Sept. 11, 1934. W. H. STAYTON ET AL 1,973,513

PORTABLE PUTTING DEVICE

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Fig. 1.

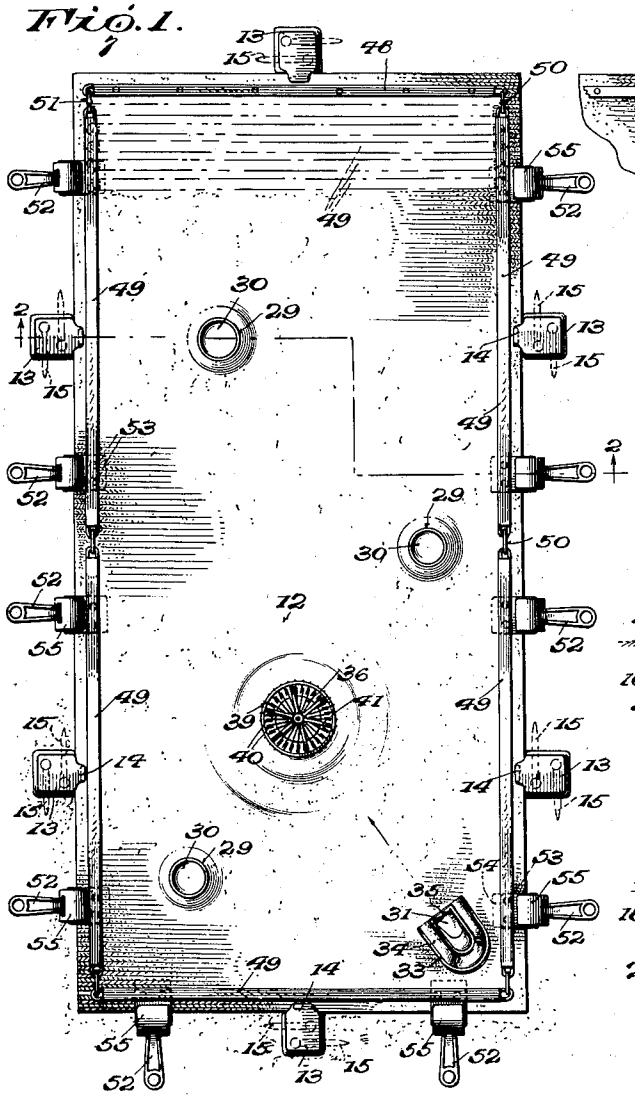


Fig. 3.

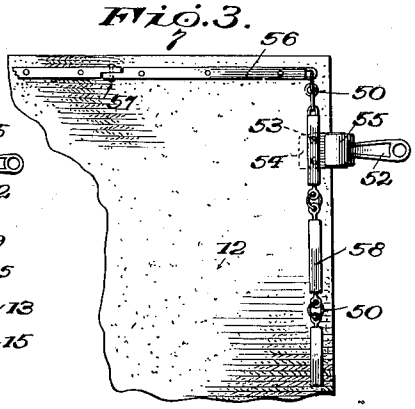


Fig. 4.

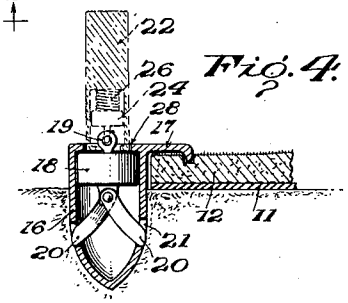


Fig. 5.

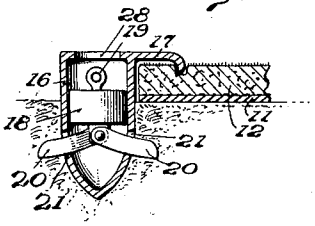


Fig. 2.

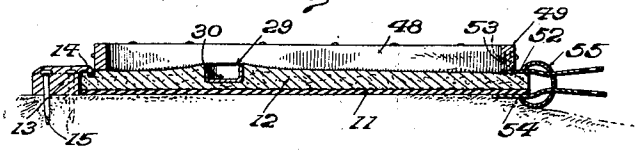
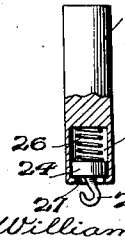


Fig. 6.



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Fig. 7.

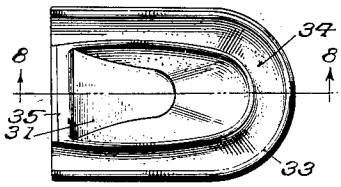


Fig. 8.

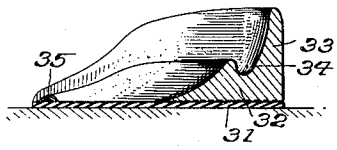


Fig. 9.

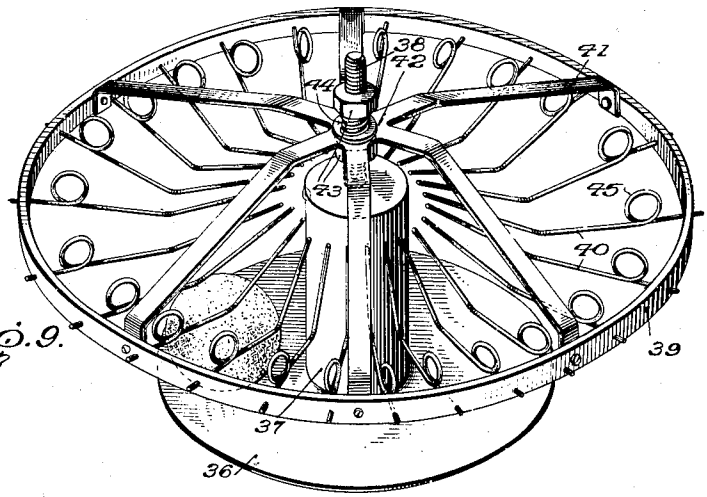
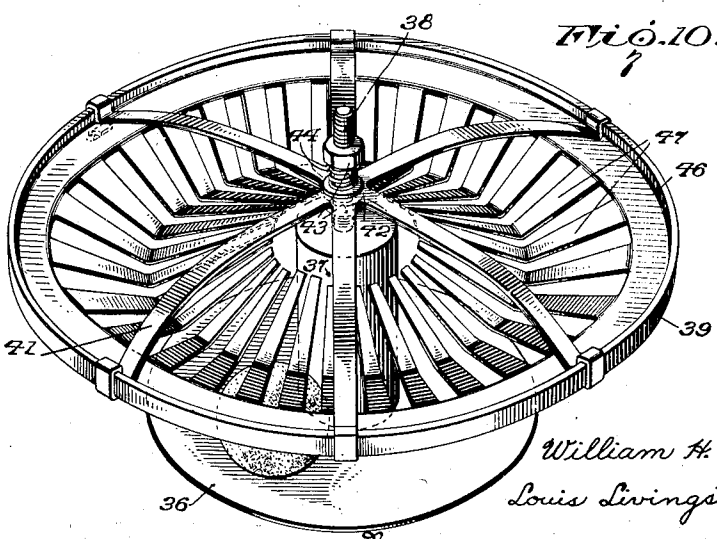


Fig. 10.



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PORTABLE PUTTING DEVICE

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Washington, D. C.

Application December 9, 1930, Serial No. 501,134

11 Claims. (Cl. 273—36)

This invention relates to the game of golf, and more particularly to portable putting devices.

Due to the widespread popularity of the game of golf, and to the natural desire of players of the game to improve the quality of their play, various devices have been produced and many artificial makeshifts resorted to in order to simulate as closely as possible actual playing conditions at a point remote from a regular golf course in order that practice and amusement might be obtained. Since putting is perhaps the most important single element of the game, as theoretically half of all the golf strokes should be taken on the putting green, it is natural that the majority of the practice devices have been adapted to this feature of the sport. Of the many devices heretofore suggested and employed for the purpose of allowing practice in putting, there may be mentioned hole simulating devices adapted to be placed upon the floor or an ordinary carpet, artificial putting boards of various kinds containing one or a plurality of holes, and miniature golf courses of the well known type comprising artificial putting surfaces and hazards laid out in alleged simulation of a regular golf course. Perhaps the closest and best approximation of putting has been provided by the placing of cups or holes in a natural grass lawn and then closely cutting the grass so as to approach the texture of the usual putting green.

All of the means hitherto employed, however, are subject to one or more disadvantages or objections. For instance, most of the hole simulating devices fail to accurately reproduce actual putting conditions since they usually require that the ball be putted up over some sort of elevated member before it can reach the cup, or because of the inclusion of some other detail not found in the actual game. Likewise, artificial putting boards and miniature golf courses fail to offer the same shots and to reproduce the same conditions which exist on an actual green, and are more or less limited in their field of use because of such factors as size and portability. Even the use of a natural grass lawn is often objected to because of the injury received by the grass due to the necessity for cutting holes therein for the cups and from the imprints of heels and general wear and tear due to continual walking thereon by the players. It is also evident that this most natural reproduction of putting is not portable and available for use under all circumstances, but is limited to an out-of-doors installation, the use of which is greatly modified by such factors as weather conditions, available space and the like.

It is therefore one of the objects of this invention to provide a portable putting device which closely simulates the characteristics of an actual green and hole and faithfully reproduces the conditions encountered in the regular game of golf, and which is adaptable for use indoors and out, in all seasons and climates, and under all other conditions which might be encountered and which usually render the use of artificial devices impracticable or impossible.

Another object is to provide a novel hole simulating device which presents a true reproduction of putting conditions around a hole in an actual putting green.

A further object is to provide a hole simulating device of novel construction such that a ball properly stroked thereinto will be retained therewithin, but an improperly stroked ball will either be prevented from entering or, if entering, will be automatically ejected therefrom.

Still another object is to provide a novel portable hole simulating device for use in practicing putting which may be placed in any desired position on the floor, ground or lawn without the necessity for cutting a hole therein or for otherwise injuring the surface played upon.

These and other objects will appear more fully from a consideration of the detailed description of the invention which follows. Although several embodiments of the invention have been described and illustrated in the accompanying drawings, it is to be expressly understood that these drawings are for the purposes of illustration only and are not to be construed as a limitation of the scope of the invention, reference being had for that purpose to the appended claims.

In the drawings;

Fig. 1 is a plan view of a portable putting green embodying hole simulating devices constructed in accordance with the present invention;

Fig. 2 is a sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is a fragmentary plan view showing another embodiment of the border or railing forming the means for preventing the balls from rolling off the green;

Fig. 4 is another form of the device for anchoring the green to the ground;

Fig. 5 is a view showing the anchoring device of Fig. 4 in expanded position;

Fig. 6 is a sectional view of a tool for expanding and extracting the anchoring device of Figs. 4 and 5;

Fig. 7 is a plan view of one form of hole simulating device shown in Fig. 1;

Fig. 8 is a sectional view taken on line 8—8 of Fig. 7;

Fig. 9 is a perspective view of another form of hole simulating device; and

Fig. 10 is a perspective view of still another form of hole simulating device.

It will be understood that the various parts shown in the drawings are not drawn to scale, but that certain ones have been enlarged beyond their true proportions to the others in order to more clearly disclose the details thereof.

Referring now to the drawings, wherein like reference characters indicate like parts throughout the several views, there is disclosed in Fig. 1 a portable putting green or mat with which the hole simulating devices of the present invention are particularly adapted for use. This mat is pliable and flexible so as to conform to the contour of the surface upon which it is laid, and includes border or railing means for preventing the balls from rolling off the mat, and means for attaching the border to the mat and the mat to the surface on which it is laid. This putting green or mat and its associated novel features form the subject matter of our co-pending application Serial No. 650,338, filed January 5, 1933.

The putting green or mat itself, as best shown in Fig. 2, comprises a flexible base 11 of any suitable, substantially non-hygroscopic material, such as water-proofed fabric or rubberoid, and a resilient or pliable putting surface 12 which is ribbed, fibered or roughened so as to closely simulate the texture and surface friction of an actual grass putting green. One form of suitable putting surface may be made of a woven or knitted fibrous material, such as binder twine, and may be secured to the base in any desired manner, as by means of rubber cement or the like. Surface 12 is also preferably colored green, thereby further increasing its resemblance to an actual putting green. The putting green or mat may be made of any desired size or shape, that shown being only in the nature of an illustration. By constructing the mat of flexible material, it is evident that it will conform to the shape of whatever surface it is laid upon, thus making it possible to vary the contour of the putting surface at will either by changing its location, or by placing objects under the mat. Furthermore, being of a non-hygroscopic material it is not easily damaged by the weather, nor rendered unfit for use by being rained upon. Surface 12 is made of sufficiently rugged material to resist the wear occasioned by continual walking thereon, thereby also protecting from similar injury the surface upon which it is placed.

Although a mat of the nature above described would normally lie flat upon or conform to the contour of the surface upon which it is laid, suitable means may be provided, if desired, for anchoring the mat to said surface. As shown, such an anchor might comprise a substantially rectangular block 13 of wood or other suitable material, having a toothed arm 14 projecting laterally from its upper surface and adapted to bite into the resilient surface 12 of the putting green. A pair of oppositely directed diagonal spikes 15 may then be driven through holes in the block into the ground or other surface to which the mat is to be secured.

Another form of anchoring means which may be used is shown in Figs. 4, 5 and 6. In this embodiment, a substantially bullet-shaped body portion 16, adapted to be driven into the ground, is provided with a toothed arm 17 projecting laterally from the flat base of body 16 and adapted to bite into the surface of the putting mat in a manner similar to that described for arm 14. The interior of body portion 16 is hollow, and contains, slidably housed therein, a plunger 18 having an eye 19 secured to its upper surface, and a pair of pointed arms or blades 20 pivotally secured to its bottom. The outer ends of arms 20 are normally housed within openings 21 formed in body portion 16 adjacent its lower end, and are adapted to be forced outwardly through said openings when plunger 18 is forced downwardly within the bore of body portion 16, thereby penetrating the earth or other substance upon which the putting green is laid, and securely anchoring the latter thereto. A novel anchor tool is also provided comprising a substantially cylindrical body portion 22 in the lower end of which is formed a recess 23 within which is slidably housed a piston-like member 24 having formed integrally therewith and extending downwardly therefrom a hook member 25. A coil spring 26 is provided between piston member 24 and the base of recess 23 to normally force said piston member downward so that hook 25 projects beyond the bottom of body 22 through an opening 27 which is slightly smaller than piston member 24 so as to prevent the latter from moving out of recess 23, and yet sufficiently large to allow the passage therethrough of hook 25.

In using the anchor tool, to expand an anchor from the position shown in Fig. 4, hook 25 is first passed through ring 19 of plunger 18, and then body portion 22 of the anchor tool forced downwardly through an opening 28 formed in the top of body portion 16 of the anchor until it rests upon the top of plunger 18, at which time spring 26 has been compressed to allow upward movement of piston member 24, hook 25 and ring 19 within recess 23. The anchor may then be expanded by hammering or otherwise exerting pressure upon the upper end of the anchor tool, arms 20 of the anchor being forced outwardly through openings 21. To extract the anchor when in the position shown in Fig. 5, hook 25 is passed through ring 19 and arms 20 are withdrawn into body 16 of the anchor by pulling upwardly upon the anchor tool. Opening 28 is sufficiently smaller than plunger 18 to prevent the latter being pulled out of body portion 16.

With portable putting devices, and especially those which are adapted for use upon the lawn or the floor of a house, it is especially desirable that the hole simulating devices used be such as not to necessitate any openings being cut in the permanent surface upon which the putting is done. When a portable putting mat of the type just described is used, a simple form of hole or cup of this character may be constructed as shown in Fig. 2, wherein putting surface 12 is given a slight gradual increase in thickness adjacent the location of the hole, and a cylindrical recess 29 is formed in surface 12, but not extending to or through base 11. If desired, a suitable cup 30 may be placed within recess 29.

Although a hole formed in the manner just described may be satisfactory for some purposes, it is necessarily fixed in location and does not therefore enable the maximum possibilities in the nature of diversified shots. Moreover, it is often desirable to practice putting upon the floor or ground without the use of a mat of this character, in which event an independent portable hole simulating device is required. Novel means have therefore been provided by the present in-

vention for simulating golf cups or holes, which means are portable about the surface being played upon, require no holes to be cut therein, present a true reproduction of putting conditions around a hole, and are so constructed that a ball improperly stroked, even though entering the hole simulating device, will be ejected therefrom automatically.

One embodiment of such a device is shown in Figs. 7 and 8, wherein a substantially U-shaped base plate 31 is adapted to rest upon the putting surface and is provided with novel means for retaining within the device a ball which is properly stroked, and for automatically ejecting therefrom a ball which is improperly stroked. In the form shown, a moulded or cast body 32 is cemented or otherwise suitable secured to base plate 31, said body comprising a boundary wall 33 rising from the side and rear periphery of base plate 31, in which wall, intermediate the bottom and top thereof, there is formed a substantially U-shaped groove 34 which is inclined downwardly from the rear to the open forward portion of the hole simulating device. A slightly upwardly projecting lip 35 is also secured to base plate 31 across the open end of the U so as to prevent a ball properly stroked into the device from rolling out again. Thus a ball which is properly stroked into the hole simulating device, that is, a ball which is so stroked that on a regular putting green it would fall into and remain within the cup, will pass over the lip 35 onto the portion of base plate 31 which is bounded by body portion 32. Lip 35 will prevent the ball from rolling backward out of the hole simulating device, and, if the ball is properly stroked, it will not have sufficient momentum to run up on rear wall 33 far enough to enter groove 34. Should, however, the ball be stroked too hard, it will rise up on wall 33, enter groove 34, and be automatically returned or ejected from the hole simulating device by said groove.

Another embodiment of hole simulating device which may be placed upon the putting surface without requiring the cutting of a hole therein is shown in Fig. 9. In this form, a thin base plate 36 is adapted to rest upon the putting surface and to represent the hole, the diameter of plate 36 being made preferably equal to that of the regular golf cup. Secured to the center of base plate 36 in any suitable manner, and extending vertically upward therefrom, is a cylindrical center post 37 having at its upper end a threaded spindle 38 which forms the support for the novel ball engaging means which are held thereby above the base plate 36 in position to yieldingly engage the top of a ball entering upon the base plate. As shown, the ball engaging means comprise a circular frame 39 substantially larger in diameter than base plate 36, a plurality of resilient wire members 40 secured at their outer ends in any suitable manner to frame 39 and extending radially inwardly therefrom, and a supporting spider comprising a plurality of radial arms 41 secured at their outer extremities to frame 39 as by rivets, and joining to form a center collar 42 which is adapted to be placed over spindle 38 and secured thereto in any suitable manner, as by a pair of adjusting nuts 43. The height of the supporting spider, and hence the height of the entire ball engaging means, above base plate 36 may be adjusted by the lower of nuts 43. If desired, a spring 44 may be interposed between the upper nut 43 and the top of collar 42 so as to yieldingly permit rotation of the ball engaging assembly about spindle 38 for a purpose later to be described, and also to permit vertical movement of said assembly with respect to base plate 36 so that the balls received therewithin may be easily removed from the device.

Each of wires 40 is formed with a suitable loop 45 adjacent its point of connection with circular frame 39 so as to give added resiliency to said wire, and each of the wires is given a slight V-shape, the diameter of the circle passing through the points of the V's being substantially equal to that of the regular golf cup. In using this hole simulating device, the height of the ball engaging means should first be so adjusted that the distance between the surface of base plate 36 and a plane passing through the bottom points of the V's of wires 40 is slightly less than the diameter of the golf ball being used. The width and spacing of arms 41 of the spider are preferably chosen so that a golf ball cannot fall between any two adjacent arms, thereby protecting wires 40 from any accidental displacement or injury which might be caused by dropping a golf ball on top of the device.

A modification of the device just described is shown in Fig. 10, wherein resilient wires 40 are replaced by a thin, stamped-out plate of any suitable resilient material comprising a rim 46 which is secured in any suitable manner to circular frame 39 and a plurality of radially inwardly extending leaves or arms 47 which are given the same V-shape as wires 40, and which function in a similar manner.

In using the devices shown in Figs. 9 and 10, the ball engaging assembly of frame 39 and its inwardly extending resilient members 40 or 47, is first adjusted to the height of the ball to be used by means of nuts 43 as previously described. The ball is then putted in the usual manner, being aimed at base plate 36 as the representation of the hole. If the ball is properly stroked, that is, is so putted that on a regular golf green it would fall in and remain within the hole, it will pass onto base plate 36 and under resilient members 40 or 47, moving the latter yieldingly upward a sufficient distance to allow passage of the ball into the space circumscribed by the bottom ends of the V's of the resilient members. Since the ball has been properly stroked, it will be retained within this space and prevented from rolling out by the yielding resistance of members 40 or 47. If, however, the ball is stroked too hard, that is, is so putted that on a regular green the ball would roll over the cup without dropping in, it will hit center post 37 and rebound with sufficient force to overcome the yielding resistance of members 40 or 47, and be ejected from the hole simulating device. Also, should the ball just skirt the edge of disk 36, it will either be retained within the hole simulating device or be allowed to roll on by, dependent upon the same factors which cause a ball on a regular green to either fall in the cup or hang on the edge. For example, a ball which would fall into a regular hole, will be caught and held by resilient members 40 or 47, whereas a ball which would skirt the edge or hang on the lip of a regular cup, will be allowed to do so with respect to the simulating device, also, by virtue of the yielding rotatable mounting of the ball engaging means upon spindle 38.

In using the putting green or mat shown in Fig. 1, it is desirable that suitable means be provided to prevent the balls from rolling off the green and thereby causing annoyance to the

players, and possible injury to the surface upon which the mat is laid. Novel border or railing means have therefore been provided for the mat which not only prevent this undesirable escape of the balls from the green, but also are so constructed as to provide a core about which the mat may be rolled up for ready portability. As shown, the border means may comprise a plurality of jointed sections of wood or other suitable material which may be secured to the edges of the mat in any desired manner, and also be foldable along one of said edges so as to form a core about which the mat may be rolled up.

In Fig. 1, the border comprises a fixed section 48 which may be riveted or otherwise securely fastened to one edge of the mat, and a plurality of detachable sections 49 which are connected to one another and to fixed section 48 by suitable universal couplings or joints 50, the coupling at one of the ends of fixed section 48 embodying a snap link 51 which may be readily disengaged so as to disconnect fixed section 48 and its adjacent detachable section 49. If desired, suitable means may also be provided for temporarily attaching the movable links 49 to the edges of the mat, the form of attaching means shown in Figs. 1 and 2 comprising a spring clip having one arm 52 secured to the underside of section 49 as by nails or screws 53, the other arm 54 of the clip being slightly longer than arm 52 and adapted to engage the underside of base 11 of the mat. The resilient grip of arms 52 and 54 is provided by a split spring steel cylinder 55 through which said arms extend in both directions.

If it be desired that the border means be more flexible than the form just described, so as to conform accurately to the contour of the mat when the latter is laid upon an uneven surface, a suitable jointed border may be provided as shown in Fig. 3, wherein the fixed section of the border comprises a plurality of short sections 56, each of which is separately attached to the mat by rivets, and pivotally connected to its adjacent section by means of an overlapping joint and horizontal pin connection indicated at 57. The detachable sections also comprise short lengths 58 which are connected by any suitable means such as links 50, and which are detachably connected to the mat by spring clips similar to those previously described.

In spreading out the mat for use, detachable sections 49 or 58 of the border means are placed along the edges of the mat and secured thereto, if necessary, by the spring clips described. When it is desired to roll up the mat, so as to carry it indoors or from one place to another for use, the spring clips are detached from the mat, snap link 51 is disconnected, and the border is folded parallel to the fixed section thereof, as indicated in the dotted lines in Fig. 1, so as to form a core about which the mat may be readily rolled. The rigidity which this foldable border provides to the rolled up mat also makes it easier to transfer the latter, especially in mats of considerable size.

There is thus provided by the present invention a new and useful device for affording practice and amusement in the putting feature of the game of golf. The device disclosed comprises novel means for simulating a putting hole accurately reproducing the putting conditions presented by the hole or cup in an actual putting green, which device is readily movable about the putting surface, and is adapted for use either indoors or out, and on any putting surface, natural or artificial. It not only receives and retains within its confines all balls so stroked that if putted on an actual green they would fall into the hole, but also rejects or ejects all improperly putted balls which would not be holed out in actual play. The novel device provided is entirely self-contained and may be used on any putting surface whatsoever without the necessity for cutting a hole therein or otherwise injuring the same. It is simple in structure, economical to manufacture, and fulfills its purpose in a most satisfactory manner.

It will be obvious that the invention is not limited to the forms shown in the drawings, but is capable of a variety of mechanical embodiments. For example, any suitable type of resilient ball engaging members may be substituted for the specific forms shown and described, and other types of mounting for the supporting frame may be employed in place of that disclosed. Also, although the hole simulating devices of the present invention have been described and shown in connection with a portable putting green of certain construction, it is to be distinctly understood that this is but one condition of usage and that these devices are adapted for use with any surface, natural or artificial, upon which putting may be practiced. Various other changes, which will now appear to those skilled in the art, may be made in the form, details of construction and arrangement of the parts without departing from the spirit of the invention, and reference is therefore to be had to the appended claims for a definition of the limits of the invention.

What is claimed is:

1. A portable hole simulating device adapted to be disposed entirely above a putting surface comprising a base plate adapted to rest upon said putting surface and to represent the hole, a frame supported above said base plate, and a plurality of members extending inwardly from the periphery of said frame in substantially horizontal positions for engaging the top of a golf ball entering upon said plate.

2. A portable hole simulating device adapted to be disposed entirely above a putting surface comprising a base plate adapted to rest upon said putting surface and to represent the hole, a frame supported above said base plate, and a plurality of resilient members extending inwardly from the periphery of said frame in substantially horizontal positions for yieldingly engaging the top of a golf ball entering upon said plate.

3. A portable hole simulating device adapted to be disposed entirely above a putting surface comprising a base plate adapted to rest upon said putting surface and to represent the hole, an upwardly extending central post fixed to the center of said plate, means extending in a substantially horizontal plane over said base plate for engaging the top of a golf ball entering upon said plate, and means for supporting said last named means upon said post for both vertical and rotary movement relative thereto.

4. A portable hole simulating device adapted to be disposed entirely above a putting surface comprising a base plate adapted to rest upon said putting surface and to represent the hole, an upwardly extending central post fixed to the center of said plate, resilient means extending in a substantially horizontal plane over said base plate for yieldingly engaging the top of a golf ball entering upon said plate, and means for supporting said resilient means upon said post for rotary movement relative thereto.

5. A portable hole simulating device adapted to be disposed entirely above a putting surface comprising a base plate adapted to rest upon said putting surface and to represent the hole, an upwardly extending central post fixed to the center of said plate, a frame supported by said post, and a plurality of members extending inwardly from the periphery of said frame and substantially parallel to the plane of said plate for engaging the top of a golf ball entering upon said plate.

6. A portable hole simulating device adapted to be disposed entirely above a putting surface comprising a base plate adapted to rest upon said putting surface and to represent the hole, an upwardly extending central post fixed to the center of said plate, a frame supported by said post, and resilient members extending inwardly from the periphery of said frame and substantially parallel to the plane of said plate for yieldingly engaging the top of a golf ball entering upon said plate.

7. A portable hole simulating device adapted to be disposed entirely above a putting surface comprising a base plate adapted to rest upon said putting surface and to represent the hole, an upwardly extending central post fixed to the center of said plate, a frame, resilient members extending inwardly from the periphery of said frame, and means secured to said post for supporting said frame and resilient members above and in a plane substantially parallel to said base plate so as to yieldingly engage the top of a golf ball entering on said plate, said last named means forming a protective covering over said resilient members.

8. A portable hole simulating device adapted to be disposed entirely above a putting surface comprising a base plate adapted to rest upon said putting surface and to represent the hole, and a plurality of substantially horizontal resilient members supported above and in radially disposed relation with respect to said base plate for engaging the top of a golf ball entering upon said plate.

9. A portable hole simulating device adapted to be disposed entirely above a putting surface comprising a base plate adapted to rest upon said putting surface and to represent the hole, a plurality of substantially horizontal members radially disposed above said base plate for engaging the top of a golf ball entering upon said plate, and means for supporting said members for both vertical and rotary movement relative to said plate.

10. A portable hole simulating device adapted to be disposed entirely above a putting surface comprising a base plate adapted to rest upon said putting surface and of a size substantially equal to that of a regular putting hole, a frame supported above said base plate and having an area substantially greater than that of said plate, and a plurality of slightly V-shaped members secured at their outer ends to said frame and extending inwardly therefrom in substantially horizontal positions above said base plate for engaging the top of a golf ball entering upon said plate, the locus of the vertices of said members being a circle of substantially the same diameter as said base plate and with its plane substantially parallel to the plane of the latter.

11. A portable hole simulating device adapted to be disposed entirely above a putting surface comprising a base plate adapted to rest upon said putting surface and of a size substantially equal to that of a regular putting hole, an upwardly extending central post fixed to the center of said plate, a frame supported by said post above said base plate and having an area substantially greater than that of said base plate, and a plurality of slightly V-shaped resilient members secured at their outer ends to said frame and extending inwardly therefrom in substantially horizontal positions above and radially disposed with respect to said base plate for engaging the top of a golf ball entering upon said plate, the locus of the vertices of said members being a circle of substantially the same diameter as said base plate and with its plane substantially parallel to the plane of the latter.

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