

April 21, 1970

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3,507,499

DEVICE FOR PRACTICING GOLF PUTTING

Filed Feb. 3, 1967

3 Sheets-Sheet 1

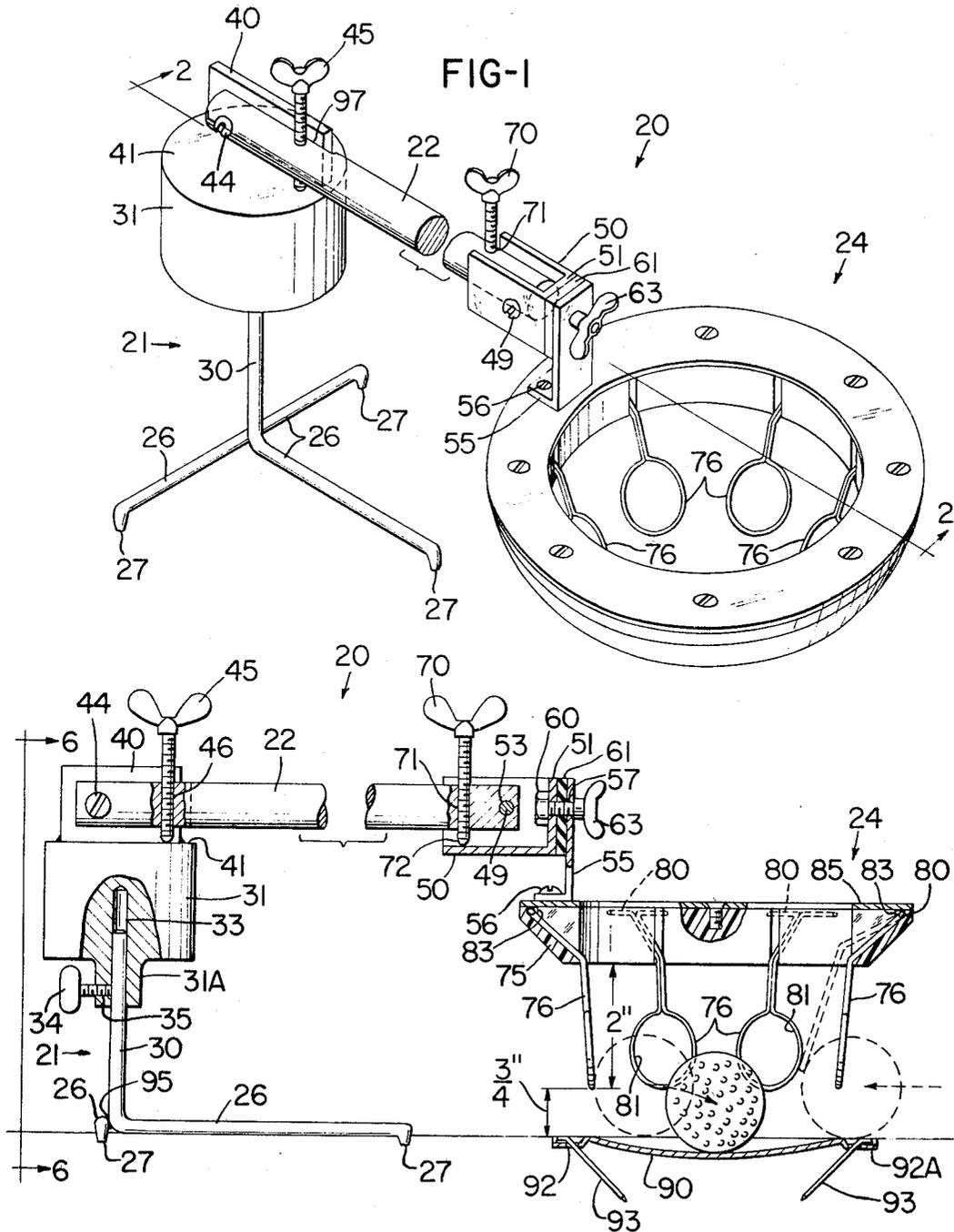


FIG-2

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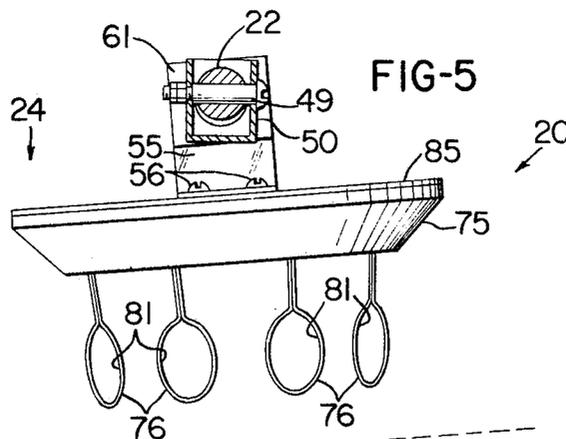
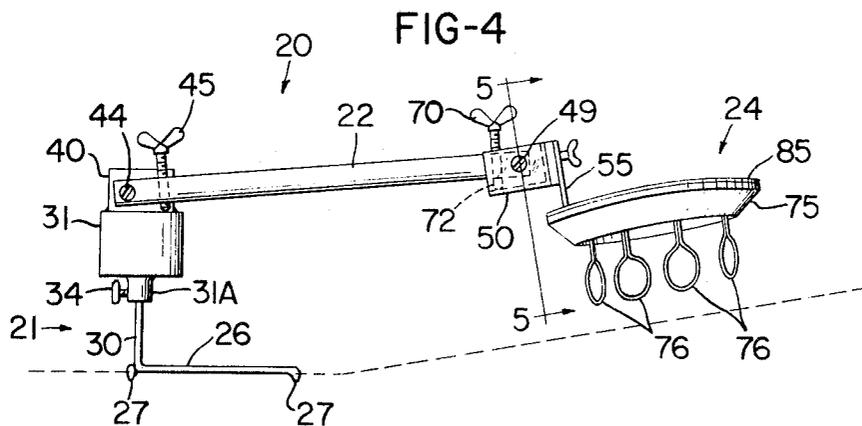
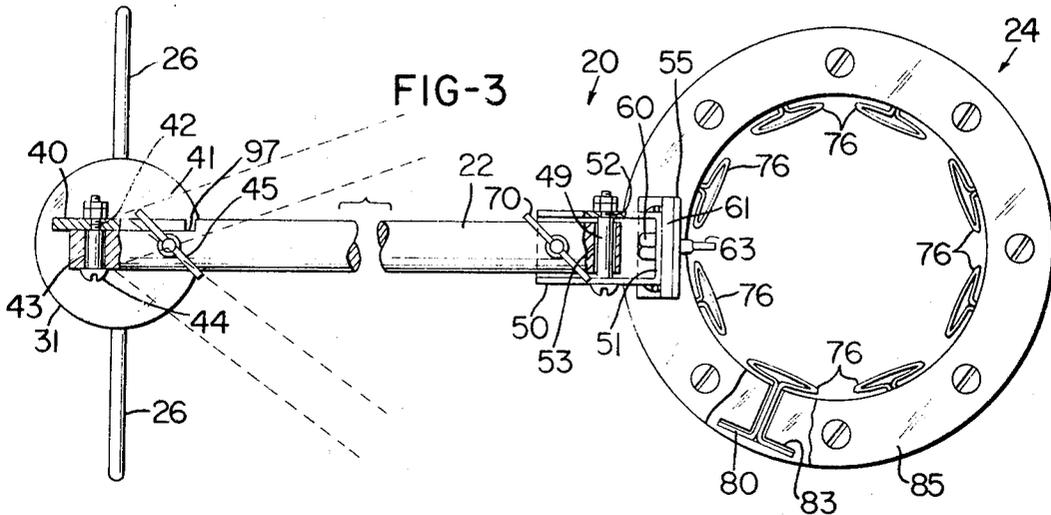
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DEVICE FOR PRACTICING GOLF PUTTING

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3 Sheets-Sheet 2



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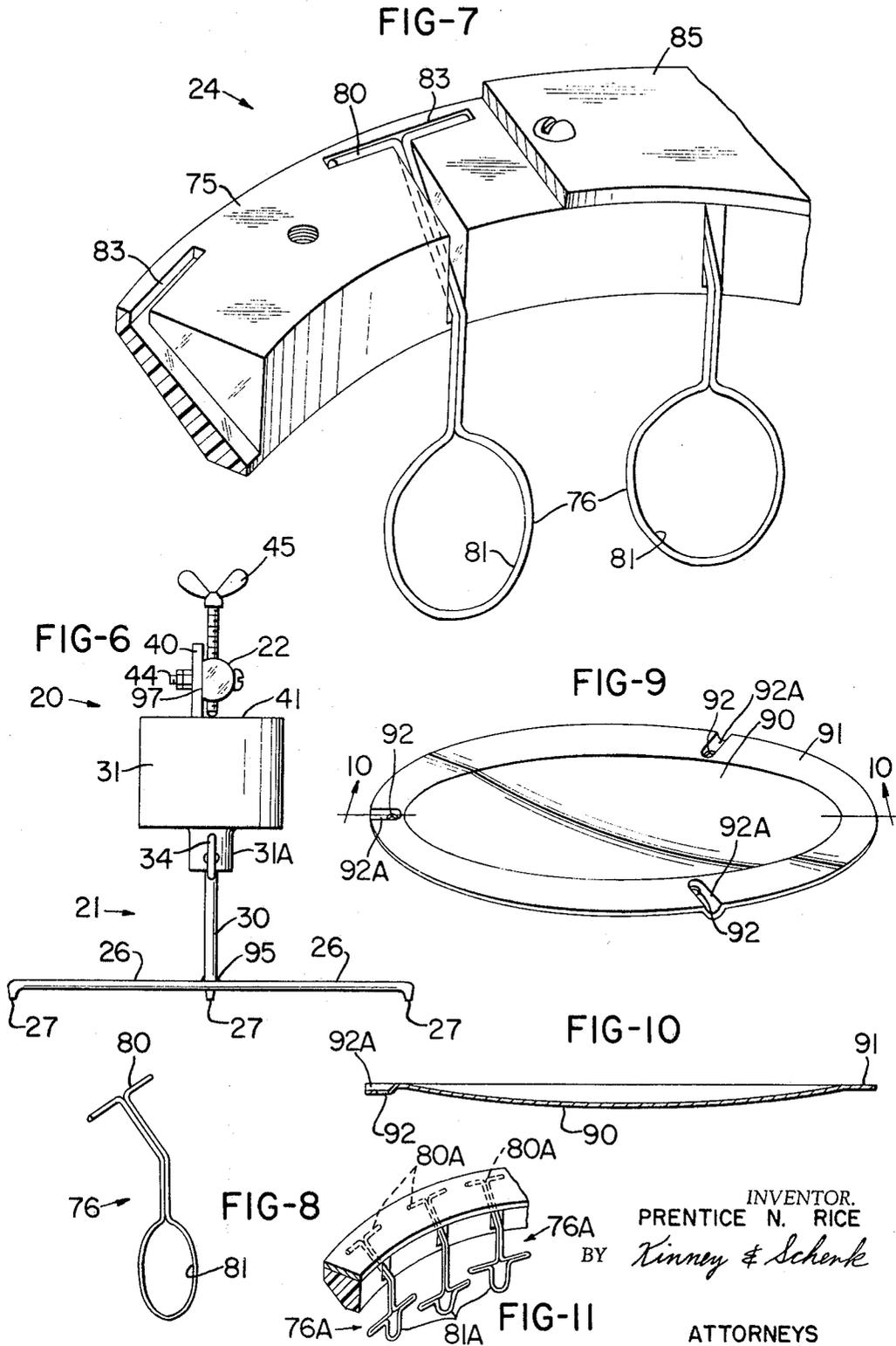
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DEVICE FOR PRACTICING GOLF PUTTING

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3 Sheets-Sheet 3



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3,507,499

DEVICE FOR PRACTICING GOLF PUTTING

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U.S. Cl. 273-178

2 Claims

ABSTRACT OF THE DISCLOSURE

A weighted platform is supported by a vertically extending member having at its lower end three spaced apart legs lying in a common plane. The legs are relatively thin to facilitate downward movement through a grassy surface to the solid ground therebeneath, which is penetrated by a downwardly extending projection at the end of each leg. An arm extends outward from the platform and supports at its outer end an angularly and vertically adjustable cage assembly into which golf balls may be putted and trapped. The inner end of the arm is pivotally connected to the platform and includes a threaded member which passes through the arm and bears against the top surface of the platform for vertically adjusting the arm.

This invention relates to devices for playing golf and more particularly to a device for practicing golf putting.

Many devices previously proposed for use in practicing golf putting are complicated in operation and generally not capable of being used effectively both indoors and outdoors. The previously proposed devices do not have both vertical and angular adjustment means to enable such previous devices when used on a typical grassy putting surface outdoors to be adjusted to closely conform to local contours, if any, in such putting surface as well as make allowance for various types and heights of grass likely to be encountered. Therefore, such present devices do not closely simulate the placing of a golf cup at a corresponding location either indoors or outdoors.

Accordingly, it is a feature of this invention to provide a device for practicing golf putting which is simple in operation and is of economical construction.

Another feature of this invention is to provide a device for practicing golf putting which closely simulates the conditions provided by the placement of a golf cup at a corresponding location and irrespective of whether such device is placed indoors or outdoors.

Another feature of this invention is to provide an improved device of the character mentioned which is capable of being used in comparatively thick grassy lawns yet which provides firm support for such device.

Another feature of this invention is to provide an improved device for practicing golf putting which has an improved suspended golf cage means which closely simulates a golf cup and which is suspended remotely from support means therefor.

Another feature of this invention is to provide a device for practicing golf putting of the character mentioned which has both vertical and angular adjustment means for adjusting the vertical and angular position of such golf cage means to enable such device to be especially versatile during use outdoors on all types of grassy surfaces including contoured surfaces representative of many difficult putting greens.

Therefore, it is an object of this invention to provide an improved device for practicing golf putting having one or more of the novel features of this invention as set forth above or hereinafter shown or described.

Other objects, uses, and advantages of this invention are apparent from a reading of this description which

proceeds with reference to the accompanying drawings forming a part thereof and wherein:

FIGURE 1 is a perspective view of the improved device of this invention.

FIGURE 2 is a sectional view on the line 2-2 of FIGURE 1 with parts in section and parts broken away.

FIGURE 3 is a top plan view of the device of FIGURE 1 with parts in section and parts broken away.

FIGURE 4 is a side elevation of the device of FIGURE 1 shown in use on a putting surface which has been greatly exaggerated as to contour to illustrate the versatile adjustment features of the improved device of this invention.

FIGURE 5 is a view on the line 5-5 of FIGURE 4.

FIGURE 6 is a view on the line 6-6 of FIGURE 2.

FIGURE 7 is a fragmentary perspective view illustrating a portion of the upper supporting ring means used to support gate means comprising golf ball cage means of this invention.

FIGURE 8 is a perspective view illustrating one of the plurality of gate means used in the golf ball cage means provided on the device of FIGURE 1.

FIGURE 9 is a perspective view illustrating shallow dish means which may be used with the device of FIGURE 1 during outdoor use.

FIGURE 10 is a sectional view on the line 10-10 of FIGURE 9.

FIGURE 11 is a fragmentary perspective view showing a portion of the cage means and particularly showing another embodiment of gate means.

While the various features of this invention are hereinafter illustrated and described as being particularly adaptable for providing an improved device for practicing golf putting, it is to be understood that the various features of this invention can be utilized singly or in any combination thereof to provide an improved device of this type for other uses as desired.

Therefore, this invention is not to be limited to only the embodiments illustrated in the drawings because the drawings are merely utilized to illustrate one of the wide variety of uses of this invention.

In the exemplary embodiment of this invention illustrated in FIGURES 1-10, a device for practicing golf putting and designated by the numeral 20 is shown. Device 20 is particularly adapted to be used for practicing golf putting both indoors and outdoors and has unique and versatile adjustment means enabling adjustment of such device to conform to the particular surface means on which the device is used.

Device 20 has support means designated generally by the numeral 21 and elongated arm means shown as an elongated arm 22 supported adjacent one of its end portions on the upper portion of support 21. Arm 22 has such one end portion supported on support 21 for pivoting movement and it is normally arranged to extend substantially horizontally.

Golf ball cage means shown as a cage assembly 24 is supported adjoining opposite end means or at the opposite end of arm 22. As will be appreciated from the drawings, the placing of cage assembly 24 at the opposite outer end of arm 22 enables such cage to be suspended remotely from support 21 and hence enables cage assembly 24 to be placed in position at any desired location or over any particular surface without undue interference from support means 21 therefor.

Device 20 has adjustment means for adjusting both the vertical position of the cage assembly 24 and the angular position of such cage assembly 24 whereby adjustment can be made so as to conform to all types of putting surface means. In particular, the provision of adjustment means for adjusting both vertical and angular

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positions enables device 20 to be used outdoors on a grassy surface, for example, which has a contoured profile in several directions, yet cage assembly 24 can be readily adjusted to compensate for the contours and more realistically simulate the action of a golf cup at a corresponding location.

Support means or support 21 comprises tripod leg means shown as three legs arranged in a crow's-foot pattern and each of such three legs is designated by the same numeral 26. Each leg 26 has a downwardly depending gripping means or spur-like projection designated by the numeral 27 and during outdoor use legs 26 are adapted to be placed on solid ground with each spur-like projection 27 firmly anchored in the ground.

Support means 21 also comprises vertical support column means shown as a vertical support column 30 which in this example of the invention is formed as an integral part of one of the legs 26. Support means 21 also has weighted platform means shown as a weighted platform 31 which is supported on vertical column 30 as will be presently described.

Platform 31 is of substantially circular cylindrical configuration and has vertically extending bore means shown as a bore 33 which is slightly larger in diameter than the outside diameter of vertical column 30 such that platform 31 may be supported on vertical column 30 by inserting such column in position through bore 33. As seen particularly in FIGURE 2 of the drawings, platform 31 also has a lower portion 31A which is of smaller diameter than main portion 31 and bore 33 also extends through portion 31A.

Fastening means shown as a set screw 34 is provided and threaded through lower portion 31A of platform 31 through a threaded opening at 35. Set screw 34 is adapted to extend completely through lower portion 31A into bore 33 and set screw 34 has an easily grasped outer end.

Thus, it is seen that to adjust platform 31 vertically on vertical column 30 it is necessary merely to loosen set screw 34 and slide platform 31 to any desired position. It will be appreciated that platform 31 and hence cage assembly 24 can be thus moved to an infinite number of positions as desired and to compensate for local putting surface conditions. The threaded set screw 34 cooperating with vertical column 30 sliding within bore 33 in weighted platform 31 comprises the vertical adjustment for device 20.

Elongated arm 22 is supported by platform 31 as will be presently described. Plate means shown as a vertical plate 40 is fixed to top planar surface 41 of weighted platform 31. Plate 40 is fixed in a suitable manner as by unit casting, welding, or the like.

Vertical plate 40 has an opening 42 extending therethrough which is arranged substantially perpendicular to vertical column 30 and arm 22 also has an opening designated by the numeral 43 adjacent its terminal end. Openings 42 and 43 are placed in aligned relation and pivot pin means shown as a pivot pin 44 is inserted therethrough. Pivot pin 44 supports one end portion of arm 22 for pivoting movement.

In this example of the invention, threaded fulcrum means shown as a fulcrum 45 is threaded through a portion of arm 22 adjacent pin 44. Fulcrum 45 has a wing arrangement provided therein to enable such fulcrum to be readily threaded in and out by hand through a threaded opening 46 provided in arm 22.

By moving threaded pivot 45 downwardly against planar surface 41 arm 22 is raised upwardly about pivot 44 at an upwardly inclined angle with respect to a horizontal plane. Conversely by threading pivot 45 away from surface 41 arm 22 is allowed to move downwardly with respect to such horizontal plane.

Cage assembly 24 is fastened at the opposite outer end portion of arm 22 so that it can be adjusted angularly about two axes as will be presently described. Structural channel means shown as a substantially U-shaped member 50 having a closed end 51 is fastened in

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position at the opposite end of arm 22. Member 50 is pivotally mounted about a pivot pin 49 which is inserted through aligned openings 52 and 53 in channel member 50 and arm 22 respectively so that its closed end is arranged outwardly of the terminal end of arm 22.

Cage assembly 24 is fixed to member 50 at the terminal end of arm 22 using a substantially L-shaped bracket designated by the numeral 55. Bracket 55 is suitably fixed at its lower end to cage assembly 24 by screw means shown as a pair of screws 56. The upper end portion of L-shaped bracket 55 has an opening 57 provided therein and a threaded bolt 60 extends outwardly through opening 57 and through a friction-type washer 61 which is sandwiched between the inside surface of L-shaped member 55 and the outside surface of closed end 51. Bolt 60 has its head portion suitably held against closed end 51 of member 50 as by welding, or the like.

Nut means shown as a cooperating threaded wing nut 63 is provided and threaded on the outer end of bolt 60 with such bolt installed in position as seen in FIGURE 2. Nut 63 compresses friction washer 61 firmly against end 51. Thus, it is seen that by turning wing nut 63 the position of cage assembly 24 is adjusted about an axis coinciding with the axis of bolt 60.

Means is also provided for pivoting cage assembly 24 about pivot pin 49 and such means comprises a winged bolt 70 which is threaded through arm 22 at 71. Bolt 70 has an end 72 which engages member 50 and pivots such member about pivot pin 49 to thereby adjust the angular position of cage assembly 24 about pivot pin 49.

Thus, it is seen that means is provided for moving the entire cage assembly 24 vertically as well as pivoting arm 22 on support 21 at an angle with respect to a horizontal plane while also separately pivoting cage assembly 24 at the opposite outer end of arm 22 as well as simultaneously rotating cage assembly 24 about the axis of bolt 60. This completely versatile adjustment means for raising and lowering cage assembly 24 as well as adjusting the angular position of such cage assembly about a plurality of axes enables the device of this invention to be used on any type of putting surface means, including contoured surface means, by enabling precise adjustment so as to closely approximate putting into a putting cup placed at the corresponding position on such putting surface means.

As seen particularly in the drawings, cage assembly 24 is a substantially cylindrical cage and has supporting ring means shown as supporting ring 75 defining the upper portion thereof. Ring 75 has a plurality of gate means shown as a plurality of eight identical gates each designated by the numeral 76 provided therein. Gates 76 are supported for free hinged movement toward the center of cage 24.

Each gate means or gate 76 is substantially T-shaped at its upper end portion and has a circular or angular outline at the terminal lower end thereof. Each gate 76 is preferably formed as a single structural unit by using a suitable wire or rod and bending such rod to define the T-shaped upper end 80 and a looped lower end 81. The T-shaped upper end 80 of each gate 76 is bent at an angle of preferably 42 degrees with respect to the horizontal and at a point approximately $1\frac{1}{16}$ inch from the T-shaped end for reasons as will be explained in detail subsequently.

Upper ring 75 has a plurality of eight identical substantially T-shaped slot means provided therein which correspond in size and arrangement to the T-shaped upper end 80 of each gate 76. Each T-shaped slot is designated by the numeral 83 and is adapted to support an associated gate 76 so that it moves in a pivoted substantially frictionless manner toward the center of cage assembly 24.

A ring plate designated by the numeral 85, in effect, serves as a connecting means to upper ring 75 and is provided for holding each gate 76 in position. Ring plate 85, in effect, serves as a dust cover preventing slots 83 and gates 76 from being exposed to dirt, and the like,

while preventing such gates from being inadvertently removed.

Of course, it will be appreciated that gravity alone is sufficient to hold such gates suspended in position and once a golf ball strikes the outside surface of each gate 76 it will be deflected inwardly and upwardly in a pivoted manner about its T-shaped end so that the particular golf ball is trapped within cage assembly 24. The weight of each gate 76 and the manner of supporting each gate in position offers minimum resistance once it is struck by a golf ball and thus very closely approximates the condition of a ball entering a normal golf cup.

Once a golf ball strikes against a gate 76 or against two adjoining gates 76 an inward deflection of one or both gates, as the case may be, occurs and as the ball travels within cage 24 the deflected gate means drops back into position by gravity to trap the golf ball within cage 24. The golf ball is easily retrieved by either reaching through the open top of cage 24 or by pivoting gate means 76 inwardly and reaching from the side.

As seen particularly in FIGURES 3, 7 and 8 of the drawings, the T-shaped upper end 80 is bent at a 42 degree angle with respect to a horizontal plane. Each substantially T-shaped slot 83 provided in upper ring 75 has its vertical portion inclined at an angle of approximately 45 degrees with respect to such horizontal plane.

This arrangement of each slot 83 and the manner of bending each gate 76 causes each gate 76 to tilt inwardly at a slight angle. Thus, as a golf ball strikes each gate a minimum of resistance is offered thereby and such gate is easily pivoted toward the center of cage assembly 24. The preferred dimensional arrangement is to provide the upper ends of gates 76 arranged on a six inch circle and with the lower ends preferably defining a circle four inches in diameter.

Each gate 76 preferably extends down below support ring 75 two inches and the lower terminal end of each gate 76 is positioned on an associated putting surface so that it is approximately $\frac{3}{4}$ of an inch thereabove.

Thus, it is seen that the cage assembly 24 and its gates 76 is of simple and economical construction and each gate 76 is made of a simple wire and suspended in position in a hinged manner in a simple manner. The action provided by each gate 76 provides minimum resistance to a golf ball striking thereagainst and thus closely simulates the action provided by a cup at a corresponding position on a golf putting surface.

Concave dish means shown as a dish 90 is provided for use with cage assembly 24 during outdoor use. Dish 90 has a peripheral flange 91 having a plurality of spaced apart holes 92 provided therein. Flange 91 also has a plurality of channel-like grooves in its top surface each designated by the numeral 92A and each extending from the outer periphery thereof to the entrance end of an associated hole 92. Each groove is approximately $\frac{1}{4}$ inch wide and $\frac{1}{8}$ inch deep.

Nail means shown as a plurality of nails each designated by the numeral 93 is provided for inserting through dish holes 92 at a 45 degree angle toward the center of dish 90 for firmly fastening dish 90 in position beneath the cage 24. The head portion of each nail 93 is preferably bent at an angle of about 45 degrees at a point roughly $\frac{1}{2}$ inch from its terminal end. When inserted through an associated hole 92 the head portion of each nail 93 is nested within groove 92A so that no part of nail 93 will protrude above flange 91. This arrangement assures that a golf ball may travel across flange 91 into dish 90 without interference. Thus, with the use of downwardly concave dish 90 during outdoor use a more realistic simulation of an actual putting cup is created. The preferred maximum depth of dish 90 is approximately $\frac{1}{4}$ of an inch.

In this example of the invention each leg 26 with its downwardly depending projection 27 is shown in the form of a crow's-foot and each leg 26 is comparatively

thin. Thus, it is a simple matter to insert each leg in tall grass, for example, so that it can be easily moved down through the grass and against solid ground so that the projections 27 can be embedded firmly in position. It will be noted that the legs 26 lie essentially in a common horizontal plane. However, it will be appreciated that such legs may be of a downwardly inclined triangular arrangement in a more conventional tripod fashion.

The construction of legs 26 is also quite simple and in this example one of the legs 26 has upwardly extending column 30 formed as an integral part thereof and is thus essentially L-shaped. In addition, the other two legs 26 are arranged on either side thereof in a symmetrical manner and are preferably comprised of a single bar which is suitably fixed in position as by welding, or the like, as shown at 95.

The versatile adjustment features provided by device 20 assure that a golf ball can be putted toward cage 24 without physical or visual interference by support means 21. Thus, arm 22 may be moved to either side of its solid line position to dotted line positions as illustrated in FIGURE 3, for example. The angular movement of arm 22 to either side of the solid line position illustrated may be an acute angle of any amount and is preferably 45 degrees or less.

Rod 22 in this example of the invention is substantially of circular cross section and has a flattened end adjacent pin 44. The flattened end is designated by the numeral 97 and is adapted to engage vertical plate 40 and, in effect, serves as a guide during vertical movement of arm 22. Surface 97 is comparatively smooth as is the cooperating surface of vertical plate 40 and the movement of arm 22 is thus provided in an unrestricted manner.

Another exemplary embodiment of gate means which may be used in cage assembly 24 is illustrated in FIGURE 11 of the drawings. Each gate means or gate of FIGURE 11 is designated by the numeral 76A and has a T-shaped upper end 80A. Each T-shaped upper end 80A is constructed and arranged so that it is carried within an associated slot 83 of ring 75 in a similar manner as described in connection with gate 76 and upper end 80A has the same angular arrangement as described for upper end 80.

Each gate 76A has a lower end portion that is approximately in the shape of an inverted T and designated by the numeral 81A. Gates 76A are made so that their lower end portions 81A are basically of two lengths one being slightly longer than the other.

Gates 76A are suspended in position so that each alternate gate has a longer lower end portion 81A, i.e. a long gate, then a short gate, another long gate, then another short gate, etc. about the entire periphery of ring 75. The terminal ends of horizontal bar portions of inverted T-shaped ends 81A located immediately adjacent each other are arranged one above the other so that each gate 76A may swing without interference, yet this arrangement assures that the space between adjoining gates is substantially eliminated. The construction of gates 76A thus provides a cage assembly that is more responsive to a golf ball striking at any position therearound.

Terms such as "upwardly," "downwardly," "top," "bottom," and the like, have been used in this disclosure of the invention for ease of description and merely to correspond to the arrangement of various components of this device as seen in the drawings and such terms should not be considered as limiting the scope of this invention in any way.

Thus, it is seen that an improved device for practicing golf putting has been provided which is completely versatile and capable of being used both indoors and outdoors and which can be adjusted both vertically and angularly about a plurality of axes to compensate for all types of putting surface conditions.

While the form of the invention now preferred has

een disclosed as required by statute, other forms may be used, all coming within the scope of the claimed subject matter which follows.

What is claimed is:

1. A device for practicing golf putting on playing surface means comprising, support means, elongated arm means having one end portion supported on said support means, golf ball cage means simulating the action of a golf cup and supported adjoining opposite end means of said elongated arm means, adjustment means for adjusting the vertical and a plurality of angular positions of said cage means to conform to all types of said playing surface means, said support means comprising vertical support column means having leg means at the terminal lower end thereof, said leg means comprising three relatively thin elongated spaced apart legs arranged substantially in a common plane extending transversely to said vertical support column and each having downwardly depending gripping means at its terminal outer end, whereby upon using said device on grassy putting surface means the thin configuration of each of said legs enables each to be readily pushed through said grassy putting surface means and placed against solid ground beneath the top surface hereof and firmly anchored using said gripping means without damage to said grassy putting surface means and yet provide a stable support for said device.

2. A device for practicing golf putting on playing surface means comprising, support means, elongated arm means having one end portion supported on said support means, golf ball cage means simulating the action of a golf cup and supported adjoining opposite end means of said elongated arm means, adjustment means for adjusting the vertical and a plurality of angular positions of

said cage means to conform to all types of said playing surface means, said support means comprising vertical support column means having leg means at the terminal lower end thereof, said support means comprising weighted platform means supported on said vertical column means and having substantially horizontal top surface means, said elongated arm means having said one end portion supported for pivoting movement on said weighted platform means, said adjustment means comprises vertical adjustment means for adjusting said weighted platform means vertically and hence said arm means and cage means vertically, fulcrum pin means supported on said platform means and adapted to be moved through said one end portion of said elongated member for pivoting movement of said elongated member thereabout, and adjustable fulcrum means arranged along said elongated member inwardly of said one end portion and adapted to be adjusted against said top surface means of said weighted platform means to thereby change the angular position of said elongated arm means with respect to said weighted platform means and hence provide fine adjustment for said cage means supported at said other end portion of said elongated member.

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