There is provided a golf putting practice device comprising a green, a hole cut into the green and a guide passage from which a ball entered (holed) into the hole rolls out, in which the guide passage is provided with a detection unit for detecting that the ball is holed; the green is provided with a notifying unit for notifying the outside that the ball is holed, based on the detection by the detection unit; the notifying unit is a sound; the notifying unit is a voice of a famous pro golfer; the notifying unit appeals to a sense of one’s sight; and the golf putting practice device further comprises: a counter function for counting a number of holed balls; and a slope angle changing function for changing a slope angle of the green; in which the notifying unit, a position of the hole, and a slope angle of the green can be changed by remote control, whereby, when the ball holes into the cup, there is a reaction of the notification that the ball is holed, and encouragement and support toward a practitioner, to enable practice to continue for a long time without becoming boring with the result of improvement in one’s skill in putting.
GOLF PUTTING PRACTICE DEVICE

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a golf putting practice device.

[0003] 2. Description of the Related Art

[0004] There have been conventionally known various kinds of golf putting practice devices. Typically, the golf putting practice device has a hole at an end of an elongated mat made of artificial turf, to which an upward slope is applied, and a ball is hit from another end of the mat to hole it into the hole. When the hit ball enters the hole (drops in the cup or holes), the ball travels through a return passage to return to a person who hit the ball (travels toward a practitioner). In a case where the ball does not enter the hole, it travels on the mat to return to the person practicing.

[0005] In the conventional golf putting practice device, even when the ball goes into the cup, there is no reaction such as a notification that the ball has been holed and encouragement or support toward the practitioner. Therefore, the conventional golf putting practice device is not encouraging, and practice is boring, with the result that the practitioner does not continue the practice for a long time. Accordingly, it is not easy to improve one's skill in putting.

SUMMARY OF THE INVENTION

[0006] An object of the present invention is to provide a golf putting practice device, in which, when a ball goes into a cup, a voice of encouragement or a sound of praise or the like occurs, to thereby make the practice encouraging so that putting can be practiced patiently.

[0007] According to a first aspect of the present invention, there is provided a golf putting practice device comprising a green 1, a hole 2 cut into the green 1 and a guide passage 3 from which a ball that has entered (has been dropped in the cup) into the hole rolls out, in which the guide passage 3 is provided with detecting means 4 for detecting that the ball has been holed; and in which the green 1 is provided with notifying means 5 for notifying the outside that the ball has been holed, based on the detection by the detecting means 4.

[0008] According to a second aspect of the present invention, in the first aspect of the invention, there is provided a golf putting practice device in which the notifying means 5 is a sound.

[0009] According to a third aspect of the present invention, in the first or second aspect of the invention, there is provided a golf putting practice device in which the notifying means 5 is a voice of a famous pro golfer.

[0010] According to a fourth aspect of the present invention, in the first aspect of the present invention, there is provided a golf putting practice device in which the notifying means 5 appeals to a sense of one's sight.

[0011] According to a fifth aspect of the present invention, in any one of the first to fourth aspects of the invention, there is provided a golf putting practice device further comprising a counter function 6 for counting a number of holed balls.

[0012] According to a sixth aspect of the present invention, in any one of the first to fifth aspects of the invention, there is provided a golf putting practice device further comprising a slope angle changing function for changing a slope angle of the green 1.

[0013] According to a seventh aspect of the present invention, in any one of the first to sixth aspects of the invention, there is provided a golf putting practice device in which switching of the notifying means 5 between audio and visual, switching of lines when the notifying means is the voice, changing of a position of the hole 2 and changing of a slope angle of the green 1 can be performed by remote control.

[0014] According to the present invention, there is provided a golf putting practice device in which a rear end portion 30 of the green 1 is folded back to have a circular shape, and a support body 33 that is downwardly sloped toward the side of the hole 2 is arranged in the inside of the rear end portion, to thereby downwardly slope the rear end portion 30 toward the hole 2 side.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] In the accompanying drawings:

[0016] FIG. 1 is a perspective view showing an example of a golf putting practice device of the present invention;

[0017] FIG. 2 is an explanatory diagram showing an example of a detection means;

[0018] FIG. 3 is an explanatory diagram showing another example of the detection means;

[0019] FIG. 4A is a rear view showing an example of an end surface of a base;

[0020] FIG. 4B is a rear view showing another example of an end surface of the base;

[0021] FIG. 5 is a perspective view showing a folded-back state of a green end of the golf putting practice device of the present invention;

[0022] FIG. 6A is a side view showing a state in which an end portion of a green is folded back toward the upper surface side;

[0023] FIG. 6B is a side view showing a state in which an end portion of a green is folded back toward the lower surface side;

[0024] FIG. 7 is a perspective view of an example of a support body arranged in the folded-back portion in FIG. 5, and

[0025] FIG. 8 is a diagram for explaining a putting practice at the folded-back portion in FIG. 5.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0026] Hereinafter, an embodiment of a golf putting practice device of the present invention will be explained based on FIG. 1 through FIG. 4. In a putting practice device of a first embodiment, an artificial turf surface material 11 is spread over a base 10 to make the material 11 serve as a
green 1, and a hole 2 is formed on a top part 12 of the green 1. The surface material 11 may also be a material other than artificial turf.

[0027] A front side of the base 10 slopes upward, the top part 12 is parallel with a floor, a set hole 13 is created at the top part 12 and a downwardly sloped guide passage 3 is formed on a side of the set hole 13. A bottom surface of the guide passage 3 is formed so as to slope downwardly toward the outside. The set hole 13 is about 25 cm in diameter.

[0028] A receiving hole 14 having substantially the same size as the set hole 13 is created in the surface material 11 spread over the base 10, and a disc 15 covers the receiving hole 14. In the disc 15 is created the hole 2 having the same size as a cup on a green of a golf course, and, by rotating the disc 15, a position of the hole 2 shown by solid lines in FIG. 1 can be changed to optional positions shown by imaginary lines. A surface material 11 made of the same material (the artificial turf in FIG. 1) as the surface material 11 is spread over a top of a round plate of the disc 15. The hole 2 is about 8 cm in diameter. The disc 15 can be rotated by hand, and can be rotated electrically. In a case where the disk 15 is rotated electrically, the disc 15 can be rotated by a motor, for example.

[0029] Beyond (behind) the disc 15 and on the front of the side of the disc 15 is formed a return passage 16, into which a ball that was hit but did not enter (missed) the hole 2 falls and returns to the person who hit the ball. An exit from the guide passage 3 is connected to the return passage 16, and a ball which enters the hole 2 and falls into the guide passage 3 comes to the return passage 16, which is sloped downward toward the front (toward the person hitting), so that the ball returns automatically to the person who hit the ball.

[0030] In the guide passage 3, there is formed a detection means 4 for detecting a ball, which holes into a cup and then returns, as shown in FIG. 2, and a notifying means 5 is connected to the detection means 4. The detection means 4 is arranged midway through the guide passage 3 and detects a state in which the ball is has been holed into the hole 2 rolls through the guide passage 3, thus detecting that the ball has been holeed. The ball detection means 4 shown in FIG. 2 is a limit switch 30, which operates due to the ball, which rolls through the guide passage 3 and pushes an arm 17 of the limit switch 30 as it passes through, thus detecting that the ball has been holeed. The detection means may be formed in other places than the guide passage. For example, the bottom surface of the receiving hole 14 may be a sensor to detect the ball holeed when holeed ball falls onto the bottom surface of the receiving hole 14.

[0031] As another example of the detection means 4, an optical sensor may also be used. In such a case, light from a light generator 18 provided to one side of the inside of the guide passage 3 is received by an optical sensor 19, and when the light is temporarily blocked by the ball passing through the guide passage 3, the optical sensor 19 operates, thus detecting that the ball has been holeed. In a case where it is bright inside a room, the optical sensor 19 receives the brightness (light) inside the room even when the light is not projected from the light generator 18, and when this light is temporarily blocked by the ball passing through the guide passage 3, the optical sensor 19 operates. Therefore, the light generator 18 is not necessarily needed. When the brightness inside the room does not provide enough light, the light generator 18 can be used for assistance. In other words, in this case the light generator 18 functions as auxiliary light.

[0032] The notifying means 5 operates in association with the detection means 4. When the detection means 4 detects the ball, the notifying means 5 audially or visually notifies that the ball has been holeed to the person who hit the ball and a person watching the practice. Examples of the notifying means 5 for making the notification audially includes a person's voice, music and a buzzer. An example of the notifying means 5 for making the notification visually includes an optical one. The voice may be a famous pro golfer's or instructor's words of praise, or lines that will encourage the person practicing, or the like. Examples of the words of praise or lines include “Nice putt!”, “Nice int!”, “You improved!” etc. The sound is not limited to voice, and the sound may be freely chosen, such as a sound of fanfare, a voice of an animal and a sound of a stream murmuring. The voices and sounds are stored in a voice IC or other storage medium to be reproduced. Further, the notifying means 5 may be a voice recording device within a micro phone. In this case, not only the voice of the famous pro golfer, but also the practitioner's own voice or their favorite sounds can be recorded to be reproduced.

[0033] The notifying means 5 for making the notification visually may be a lamp, an image or the like, for example. The lamp may be a lamp which is turned on continuously for a given duration of time each time the ball is holeed, or may be one which blinks or the like. In the case of the image, the face, playing scene and message of the famous pro golfer or of a pro golfer whom the practitioner admires appears, for example, and the voice of that person can also be produced together with the image. It is possible for the notifying means 5 to utilize both the means for making the notification audially and the means for making the notification visually to use them simultaneously and also to use only one of them by switching. It is preferable that various kinds of words of praise and lines are prepared to be selected for use so that the practitioner does not get bored.

[0034] As shown in FIG. 4A and FIG. 4B, power source switches, a speaker 21, a battery accommodating portion open/close cover 22 and the like are provided to an end surface 20 of the base 10. The one shown in FIG. 4A is a type using an optical sensor as the detection means 4, and it comprises an optical sensor power source switch 23, a light generator power source switch 24, the battery accommodating portion open/close cover 22 and the speaker 21. The one shown in FIG. 4B is a type using the limit switch 30 as the detection means 4, and it comprises a limit switch power source switch 26, the battery accommodating portion open/close cover 22 and the speaker 21. In the case where the notifying means is a type for making the notification visually, a lamp, a compact liquid crystal screen or the like is raised up from the base 10 so that the person practicing can see it. The lamp, the compact liquid crystal screen or the like is made in a rotatable fashion, and by standing it up at a time of use and laying it down along the base 10 at a time of non-use, thereby facilitating their storage with less damage.

[0035] A counter function 6 and a display apparatus are provided to the golf ball practice device. The counter function 6 is made to operate in association with the detecting function 3, and each time the detecting function 3 detects that the ball has been holeed, count is taken by the counter function 6.
function 6 and a counted number is displayed on the display apparatus. It is preferable that the display apparatus is set up in a position where the displayed numerical value can be seen by the practicer.

[0036] The golf putting practice device is provided with a slope angle changing function 7, by which the slope of the upper surface of the green 1 can be adjusted. As an example of the slope angle changing function 7, supporting legs (for example, bolts) which are adjustable in length (height), may be attached at optional several places on the surface material 11 in the front of the base 10, and the height of these supporting legs may be adjusted individually to thereby change the slope of the upper surface of the green 1, or to thereby change undulation along the slope, and the like. The leg length adjustment may be performed manually or automatically. In case of the automation, the device can be made compact by employing such a manner that the supporting legs are rotated by means of the motor.

[0037] The switching of the notifying means 5 between audio and visual, the switching of the lines when the notifying means 8 is the voice, the rotation of the disc 15 to change the position of the hole 2, the changing of the slope angle of the green 1 and the like may also be performed by a remote control.

[0038] As shown in FIG. 5, MAGIC BAND (a registered trademark) 31 is attached to an upper surface of a rear end portion 30 of the green 1. Further, as shown in FIG. 6A, the rear end portion 30 is folded back toward the upper surface side of the green 1 to have a circular shape by making the MAGIC BAND 31 retained with MAGIC BAND 32 inside the green 1, a triangular support body 33 is inserted into the inside of the circular portion, and thus, the rear end portion 30 can be used with a downward slope to the inner side. When the downward slope is provided as described above, as shown in FIG. 8, a person can practice an exercise in which he/she hits a golf ball 35 using a golf club 34 such as a pitching wedge or a sand wedge at its leading edge at a foot portion of the slope. Practicing the exercise is useful for a case of actual playing in a golf course. Incidentally, in the case of actual playing in a golf course, there often occurs a case where the golf ball stops at a fringe of the green so that a putter becomes difficult to be used, with the result that a person has to hit the golf ball by using the golf club such as the pitching wedge or the sand wedge at its leading edge. Practicing the exercise with the golf putting practice device according to the present invention in advance is very useful for such a case.

[0039] In the case where the rear end portion 30 is folded back as shown in FIG. 6A, the length of the folded-back end portion can be arbitrarily selected, but, for example, 20 to 40 cm is appropriate. The support body 33 has a side surface with a triangular wedge shape, and has substantially the same width as the green 1. The dimension of the support body 33 can be arbitrarily selected. However, for example, a length L of a bottom surface thereof is appropriately about 15 to 20 cm, and a height H thereof is appropriately about 7 cm. Foam resin and other light-weight materials are appropriate as the material of the support body 33.

[0040] As shown in FIG. 6B, the rear end portion 30 can also be folded back to the lower surface side of the green. In this case, both the MAGIC BANDS 31 and 32 are attached to the lower surface of the green 1 to be set capable of being retained with each other.

[0041] In the first aspect of the golf putting practice device of the application concerned, since the notifying means notifies the person practicing putting that the hit ball has been holed, confirmation that the hit ball has been holed can be made by his/her ears or eyes. As a result, an environment may be created in which the person practicing putting is encouraged in the practice and practices enthusiastically, whereby he/she does not get bored even in a long-time practice, which is thus helpful for improving his/her putting skill.

[0042] In the second aspect of the golf putting practice device of the present application, the notifying means is the sound. As a result, the person practicing putting can focus on hitting the ball without thinking about whether or not the ball has been holed, whereby effects of the practice can be expected.

[0043] In the third aspect of the golf putting practice device of the present application, since the notifying means is the voice of the famous pro golfer, the following effects are produced in addition to the above-mentioned effects.

[0044] (1) The person practicing putting feels as if he/she is playing with the famous golfer together on the green, whereby he/she can practice putting enjoyably.

[0045] (2) In the case where the voice for notifying that the ball has been holed is the words of praise from the famous golfer, the words of praise give the person practicing putting confidence.

[0046] In the fourth aspect of the golf putting practice device of the present application, the notifying means 5 notifies to the sense of one’s sight, whereby the hoiling of the ball can be confirmed by the eyes. In this case, if the screen is made to display the image of the famous golfer or the admired golfer, the practice becomes intense and effects of the practice can be expected, and further, it becomes possible to practice putting even in the middle of the night without making noise.

[0047] In the fifth aspect of the golf putting practice device of the present application, the counter function for counting the number of holed balls is provided, whereby, in addition to the above-mentioned effects, an effect is obtained that the person practicing putting can concentrate on putting without remembering the number of balls that have been holed and the practice of putting can be performed efficiently.

[0048] In the sixth aspect of the golf putting practice device of the present application, there is provided the slope angle changing function for changing the slope angle of the green. As a result, in addition to the above-mentioned effects, there is an effect that putting practices supposing the green in a variety of states can be conducted, and there is another effect that a variety of putting practices can be conducted without making the putting practice get in a rut.

[0049] In the seventh aspect of the golf putting practice device of the present application, the switching of the notifying means between audio and visual, the changing of the position of the hole and the changing of the slope angle, the undulation and the like of the green can be performed by the remote control. As a result, switching and changing become easy. Furthermore, since the state of the green can be changed instantly while practicing, the practicer can concentrate and conduct a variety of practices without
making the practice interrupted to change the state of the green, whereby effects of the practice can be expected.

[0050] In the golf putting practice device of the present application, the rear end portion of the green is folded back to have the circular shape, and the support body that is downwardly sloped toward the side of the hole is arranged in the inside of the rear end portion, to thereby downwardly slope the rear end portion toward the hole side. As a result, the person can practice the exercise in which he/she hits the golf ball using the golf club at its leading edge at the foot portion of the slope, and thus, can learn the putting form with the leading edge.

What is claimed is:

1. A golf putting practice device comprising a green; a hole created into the green; and a guide passage from which a ball entered (holed) into the hole rolls out; detection means for detecting that the ball is holed; and notifying means for notifying the outside that the ball is holed, based on the detection by the detection means.

2. A golf putting practice device comprising a green; a hole created into the green; and a guide passage from which a ball entered (holed) into the hole rolls out;

    wherein the guide passage is provided with detection means for detecting that the ball is holed; and

there is provided the notifying means for notifying the outside that the ball is holed, based on the detection by the detection means.

3. A golf putting practice device according to claim 1 or claim 2, wherein the notifying means makes a sound.

4. A golf putting practice device according to any one of claim 1 to claim 3, wherein the notifying means is a voice of a famous pro golfer.

5. A golf putting practice device according to claim 1 or claim 2, wherein the notifying means appeals to a sense of one’s sight.

6. A golf putting practice device according to any one of claim 1 through claim 5, further comprising a counter function for counting a number of holed balls.

7. A golf putting practice device according to any one of claim 1 through claim 6, further comprising a slope angle changing function for changing a slope angle of the green.

8. A golf putting practice device according to any one of claim 1 through claim 7, wherein switching of the notifying means between audio and visual, switching of lines when the notifying means is the voice, changing of a position of the hole and changing of a slope angle of the green can be performed by remote control.

9. A golf putting practice device according to any one of claims 1 to 8, wherein a rear end portion of the green is folded back to have a circular shape, and a support body that is downwardly sloped toward the side of the hole is arranged in the inside of the rear end portion, to thereby downwardly slope the rear end portion toward the hole side.

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