock, as shown more clearly in the subsequent figures. The driving fairway has a length of approximately 65 feet.

The tee-off portion **12** includes, see also FIGURE 2, a tee-off brush mat **22**, a right hand standing mat **24**, and a left hand standing mat **26**. The tee-off mat **22** comprises, in this example, a ball-supporting, turf-simulative bristle or plastic nap **28** set into a rigid plastic base member **30** which is in turn anchored to the ground **31** by a set of anchor members **32**. Similarly each of the standing mats **24**, **26** comprise a mat surface portion **34** which may be of textured rubber or the like which provides a secure and comfortable footing for the player and which is secured to a base member **36** anchored, in turn, to the ground **31** by a series of anchor members **38** as shown. The layer **21** of pea gravel preferably covers the base members of the mats but leaves the nap or tread exposed clearly thereabove. This relation affords means to assist in keeping the nap surfaces clear of loose gravel which may otherwise not only interfere with the player's stroke but create a hazard to other players due to a pebble being accidentally driven down the fairway.

Distributed along the fairway **10** is an array of brush mats **40**, see also FIGURE 3. Although the mats **40** are particularly adapted for pitch and chip shots they may be constructed and anchored in much the same manner as the tee-off mat **22**. Thusly, a typical one of the mats **40** may include a ball-supporting and turf simulating brush mat **42** embedded in a solid base member **44** which is anchored to the ground **31** by a set of anchor members **46**. Again it has been determined to be preferable to maintain the top of the nap **42** well above the level of the gravel layer **21** for the reasons pointed earlier hereinabove.

Referring to FIGURE 4, details of a portion of the putting green **14** of FIGURE 1 are illustrated in a cross-sectional manner. The various putting greens of the 9-hole course are preferably each designed to be at least somewhat different; however, it is presently considered preferable that they each constitute at least a slight mound **48** and have a mesa-like surface **49** thereover. The height of the mesa may vary from 4 to 12 inches and may be contoured as shown to require some degree of skill and practice in putting the ball to the ball-receiving cup **50**. The average diameter of the mesa-like surface **49** is, in this example, approximately 12 feet thusly providing an area of green of the order of 100 to 200 square feet.

The mound **48** of the green **14** is formed of earth **31** which is retained about the mesa periphery by a bending stock retaining board **52**. The top surface **49** of the green is formed by a segment of close-mowed, turf-simulative plastic carpet **54** which follows the contours of the supporting earth **31** and may, when desired, be further retained along its periphery by attachment to the retaining board **52** as by nail or other type fasteners **56** as shown. The peripheral slopes **58** of the mound **48** are shown covered by the layer **21** of pea gravel.

With further reference to FIGURE 1, the beginning of the next fairway **50**, which succeeds fairway **10** and is interconnected sequentially therewith, is illustrated as including a set of tee-off driving mats **62** and standing mats **64**, **66** and a depressed course hazard **68** which may be either a sand or a water trap.

Referring to FIGURE 5, an example of a driving ball **70** of the invention is illustrated. The ball is, in this example, thin-walled and fabricated of fairly high density plastic such as polyethylene or the like. The driving ball may be perforated, as shown, when desired for greater similarity to the driving effects of a high-density, high velocity golf ball on a traditional course. The dimensions and appearance of the driving ball **70** may otherwise be simulative of the traditional golf ball. The driving ball thusly constructed may readily be driven 50 to 80 feet depending upon the club used and the technique and skill of the player. Furthermore it has been found that hooking and slicing effects are realistically reproduced to scale with the impact-absorptive ball **70** with respect to the fairway **10** and adjoining areas such as the planter rough **16**.

In FIGURE 6 an example of the putting ball **72** is illustrated. In a presently preferred embodiment, the putting ball **72** is constructed of solid polyurethane plastic and in all external respects simulative of a traditional golf ball. The ball thusly fabricated is highly realistic in its putting

characteristics on the short plastic nap carpet **54** and yet is not dangerous with respect to personnel impact because its flight energy is significantly less than that of a traditional golf ball because of its lesser mass and because of the greater impact energy absorption characteristic of its solid plastic construction.

In the practice and operation of the game system of the invention, the player tees off from the brush mat **22** with a driving ball **70** and a 7 or 8 iron club. If the drive is not to the green **14**, the ball is moved to the nearest brush mat **40**, without penalty if on the fairway, and with a one stroke penalty if from the rough **16**. The ball **70** is then by pitch or chip shots moved to the green **14** whereupon it is replaced with the solid putting ball **72** to finish the hole. As stressed hereinabove, the operation of the game system as described is highly simulative of traditional golf and yet has the many enumerated advantages with respect thereto discussed above. In particular, it should be noted that courses embodying the system may readily include approximately one acre of total land area including that required for management and maintenance and the like. In one example, a complete such 9-hole course layout has been made utilizing a substantially level plot of land which is 175 feet square.

There have thus been disclosed and described a number of examples and features of a game system which achieves the objects and exhibits the advantages set forth hereinabove.

What is claimed is:

1. A miniature course incorporating a plurality of golf holes, each of said holes comprising: an elongated fairway area having first and second ends spaced apart a distance of substantially 65 feet; a driving tee affixed at the first end of said fairway area and having a turf-like surface; golf green means, including a ball-receiving cup and means defining a turf-like putting surface continuously around said cup, said golf green means being affixed at the second end of said fairway area; a plurality of turf-simulating brush mats spaced apart from each other and affixed to said fairway area between said driving tee and said golf green means; said fairway area having disposed thereon a gravel-like substance forming a continuous gravel-like fairway upper surface extending continuously from said driving tee to around said brush mats and to said golf green means; a first ball to be driven from said driving tee and said brush mats toward said golf green means, said first ball being hollow and of a relatively impact-energy absorptive material which permits said first ball to be driven only a relatively short distance as compared to the distance a regulation golf ball may be driven; and a second ball to be used in putting on said golf green means, said second ball being of uniformly solid material permitting said second ball to simulate the putting characteristics of a regulation golf ball.

2. A miniature golf course according to claim **1** wherein said turf-like surface continuously around said cup of said green means is of an area between 100 and 200 square feet.

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GEORGE J. MARLO, *Primary Examiner.*

U.S. Cl. X.R.

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