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(54) **GOLF PUTTING PRACTICE DEVICE**

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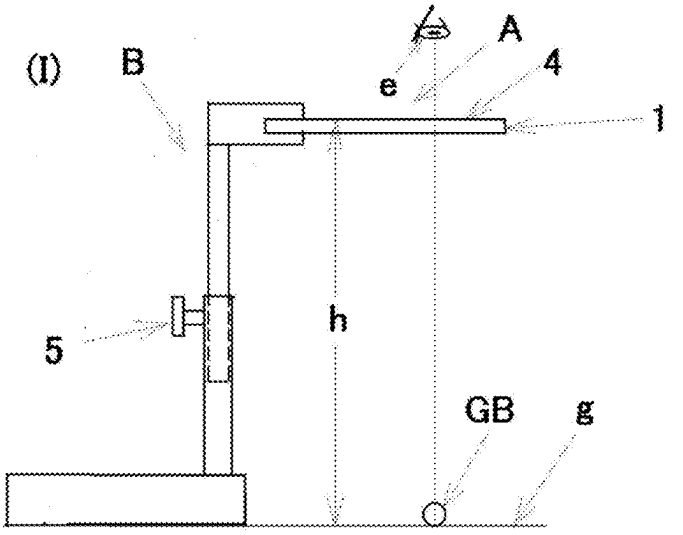
(57) **ABSTRACT**

The present invention provides a novel golf putting practice device including a main body portion having at least a half mirror formed in a flat plate shape and a support portion maintaining the main body portion in the air.



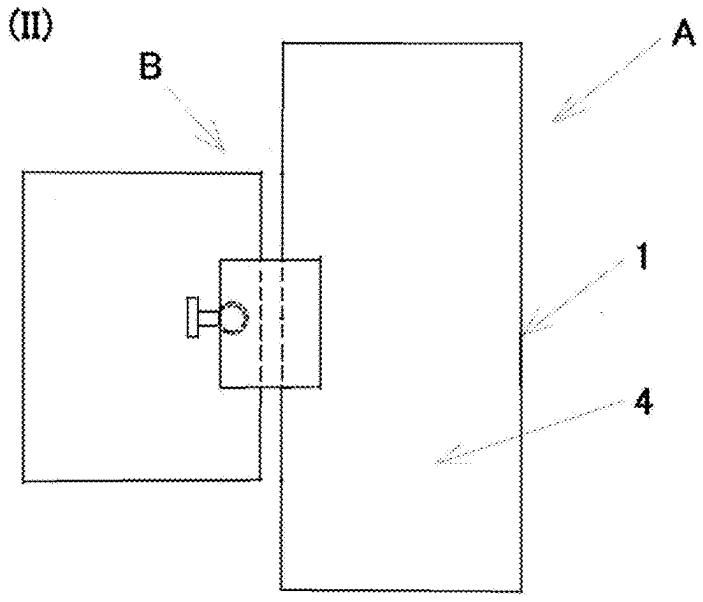


FIG. 1

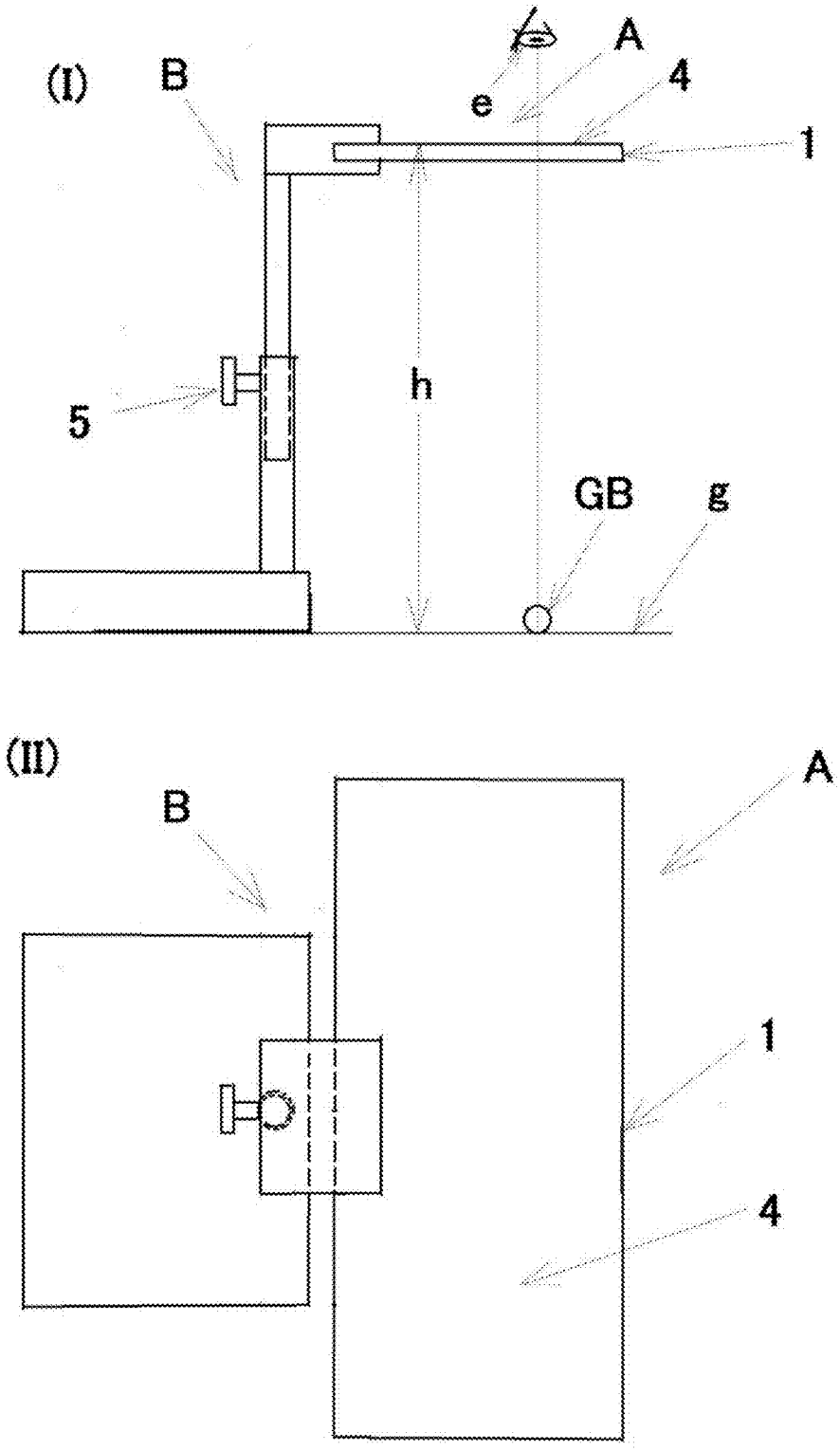


FIG. 2

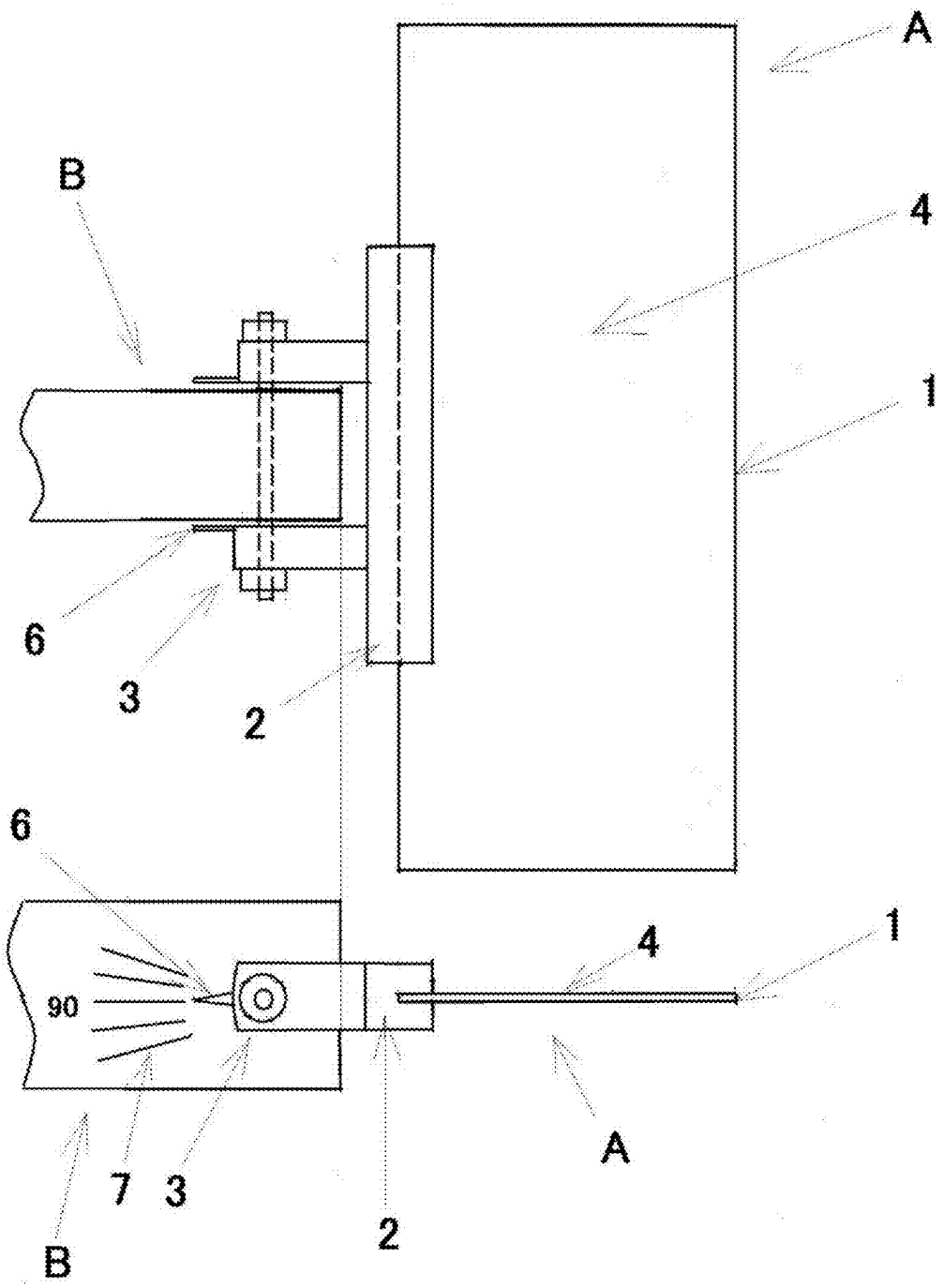


FIG. 3

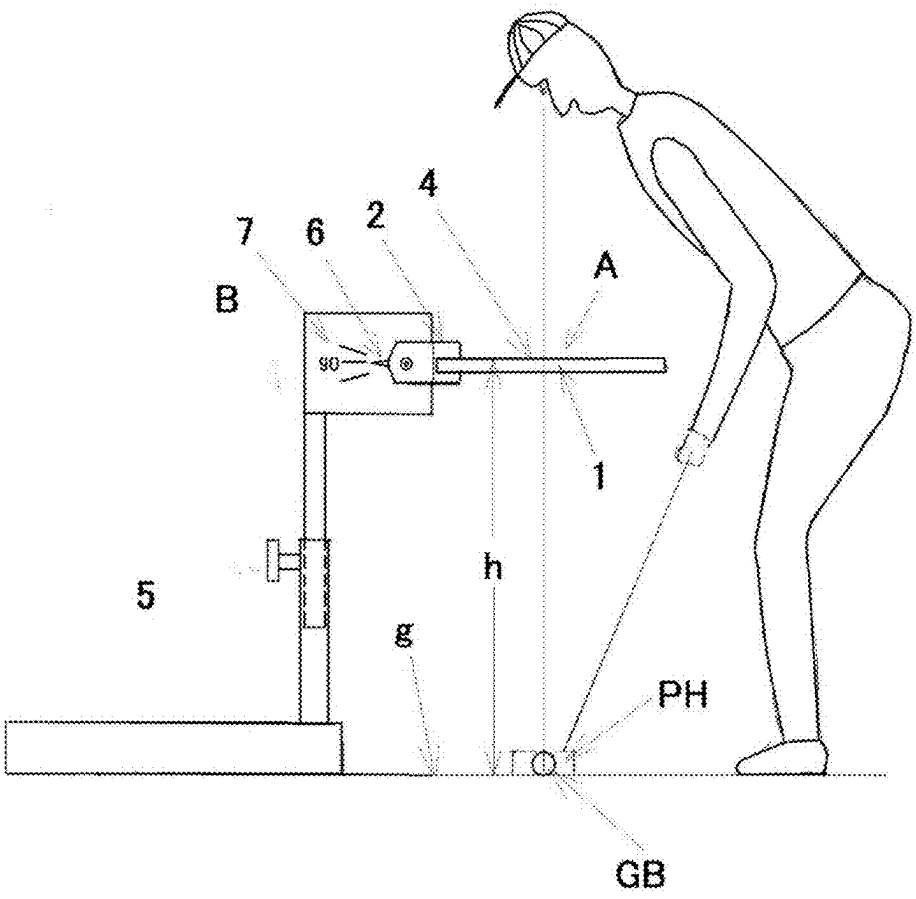


FIG. 4

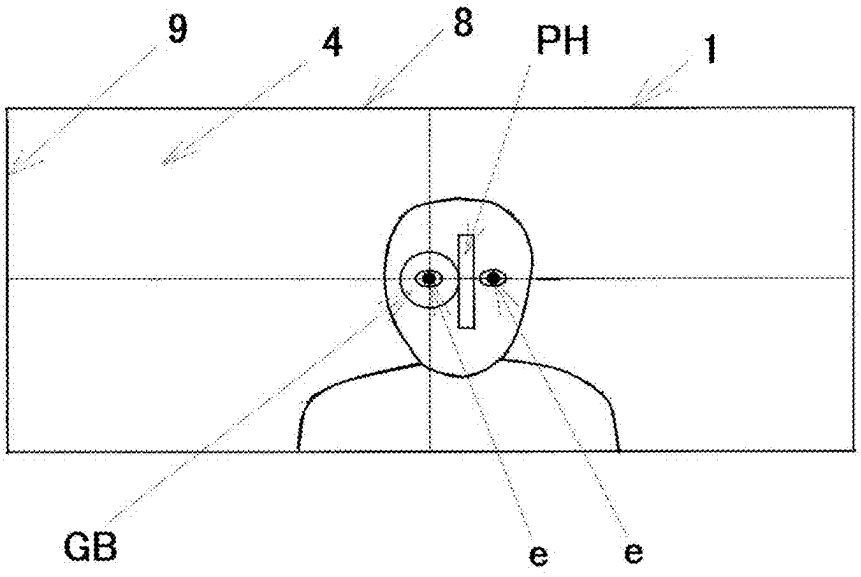


FIG. 5

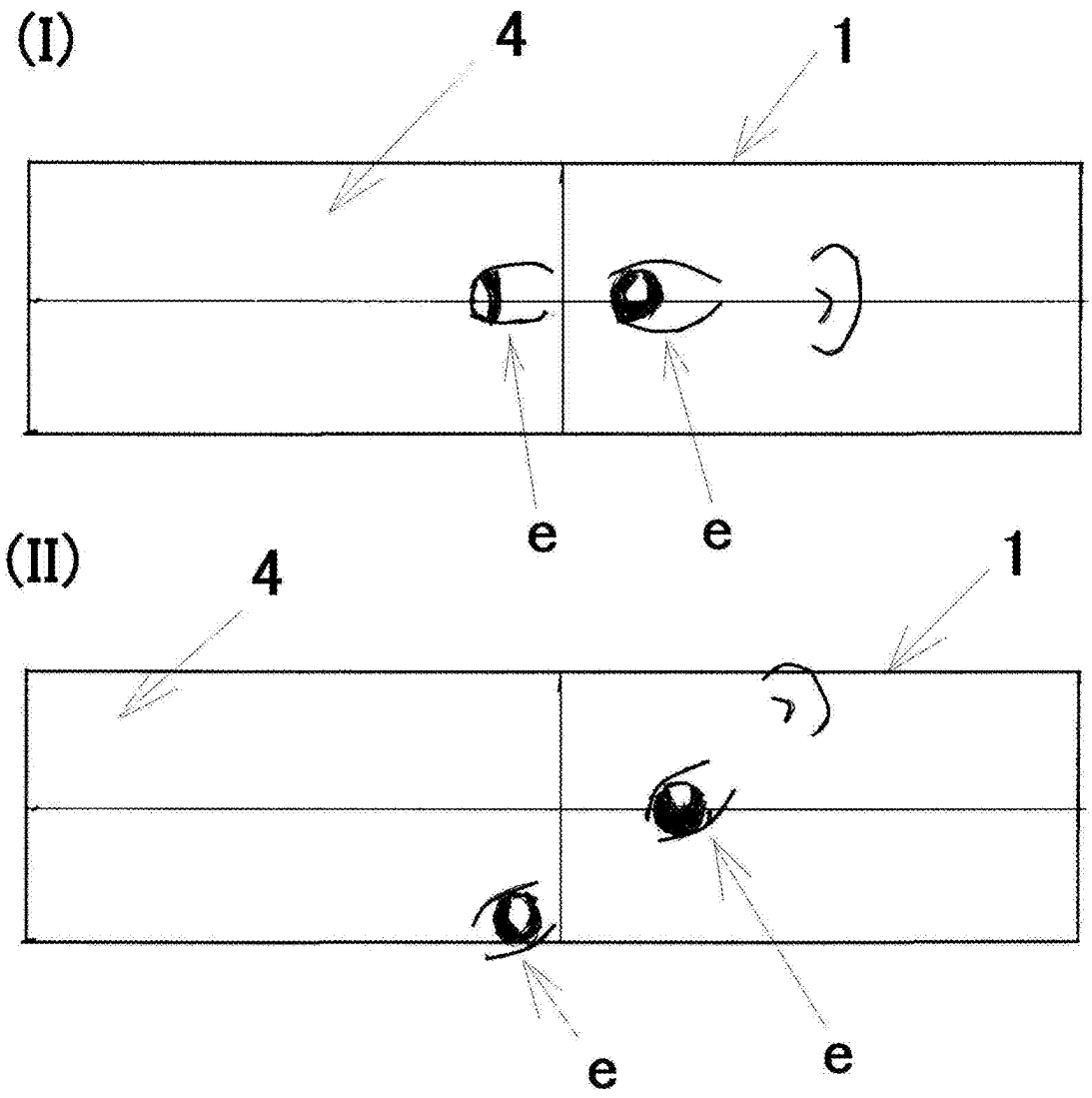


FIG. 6

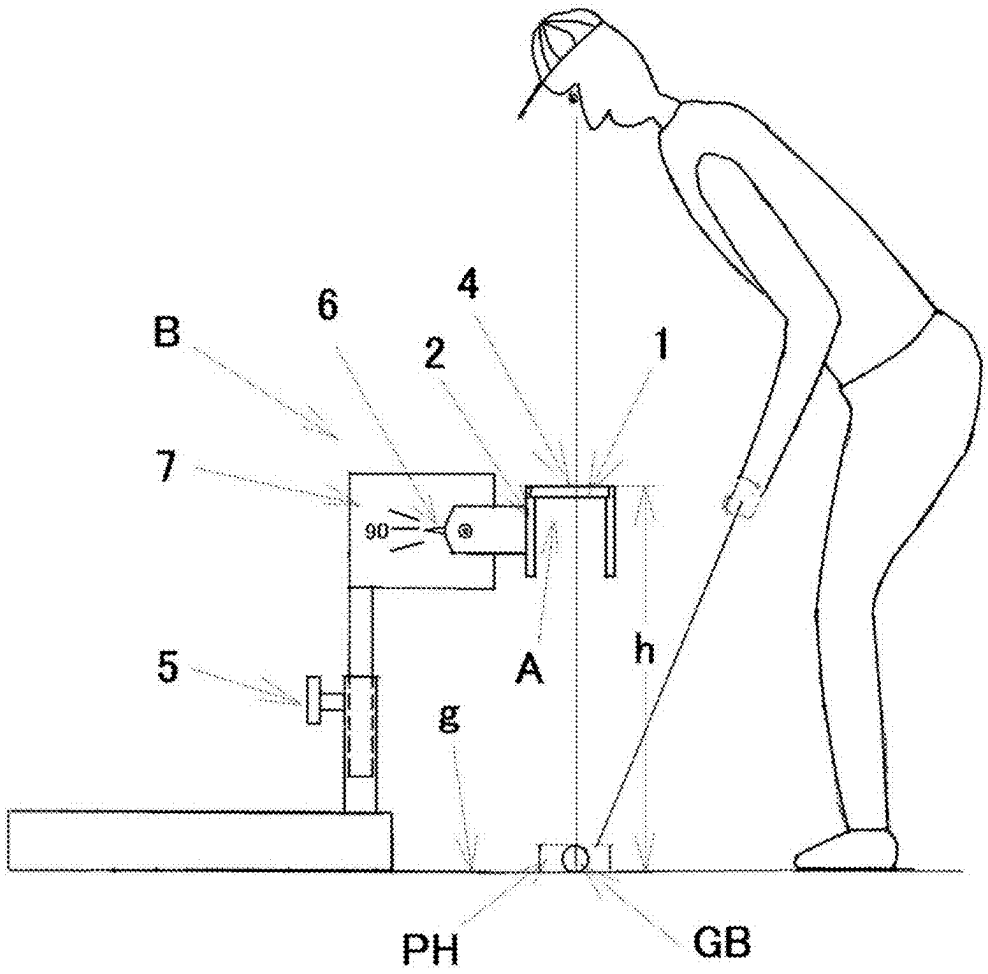


FIG. 7

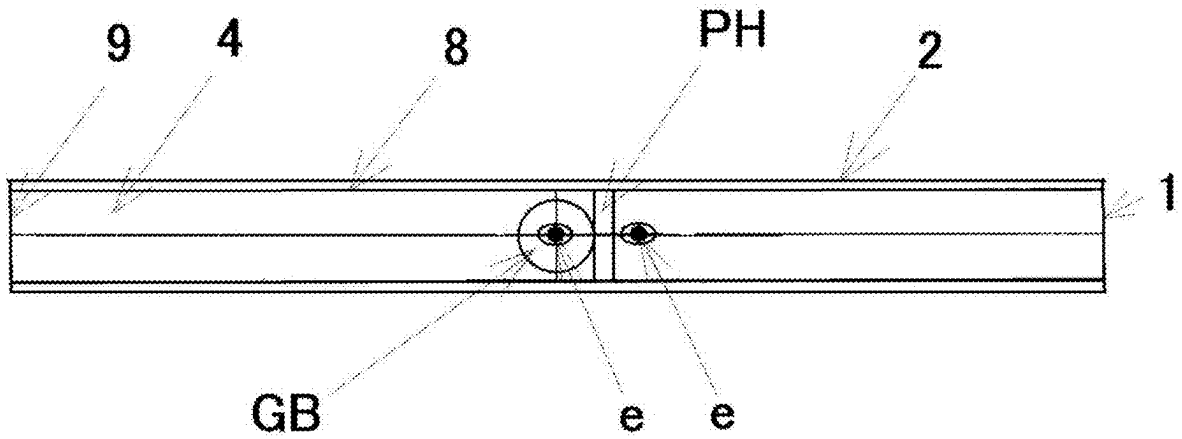


FIG. 8

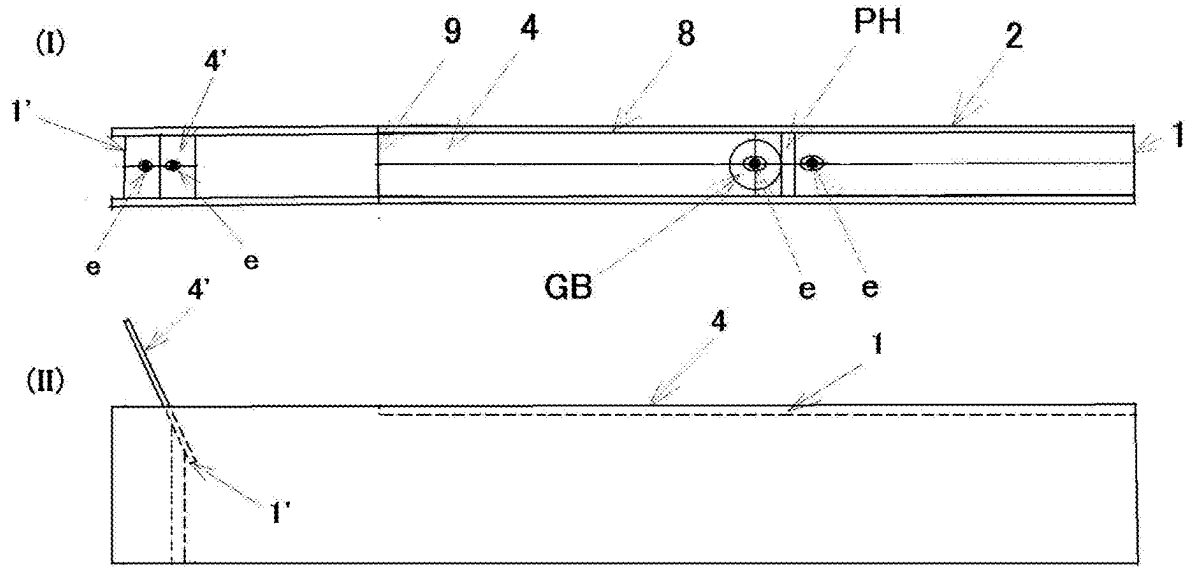


FIG. 9

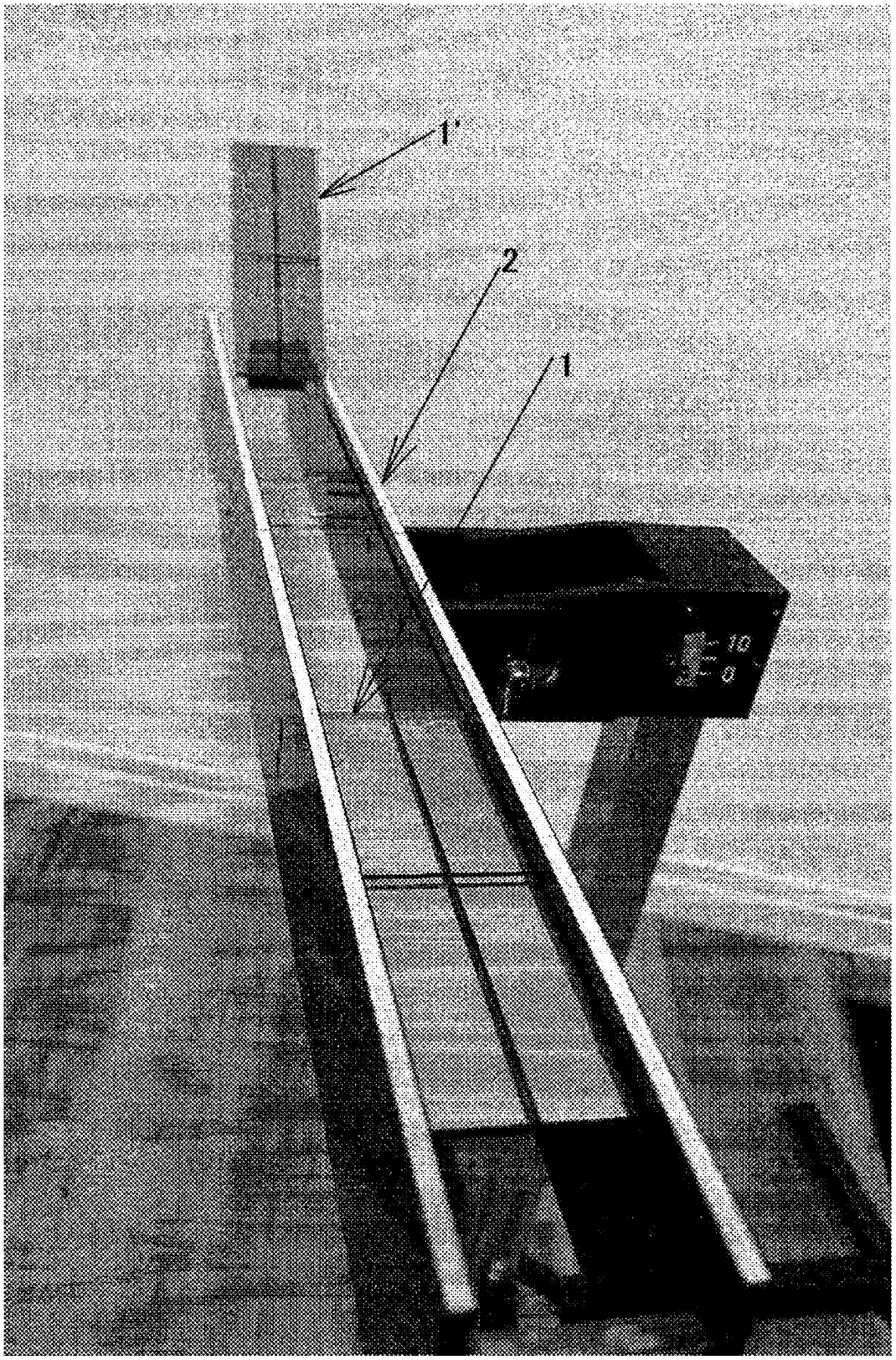


FIG. 10

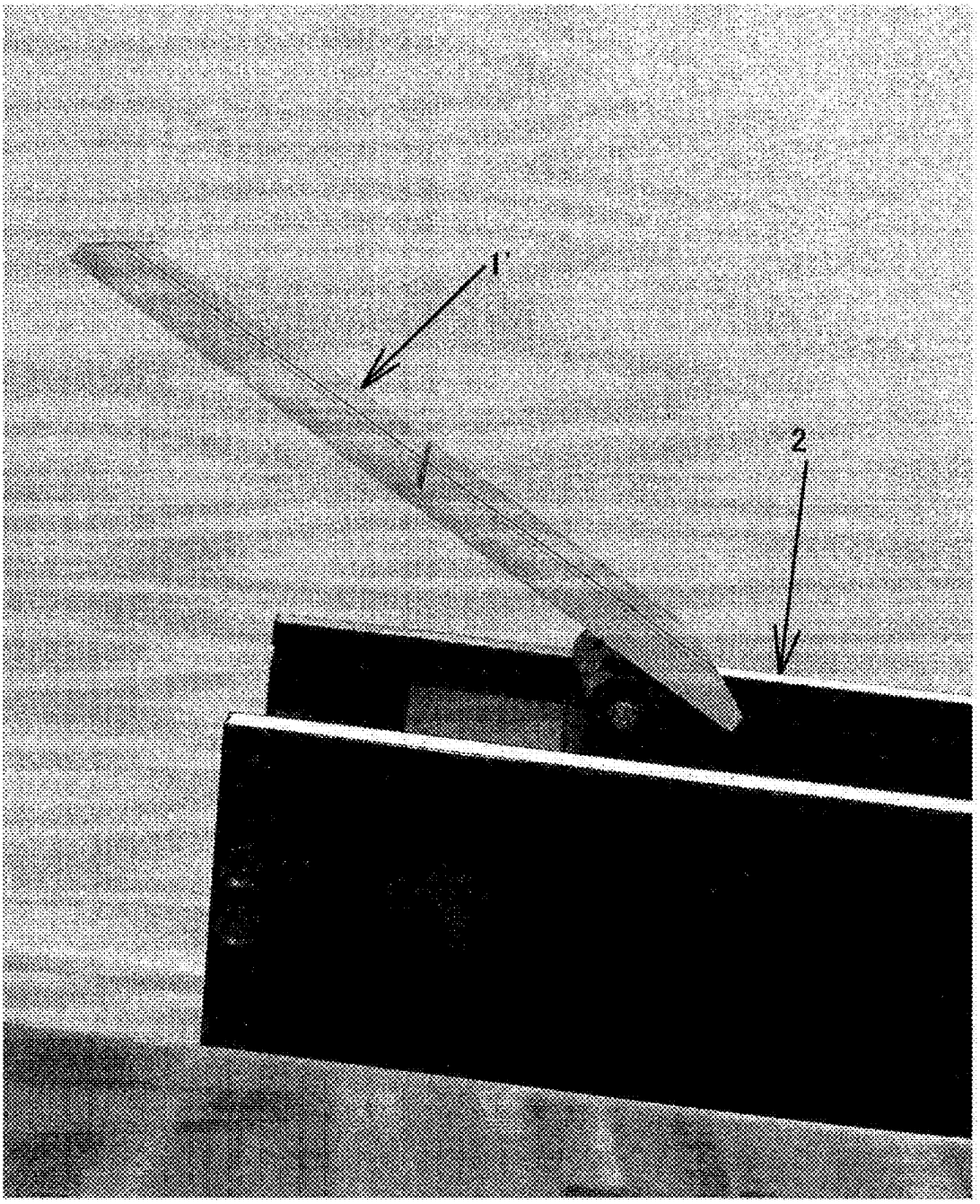


FIG. 11

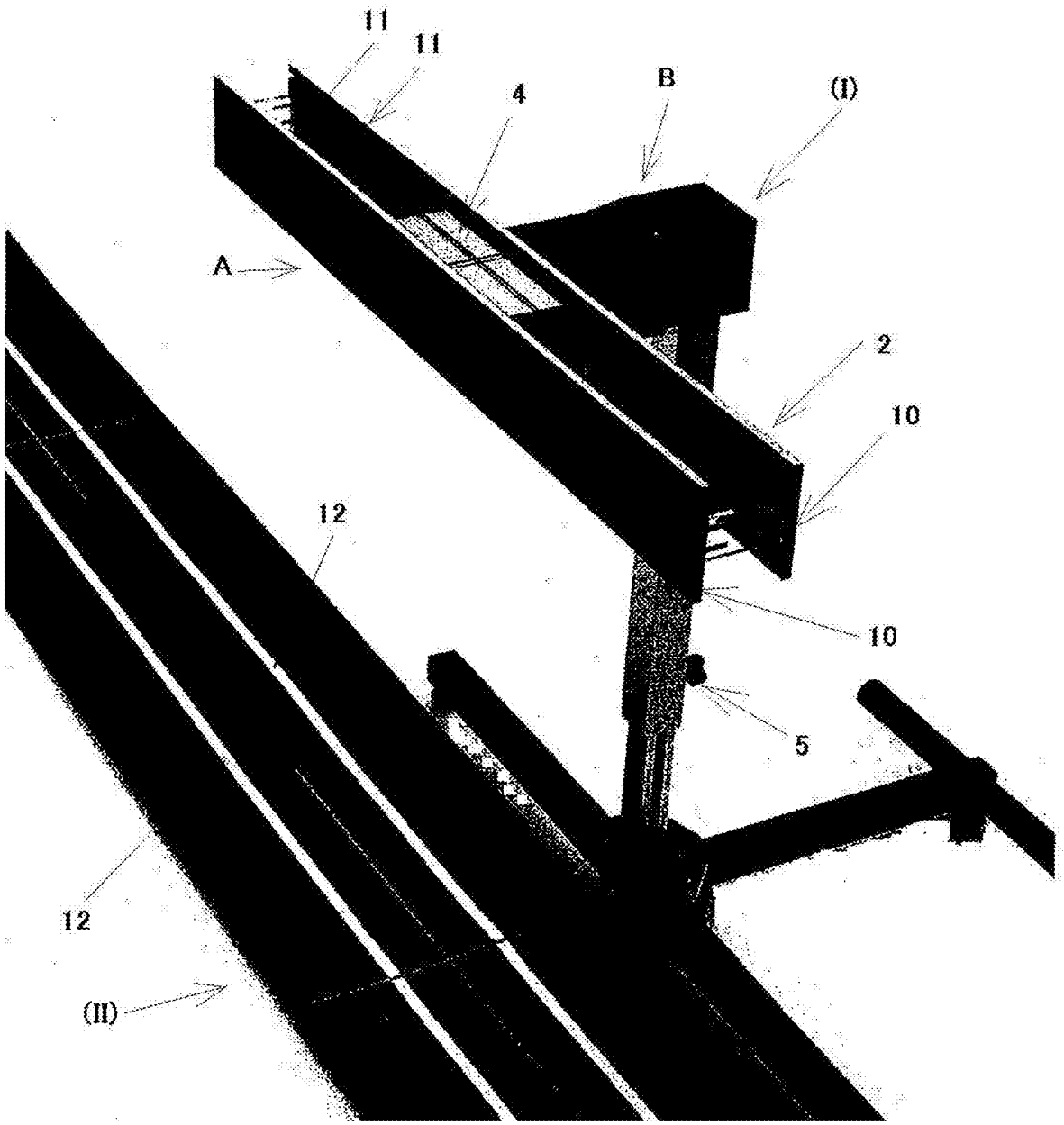
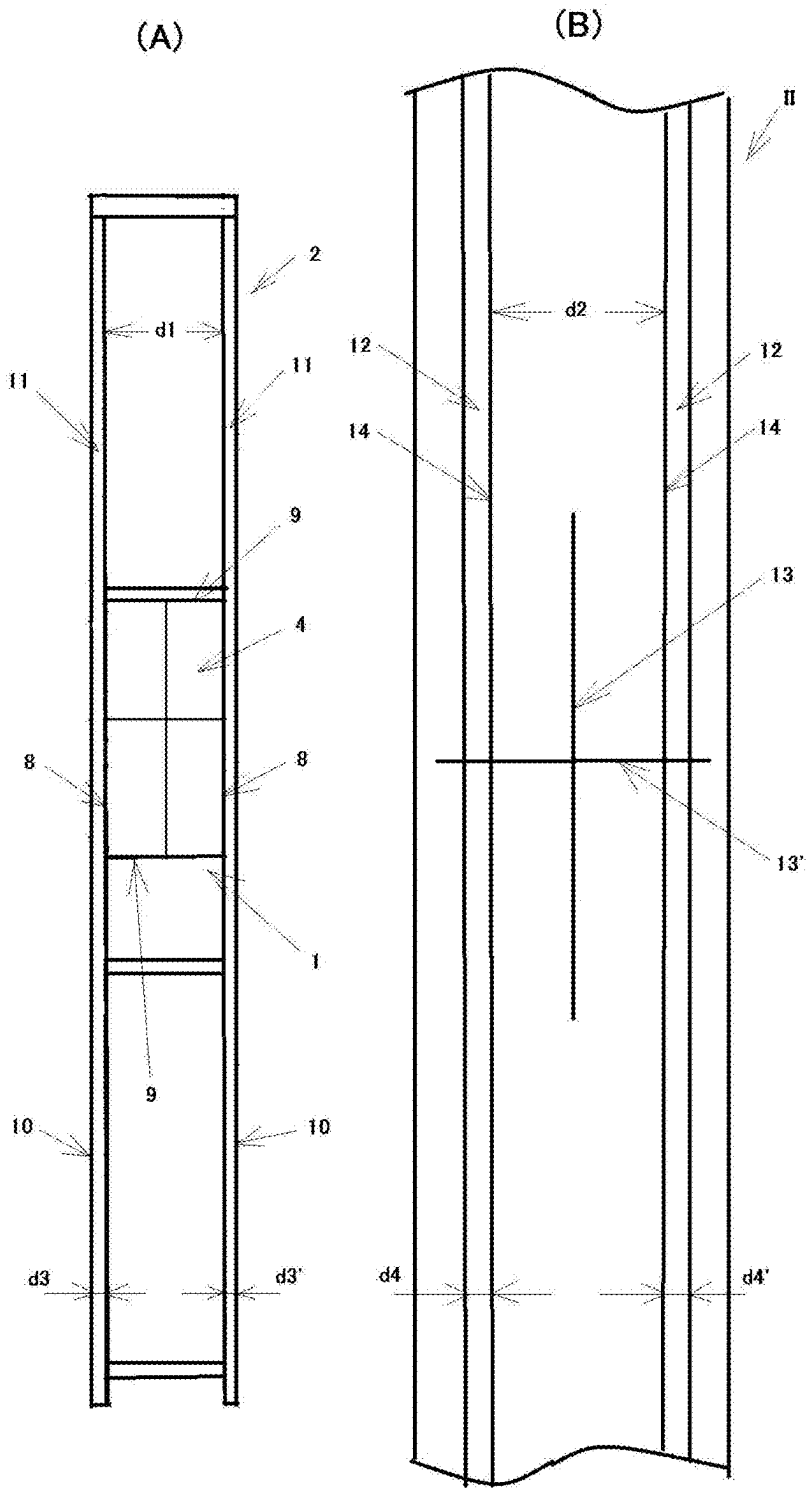


FIG. 12



GOLF PUTTING PRACTICE DEVICE

TECHNICAL FIELD

[0001] The present invention relates to a golf putting practice device, and more particularly, to a golf putting practice device including a main body portion having at least a half mirror formed in a flat plate shape and a support portion maintaining the main body portion in the air.

BACKGROUND ART

[0002] Various conventional golf putting practice devices are known. For example, a device referred to as "putter mat" which has a ball cup installed near an end of an artificial grass mat and a white straight line drawn from the ball cup on the mat to guide a golf ball to be putted along the white line, further, a device having a gradient formed on the artificial grass mat, is known. In addition, as plates for checking putting address, which are two plates between which a groove having a width of about 5 mm and a depth of about 9 mm is disposed, a structure in which a side surface of the groove between the plates is in a 90° direction from planes of the plates, and a bottom of the groove between the plates has a bright color for high visibility is known (Patent Document 1). The plates for checking address are to allow both eyes to be accurately placed right above a ball and a putting line in golf putting. Furthermore, as a mirror for checking accuracy of a stance or swing in golf, a mirror for checking alignment is known, which has a mirror member having predetermined vertical and horizontal sizes, a few linear lines for checking alignment that are drawn on the mirror member, a scale drawn on the mirror member to allow checking of positions of each part of the body, a swing width, or the like, and a tee peg insertion hole for checking the trajectory of a ball that is drilled in the mirror member to practice golf putting (Patent Document 2). In the invention of Patent Document 2, an improvement is made to the invention of Patent Document 1, and the plates of Patent Document 1 are replaced with a mirror to allow players see themselves reflected in the mirror and allow more effective practice.

[0003] A putting practice device is known, which has a case having an inner diameter substantially the same as or smaller than a diameter of a golf ball and a mechanism for vertically supporting the case (Patent Document 3). The invention provides a putting practice device that has a simple structure to allow, when using a putter for play, checking whether the positions of a dominant eye of a player and a golf ball are accurately aligned, the golf ball is hit by pulling the putter while the positions are maintained, and the position of the dominant eye is continuously maintained even after the golf ball is hit, and that enables the body to remember a correct stance through repeated practice.

RELATED ART DOCUMENTS

Patent Documents

[0004] (Patent Document 1) Japanese Utility Model Registration No. 3196203

[0005] (Patent Document 2) Japanese Utility Model Registration No. 3200271

[0006] (Patent Document 3) Japanese Unexamined Patent Application Publication No. 2014-233618

DISCLOSURE

Technical Problem

[0007] The present invention is directed to providing a novel golf putting practice device including a main body portion having at least a half mirror formed in a flat plate shape and a support portion maintaining the main body portion in the air, the golf putting practice device not only enabling a player to, while reliably looking at a golf ball in a direction that is 90° from a surface on which the golf ball is placed (for example, a surface of the green), that is, while reliably looking at the golf ball from directly above the golf ball, reliably hit the center of the golf ball with a face of a putter head from the 90° direction, but also enabling the player to reliably check the moment the face of the putter head comes into contact with the golf ball and a following series of movement (a target line) of the golf ball, such as rolling of the golf ball, and perform repeated putting practice, and further, since the player is able to view both of his or her eyes, preferably, also the face and a part of the body, reflected in the half mirror, enabling the player to practice aligning both eyes with the target line and placing the face and body parallel to the target line before and after putting, preferably, enabling each player to find his or her own optimal angle from the surface of the green while looking at the golf ball and perform repeated putting practice at that angle. According to the golf putting practice device of the present invention, since the repeated putting practice allows a player to reproduce his or her putting posture with high precision even on the actual green, the success rate of putting can be significantly increased.

Technical Solution

[0008] In golf putting, it is considered fundamental for a player to putt while looking at a golf ball in a direction that is 90° from a surface on which the golf ball is placed (a surface of the green), that is, while looking at the golf ball from directly above the golf ball. Accordingly, even for the above-described conventional putter mat, plates for checking putting address, and mirror-type golf putting practice device, the basic principle is to practice putting while looking at a golf ball from directly above the golf ball. However, in fact, even when a considerable amount of practice is done using these conventional devices, the putting practice rarely improves performance, and it is difficult to putt as desired on the actual green.

[0009] The conventional putter mat is for helping improve putting techniques by repeatedly practicing putting a golf ball along the white line. However, since the white line drawn on the putter mat is not present on the actual green, the player draws an imaginary white line between a ball and a cup present on the green in his or her head and putts the ball based on the imaginary white line. Therefore, there is a problem that the player may be focused only on the direction of the cup, move his or her gaze away from the ball, not put much effort into putting, and easily make a mistake. In addition, the mirror-type golf putting practice device is for helping improve putting techniques by, basically when putting a golf ball while looking at the golf ball in a direction that is 90° from a surface on which the golf ball is placed (a surface of the green), that is, while looking at the golf ball from directly above the golf ball, reflecting alignment of the player's knees, waist, shoulders, and gaze at the time of

address in a mirror to allow the player to check the alignment and correct the alignment relative to the ball. As described above, in practicing using the device, it is considered fundamental to look at a golf ball from directly above the golf ball. Therefore, while such a posture can be relatively easily reproduced on the green by a tall player, such as a typical Western player, it is not considered to be easy for a player who is not that tall, such as an Asian player including a Japanese player, to repeatedly reproduce a posture of always looking at a golf ball in the direction that is 90° from the surface of the green due to a putter shaft length or the like. As a result, since players often look at a golf ball at an angle smaller than 90° from the surface of the green during actual putting, practice using the mirror-type golf putting practice device rarely leads to improvement in performance. The same applies for the plates for checking putting address. In addition, the mirror-type practice device has a problem that it is easily damaged during putting practice.

[0010] The main reasons that performance is rarely improved by putting practice using the conventional practice devices described above are that, since a player is able to freely look at a set golf ball from any direction and angle other than directly above the golf ball, even when the player thinks that he or she is practicing while looking at a golf ball from directly above the golf ball, the player may actually be looking at the golf ball from various angles other than directly above the golf ball in many cases, and further, the angle at which the player looks at the golf ball may not be constant. The putting practice device disclosed in Patent Document 3 is known as a device that allows a player to practice putting while reliably looking at a golf ball from directly above the golf ball. However, with the putting practice device, since a player looks at a golf ball through a case that is present in the vertical direction and has an inner diameter substantially the same as or smaller than a diameter of the golf ball, there is a problem that, while the dominant eye can reliably be placed directly above the golf ball, a blind spot is created due to the presence of the case, and it is not possible to clearly check the moment the face of the putter head comes into contact with the golf ball and a following series of movement (a target line) of the golf ball, such as rolling of the golf ball, that is, a line of projection of the golf ball after the golf ball is hit by the putter. Further, since the dominant eye is isolated from the other eye due to the case, it is not possible to sufficiently check whether the eye other than the dominant eye is reliably present on the target line. In addition, there is also a problem that practice does not lead to significant performance improvement because a difference between using the practice device and actually putting on the green causes a great feeling of discomfort.

[0011] Accordingly, under conditions as similar as possible to the actual green, the inventor of the present invention has reviewed various ways on how to make it possible to practice putting without creating blind spots and causing a feeling of discomfort. As a result, the inventor of the present invention has completed the present invention by finding out that, according to a golf putting practice device including a predetermined half mirror as will be described below, since the half mirror allows a player to check a golf ball and a target line from the moment the golf ball is hit during putting and to view his or her eyes, preferably also the face and a part of the body such as the shoulders, reflected in the half mirror, the player can align his or her dominant eye reflected in the half mirror with the golf ball visible through the half mirror and easily putt while looking at the golf ball from directly above the golf ball, thereby addressing the above problems.

[0012] In addition, the inventor of the present invention has noticed that players who are not that tall often look at a golf ball from an angle smaller than 90° from the surface of the green during actual play. Accordingly, the inventor of the present invention has arrived at one exemplary aspect of the present invention by finding out that, when the golf putting practice device has a structure that allows an angle of the half mirror, which is formed in a flat plate shape, to be changed to various angles from the horizontal direction, not only can the players practice putting while looking at a golf ball in a direction that is 90° from the surface of the green, that is, while looking at the golf ball from directly above the golf ball, but also each player can find his or her own optimal angle and repeat practice at that angle.

[0013] That is, the present invention,

[0014] (1) the present invention provides a golf putting practice device including a main body portion (A) having at least a half mirror (**1**) formed in a flat plate shape and a support portion (B) maintaining the main body portion (A) in the air, wherein the support portion (B) has a structure configured to maintain a mirror surface (**4**) of the half mirror (**1**), which is provided at the main body portion (A), in a substantially horizontal direction.

[0015] According to one exemplary aspect,

[0016] (2) In the golf putting practice device of (1), the support portion (B) may further have a structure that allows an angle of the mirror surface (**4**) of the half mirror (**1**), which is provided at the main body portion (A), to be changed within 20° from the horizontal direction.

[0017] (3) According to one exemplary aspect, in the golf putting practice device of (1), the support portion (B) may further have a structure that allows an angle of the mirror surface (**4**) of the half mirror (**1**), which is provided at the main body portion (A), to be changed within 15° from the horizontal direction.

[0018] (4) According to one exemplary aspect, in the golf putting practice device of (1), the support portion (B) may further have a structure that allows an angle of the mirror surface (**4**) of the half mirror (**1**), which is provided at the main body portion (A), to be changed within 10° from the horizontal direction.

[0019] (5) According to one exemplary aspect, in the golf putting practice device of (1), the support portion (B) may further have a structure that allows an angle of the mirror surface (**4**) of the half mirror (**1**), which is provided at the main body portion (A), to be changed within 7° from the horizontal direction.

[0020] (6) According to one exemplary aspect, in the golf putting practice device of any one of (2) to (5), the main body portion (A) may further have a maintaining portion (**2**) configured to maintain the half mirror (**1**), and the structure of the support portion (B) that allows the angle to be changed may have a coupling portion (**3**) between the support portion (B) and the maintaining portion (**2**) and may allow the angle of the mirror surface (**4**) of the half mirror (**1**) to be changed with the coupling portion (**3**) as a center of rotation by moving

an end portion of the mirror surface (**4**), which faces the coupling portion (**3**), in a vertical direction relative to an installation surface of the support portion (B).

[0021] (7) According to one exemplary aspect, in the golf putting practice device of any one of (1) to (6), the support portion (B) may have a structure configured to adjust a distance in a direction of gravity (height (h)) from an installation surface (g) of the golf putting practice device to the mirror surface (**4**) of the half mirror (**1**).

[0022] (8) According to one exemplary aspect, in the golf putting practice device of any one of (1) to (7), the distance (height) (h) in the direction of gravity from the installation surface (g) of the golf putting practice device to the mirror surface (**4**) of the half mirror (**1**) may range from 10 to 160 cm.

[0023] (9) According to one exemplary aspect, in the golf putting practice device of any one of (1) to (7), the distance (height) (h) in the direction of gravity from the installation surface (g) of the golf putting practice device to the mirror surface (**4**) of the half mirror (**1**) may range from 20 to 100 cm.

[0024] (10) According to one exemplary aspect, in the golf putting practice device of any one of (1) to (9), the mirror surface (**4**) of the half mirror (**1**) may have a substantially rectangular shape whose long side ranges from 5 to 60 cm and whose short side ranges from 2 to 30 cm.

[0025] (11) According to one exemplary aspect, in the golf putting practice device of any one of (1) to (9), the mirror surface (**4**) of the half mirror (**1**) may have a substantially rectangular shape whose long side ranges from 8 to 16 cm and whose short side ranges from 2 to 6 cm.

[0026] (12) According to one exemplary aspect, in the golf putting practice device of any one of (1) to (9), the mirror surface (**4**) of the half mirror (**1**) may have a substantially rectangular shape whose long side ranges from 40 to 60 cm and whose short side ranges from 15 to 25 cm.

[0027] In addition, the inventor of the present invention has reviewed various ways by further focusing on how to allow a player to reproduce an appropriate putting posture, which is acquired through repeated putting practice using the golf putting practice device of the present invention, with higher precision on the actual green. As a result, the inventor of the present invention has arrived at another exemplary aspect of the present invention by finding out that the success rate of putting can be significantly increased even on the actual green when putting is practiced using the golf putting practice device of the present invention together with a predetermined putter mat, which is always used with the putting practice device.

[0028] That is, the present invention,

[0029] (13) The present invention provides a combination-type putting practice device that includes: a golf putting practice device (I) including a main body portion (A) having at least a half mirror (**1**) formed in a flat plate shape and a support portion (B) maintaining the main body portion (A) in the air, wherein the support portion (B) has a structure configured to maintain a mirror surface (**4**) of the half mirror (**1**), which is provided at the main body portion (A), in a substantially horizontal direction, the main body portion (A) further has a maintaining portion (**2**) configured to maintain the half mirror (**1**), the mirror surface (**4**) of the half mirror (**1**) has a substantially rectangular shape, the maintaining portion (**2**) at least has two flat plates (**10**) that are disposed along two long sides of the mirror surface (**4**) having the substantially rectangular shape, are parallel to each other, and are perpendicular to the mirror surface (**4**) while the mirror surface (**4**) is disposed therebetween, and upper surfaces (**11**) of the two flat plates (**10**) are present on the same plane and each have a rectangular shape substantially parallel to the mirror surface (**4**); and a putting practice mat (II) including two linear lines (**12**) that are parallel to each other, each have a rectangular shape, and are substantially parallel to long sides of the rectangular shapes of the upper surfaces (**11**) of the two flat plates (**10**) of the maintaining portion (**2**), wherein an inner distance (d**2**) between two long sides of the rectangular shapes of the two linear lines (**12**) is greater than an inner distance (d**1**) between the two long sides of the rectangular shapes of the upper surfaces (**11**) of the two flat plates (**10**), and widths (d**4**, d**4'**) of the rectangular shapes of the two linear lines (**12**) are greater than widths (d**3**, d**3'**) of the rectangular shapes of the upper surfaces (**11**) of the two flat plates (**10**).

[0030] According to another exemplary aspect,

[0031] (14) In the combination-type putting practice device of (**13**), the support portion (B) may further have a structure that allows an angle of the mirror surface (**4**) of the half mirror (**1**), which is provided at the main body portion (A), to be changed within 20° from the horizontal direction.

[0032] (15) According to another exemplary aspect, in the combination-type putting practice device of (**13**) or (**14**), the inner distance (d**1**) between the two long sides of the rectangular shapes of the upper surfaces (**11**) of the two flat plates (**10**) may range from 20 to 60 mm, and the inner distance (d**2**) between the two long sides of the rectangular shapes of the two linear lines (**12**) parallel to each other of the putting practice mat (II) may range from 50 to 70 mm.

[0033] (16) According to another exemplary aspect, in the combination-type putting practice device of (**13**) or (**14**), the inner distance (d**1**) between the two long sides of the rectangular shapes of the upper surfaces (**11**) of the two flat plates (**10**) may range from 30 to 50 mm, and the inner distance (d**2**) between the two long sides of the rectangular shapes of the two linear lines (**12**) parallel to each other of the putting practice mat (II) may range from 50 to 70 mm.

[0034] (17) According to another exemplary aspect, in the combination-type putting practice device of (**13**) or (**14**), the inner distance (d**1**) between the two long sides of the rectangular shapes of the upper surfaces (**11**) of the two flat plates (**10**) may range from 35 to 45 mm, and the inner distance (d**2**) between the two long sides of the rectangular shapes of the two linear lines (**12**) parallel to each other of the putting practice mat (II) may range from 55 to 65 mm.

[0035] (18) According to another exemplary aspect, in the combination-type putting practice device of any one of (13) to (17), the widths (d**3**, d**3'**) of the rectangular shapes (lengths of short sides of the rectangular shapes) of the upper surfaces (**11**) of the two flat plates (**10**) may

both range from 3 to 10 mm, and the widths (d**4**, d**4'**) of the rectangular shapes (lengths of short sides of the rectangular shapes) of the two linear lines (**12**) parallel to each other of the putting practice mat (II) may both range from 8 to 12 mm.

[0036] (19) According to another exemplary aspect, in the combination-type putting practice device of any one of (13) to (17), the widths (d**3**, d**3'**) of the rectangular shapes (lengths of short sides of the rectangular shapes) of the upper surfaces (**11**) of the two flat plates (**10**) may both range from 3 to 7 mm, and the widths (d**4**, d**4'**) of the rectangular shapes (lengths of short sides of the rectangular shapes) of the two linear lines (**12**) parallel to each other of the putting practice mat (II) may both range from 9 to 11 mm.

[0037] (20) According to another exemplary aspect, in the combination-type putting practice device of any one of (13) to (19), one side of the two flat plates (**10**) that are disposed along the two long sides of the mirror surface (**4**) having the substantially rectangular shape and are parallel to and face each other while the mirror surface (**4**) is disposed therebetween may be maintained by the support portion (B).

[0038] (21) According to another exemplary aspect, in the combination-type putting practice device of any one of (13) to (19), the two long sides of the mirror surface (**4**) having the substantially rectangular shape are present in a direction in which a golf ball rolls after being hit.

[0039] (22) According to another exemplary aspect, in the combination-type putting practice device of any one of (13) to (19), one side of the two flat plates (**10**) that are disposed along the two long sides of the mirror surface (**4**) having the substantially rectangular shape and are parallel to and face each other while the mirror surface (**4**) is disposed therebetween may be maintained by the support portion (B).

Advantageous Effects

[0040] In putting, a golf putting practice device of the present invention not only enables a player to, while reliably looking at a golf ball from a direction that is 90° from a surface on which the golf ball is placed (a surface of the green), that is, while reliably looking at the golf ball from directly above the golf ball, reliably hit the center of the golf ball with a face of a putter head from the 90° direction, but also enables the player to check the moment the face of the putter head comes into contact with the golf ball and a following series of movement (a target line) of the golf ball, such as rolling of the golf ball, and perform repeated putting practice, and further, since the player is able to view both of his or her eyes, preferably, also the face and a part of the body, reflected in a half mirror, enables the player to practice aligning both eyes with the target line and placing the face and body parallel to the target line before and after putting. In addition, since the player is able to reliably check the moment the face of the putter head comes into contact with the golf ball with both eyes, the player can check whether the face of the putter head is in contact with the golf ball at a right angle. Preferably, since each player is able to find his or her own optimal angle from the surface of the green when looking at the golf ball and perform repeated putting practice at that angle, each player can self-master a putting stance and motion suitable for himself or herself and always reproduce a constant putting stance and motion. In addition, according to a combination-type putting practice device of the present invention, since the repeated putting practice allows a player to reproduce his or her putting posture with high precision even on the actual green, the success rate of putting can be significantly increased. As a result, a significant improvement in putting techniques of each player can be promoted.

DESCRIPTION OF DRAWINGS

[0041] FIG. **1** illustrates a side view (I) and a top view (II) schematically illustrating one embodiment of a golf putting practice device of the present invention.

[0042] FIG. **2** is a schematic view illustrating one embodiment of a coupling portion (**3**) between a support portion (B) and a maintaining portion (**2**) of the golf putting practice device of the present invention.

[0043] FIG. **3** is a schematic view of a golf putting practice device of the present invention that is used in Example 1.

[0044] FIG. **4** is a schematic view illustrating a golf ball (GB) and a putter head (PH) visible through a half mirror (**1**) and a player's both eyes (e), face, and part of the body, such as the shoulders, reflected in a mirror surface (**4**) of the half mirror (**1**) in Example 1.

[0045] FIG. **5** is a view schematically illustrating movement of both eyes relative to a target line.

[0046] FIG. **6** is a schematic view of a golf putting practice device of the present invention that is used in Example 4.

[0047] FIG. **7** is a schematic view illustrating a golf ball (GB) and a putter head (PH) visible through a half mirror (**1**) and a player's both eyes (e) reflected in a mirror surface (**4**) of the half mirror (**1**) in Example 4.

[0048] FIG. **8** schematically illustrates a top view (I) and a side view (II) of a golf putting practice device of the present invention that is identical to the golf putting practice device used in Example 4 except that a half mirror (**1'**) enabling an angle of a mirror surface (**4'**) to be changed towards a movement direction (target line) of a golf ball is further included.

[0049] FIG. **9** is a perspective view of a golf putting practice device of the present invention that is used in Example 5.

[0050] FIG. **10** is an enlarged view of a half mirror (**1'**) of the golf putting practice device of the present invention that is used in Example 5.

[0051] FIG. **11** is a perspective view illustrating one embodiment of a combination-type putting practice device of the present invention.

[0052] FIG. **12** is a schematic view illustrating a top view (A) of one embodiment of a half mirror (**1**) and a maintaining portion (**2**) maintaining the same that are included in a golf putting practice device (I) in the combination-type putting practice device illustrated in FIG. **11** and a top view (B) of one embodiment of a putting practice mat (II).

MODES OF THE INVENTION

[0053] Hereinafter, a golf putting practice device of the present invention will be described based on the drawings. FIG. **1** illustrates a side view (I) and a top view (II) schematically illustrating one embodiment of a golf putting practice device of the present invention. The golf putting practice device of the present invention that is illustrated in FIG. **1** includes a main body portion A and a support portion

B, wherein the main body portion A has at least a half mirror **1** formed in a flat plate shape and is maintained in the air by the support portion B. In the golf putting practice device of the present invention that is illustrated in FIG. **1**, although the main body portion A includes only the half mirror **1** formed in a flat plate shape, a protective frame or the like may also be provided entirely or partially on an outer circumference of the half mirror **1** to prevent damage to the half mirror **1**. In addition, instead of the support portion B directly maintaining the half mirror **1**, the main body portion A may include the half mirror **1** and a maintaining portion **2** configured to maintain the same, for example, a protective frame formed on the outer circumference of the half mirror **1** to prevent damage to the half mirror **1**, and the support portion B may maintain the maintaining portion **2**. In addition, a mirror surface **4** of the half mirror **1** is maintained in a substantially horizontal direction at a predetermined height h from an installation surface g of the golf putting practice device. A structure in which the main body portion A is maintained in the air and the mirror surface **4** of the half mirror **1** is maintained in a substantially horizontal direction is not limited to the structure illustrated in FIG. **1** and may adopt any other structure known in the art. The height h, that is, a distance in the direction of gravity, from the installation surface g of the golf putting practice device to the mirror surface **4** of the half mirror **1**, is not particularly limited as long as a person, that is, a player, using the putting practice device of the present invention is able to look at a golf ball GB through the mirror surface **4** of the half mirror **1**, and simultaneously, look at his or her eyes e, preferably, also his or her face and part of the body such as the shoulders, reflected in the mirror surface **4** of the half mirror **1**, and further, hit the golf ball GB without bringing a putter into contact with the half mirror **1**. In consideration of the height of a typical player (person), the height h may range preferably from 10 to 160 cm and more preferably from 20 to 100 cm. At this time, the half mirror refers to a mirror that separates incident light into transmitted light and reflected light at a certain ratio, and a ratio of the transmitted light to the reflected light may be about 1:1. However, in the present invention, the ratio is not particularly limited as long as a player practicing golf putting is able to look at the golf ball GB placed on the installation surface g of the golf putting practice device through the half mirror, and simultaneously, look at his or her eyes e, preferably, also his or her face, shoulders, and the like reflected in the half mirror. As the half mirror, a commercially available product may be used, and for example, acryl mirror MS001 (trademark) manufactured by Mitsubishi Chemical Infratec Co., Ltd. may be used.

[0054] In the golf putting practice device of the present invention, the shape and size of the mirror surface **4** of the half mirror **1** are not particularly limited as long as the eyes e, preferably, also the face, shoulders, and the like of the player practicing putting using the device can be reflected in the mirror surface **4**. The shape of the mirror surface **4** may preferably be square or substantially rectangular and more preferably be substantially rectangular. When the shape of the mirror surface **4** is substantially rectangular, preferably, a long side thereof may range from 5 to 60 cm, and a short side thereof may range from 2 to 30 cm. In addition, in one aspect, preferably, the long side may range from 8 to 16 cm and the short side may range from 2 to 6 cm, and in another aspect, preferably, the long side may range from 40 to 60 cm and the short side may range from 15 to 25 cm. When a player practices putting while only the eyes e are reflected in the mirror surface **4** of the half mirror **1**, the reflected eyes e overlap the golf ball GB visible through the half mirror **1**, and the player looks at the golf ball from directly above the golf ball, it is sufficient for the mirror surface **4** to have the former dimensions, and when the player practices putting by also checking his or her putting stance and the like while not only the player's eyes e, but also the player's face, shoulders, and the like are reflected in the mirror surface **4**, preferably, the mirror surface **4** may have the latter dimensions. In addition, a straight line, which serves as an indicator to facilitate aligning both eyes with a target line, may be drawn on the mirror surface **4** of the half mirror **1** in a direction of projection of the golf ball as necessary. Lines that serve as other indicators according to other purposes may also be drawn. Here, preferably, the straight line drawn may have a width ranging from 1 to 3 mm. When the width is too thick, it becomes difficult for the player to look at the golf ball GB present under the half mirror **1**, and when the width is too thin, it becomes difficult for the player to check the line.

[0055] In the golf putting practice device of the present invention, as illustrated in FIG. **1**, preferably, the support portion B may have a structure **5** configured to adjust the distance in the direction of gravity (height h) from the installation surface g of the putting practice device to the mirror surface **4** of the half mirror **1**. A structure known in the art may be adopted as the structure **5**. For example, the structure **5** may be a structure in which, at a portion of the support portion B in a height direction, preferably, at a lower portion of a pipe, an inner diameter of the lower portion and an outer diameter of an upper portion of the pipe are adjusted, or an outer diameter of the lower portion and an inner diameter of the upper portion are adjusted, to perfectly fit the upper portion to the lower portion, the upper portion of the pipe is moved upward or downward to adjust a height, and the adjusted height is fixed by a screw. As described above, the height h may be adjustable preferably in a range of 10 to 160 cm, and more preferably, in a range of 20 to 100 cm. Since the sizes of the eyes e or the like reflected in the mirror surface **4** of the half mirror **1** can be adjusted by changing the distance (height h), the height h can be adjusted to a height suitable for each player and can be adjusted to a height suitable for each type of practice. For example, a player checks a target line between a golf ball and a ball cup by turning his or her neck before and after putting, but at that time, it is fundamental to move the gaze along the target line, which is a very important movement. However, moving the gaze along the target line is a very difficult movement, and even when the player thinks that he or she is moving his or her gaze along the target line, the gaze may actually be in front of the target line, that is, more toward the player, in most cases. In the putting practice device of the present invention, preferably, by increasing the height h of the mirror surface **4** of the half mirror **1** to reflect the player's both eyes at a relatively large size in the mirror surface **4** and performing putting practice, since movement of the eyes can be more clearly checked, very effective practice is possible. Also, since, in some cases, the player may practice moving the gaze along the target line just by turning his or her neck without performing putting, there is also an advantageous effect due to this.

[0056] Preferably, in the golf putting practice device of the present invention, the support portion B may further have a structure that allows an angle of the mirror surface **4** of the half mirror **1**, which is provided at the main body portion A, to be changed within 20°, preferably within 15°, more preferably within 10°, and even more preferably within 7°, from the horizontal direction. Accordingly, it becomes possible for a player to find an optimal angle from a surface of the green when looking at a golf ball and perform repeated putting practice at that angle. Here, the angle of the mirror surface **4** from the horizontal direction refers to an angle that is upward or downward from the horizontal direction and generally refers to an angle that is toward an installation surface of the support portion B (a surface on which a golf ball is placed) (downward) from the horizontal direction. For example, the optimal angle may be determined by a player finding an angle at which he or she can hit the ball straight toward a first target while at his or her most comfortable stance. Further, it may be preferable for the player to ask for advice from a professional golfer as to whether the angle found by the player is indeed an optimal angle. Generally, a known structure may be adopted as the structure of the support portion B that allows the angle to be changed. As one example, the structure of the support portion B that allows the angle to be changed may be a structure that has a coupling portion **3** between the support portion B and the maintaining portion **2** of the half mirror **1** and allows the angle of the mirror surface **4** of the half mirror **1** to be changed with the coupling portion **3** as a center of rotation by moving an end portion of the mirror surface **4** (spaced away from the coupling portion **3**) (for example, an end portion of the mirror surface that is opposite to an end portion of the mirror surface near the coupling portion **3**) that faces the coupling portion **3** in a vertical direction relative to the installation surface of the support portion B to change the angle. In FIG. **2**, a schematic view of one embodiment of the coupling portion described as one example above is illustrated. The coupling portion **3** shown in FIG. **2** is made of a bolt and a nut and is generally fixed while an angle indicator **6** is set to the 90° direction (horizontal direction). In addition, the angle of the mirror surface **4** may be freely changed by loosening the nut, setting an angle at a predetermined angle, and then fixing the nut again. The angle after a change is made may be checked with angle scales **7** (the scales and numerical values are not illustrated in detail in FIG. **2**).

[0057] A combination-type putting practice device of the present invention is a combination of: a golf putting practice device I including a main body portion A having at least a half mirror **1** formed in a flat plate shape and a support portion B maintaining the main body portion A in the air, wherein the support portion B has a structure configured to maintain a mirror surface **4** of the half mirror **1**, which is provided at the main body portion A, in a substantially horizontal direction, the main body portion A further has a maintaining portion **2** configured to maintain the half mirror **1**, the mirror surface **4** of the half mirror **1** has a substantially rectangular shape, and the maintaining portion **2** at least has two flat plates **10** that are disposed along two long sides of the mirror surface **4** having the substantially rectangular shape and are parallel to and face each other while the mirror surface **4** is disposed therebetween, the two flat plates **10** parallel to each other generally being perpendicular to the mirror surface **4** and having upper surfaces **11** that are present on the same plane and each have a rectangular shape substantially parallel to the mirror surface **4**; and a putting practice mat II including two linear lines **12** that are parallel to each other, each have a rectangular shape, and are substantially parallel to long sides of the rectangular shapes of the upper surfaces **11** of the two flat plates **10** of the maintaining portion **2**, wherein an inner distance d**2** between two long sides of the rectangular shapes of the two linear lines **12** is greater than an inner distance d**1** between the two long sides of the rectangular shapes of the upper surfaces **11** of the two flat plates **10**, and widths d**4** and d**4'** of the rectangular shapes of the two linear lines **12** are greater than widths d**3** and d**3'** of the rectangular shapes of the upper surfaces **11** of the two flat plates **10**. Preferably, in the golf putting practice device I, the support portion B may further have a structure that allows an angle of the mirror surface **4** of the half mirror **1**, which is provided at the main body portion A, to be changed within 20°, preferably within 15°, more preferably within 10°, and even more preferably within 7°, from the horizontal direction. The golf putting practice device I used in the combination-type putting practice device is basically the same as the golf putting practice device of the present invention that has been described above.

[0058] FIG. **11** is a perspective view illustrating one aspect of the combination-type putting practice device of the present invention, and FIG. **12** is a schematic view illustrating a top view (A) of one embodiment of the half mirror **1** and the maintaining portion **2** maintaining the same that are included in the golf putting practice device I in the combination-type putting practice device illustrated in FIG. **11** and a top view (B) of one embodiment of the putting practice mat II. The half mirror **1** is maintained by the maintaining portion **2**, and the shape of the half mirror **1** is substantially rectangular. The sizes of the long sides and short sides of the half mirror **1** are the same as described above, and preferably, each long side may range from 8 to 16 cm, and each short side may range from 2 to 6 cm. The maintaining portion **2** maintaining the half mirror **1** of the main body portion A at least has two flat plates **10** that are disposed along the two long sides of the substantially rectangular mirror surface **4** of the half mirror **1** and are parallel to and face each other while the mirror surface **4** is disposed therebetween. The two flat plates **10** parallel to each other are generally perpendicular to the mirror surface **4**. In addition, the upper surfaces **11** of the two flat plates **10** parallel to each other both have a rectangular shape, and the two rectangular surfaces are present on the same plane and are substantially parallel to the mirror surface **4** (this also includes a case in which the two rectangular surfaces **11** and the mirror surface **4** are present on the same plane). Preferably, the two rectangular shapes may be in a congruent relationship, and more preferably, the two flat plates **10** may be in a congruent relationship. The widths d**3** and d**3'** of the substantially rectangular shapes of the two upper surfaces **11** (lengths of the short sides of the rectangular shapes) may both range preferably from 3 to 20 mm, more preferably from 3 to 10 mm, and even more preferably from 3 to 7 mm. In addition, the lengths of the substantially rectangular shapes of the two upper surfaces **11** (lengths of the long sides of the rectangular shapes) may preferably be greater than or equal to the lengths of the long sides of the half mirror **1** being maintained and may preferably be about 2 to 5 times the lengths of the long sides of the half mirror **1**. The inner distance d**1**

between the two long sides of the rectangular shapes of the upper surfaces **11** of the two flat plates **10** may range from 20 to 60 mm, preferably from 35 to 45 mm, and preferably, the inner distance d**1** may be the same as the length of the short side of the mirror surface **4** of the half mirror **1** having a substantially rectangular shape.

[0059] The putting practice mat II used in combination with the golf putting practice device of the present invention includes two linear lines **12** that are parallel to each other and each have a rectangular shape. The two linear lines **12** may both be substantially parallel to the long sides of the rectangular shapes of the upper surfaces **11** of the two flat plates **10** of the maintaining portion **2**, and the inner distance d**2** between the two long sides of the rectangular shapes of the two linear lines **12** is greater than the inner distance d**1** between the two long sides of the rectangular shapes of the upper surfaces **11** of the two flat plates **10**. The inner distance d**2** between the two long sides of the rectangular shapes of the two linear lines **12** parallel to each other may range preferably from 50 to 70 mm, and more preferably from 55 to 65 mm. In addition, the widths d**4** and d**4'** of the rectangular shapes of the two linear lines **12** parallel to each other (lengths of the short sides of the rectangular shapes) may both range preferably from 8 to 12 mm, and more preferably from 9 to 11 mm. The putting practice mat may be strip-shaped and have a substantially rectangular shape. A length (length of the long side) of the rectangular shape is not particularly limited as long as the length is greater than or equal to 2 to 3 times the length of the substantially rectangular shape of each of the two upper surfaces **11** (the length of the long side of the rectangular shape), and the length may be about 50 times thereof at maximum and may be appropriately determined according to a method of usage, a place of usage, and the like. Meanwhile, a width (length of the short side of the rectangular shape) may have any size as long as the two linear lines **12** parallel to each other and each having a rectangular shape can be provided.

[0060] In the combination-type putting practice device of the present invention, a method of combining the long sides of the rectangular shapes of the upper surfaces **11** of the two flat plates **10** of the maintaining portion **2** of the golf putting practice device I and the two linear lines **12** parallel to each other and each having a rectangular shape, which are provided on the putting practice mat II, so that they are substantially parallel to each other is not particularly limited, and a user may use any method to easily combine them. One example is as follows. The mirror surface **4** of the half mirror **1** of the main body portion A of the golf putting practice device I preferably has a rectangular shape, a linear line of a predetermined width is formed from a midpoint of each of the short side and the long side in a direction parallel to each of the short side and the long side on the mirror surface **4**, and the linear lines are orthogonal to each other and form a cross shape. Meanwhile, on the putting practice mat II, through a bisector point of the inner distance d**2** between two long sides **14** of the rectangular shapes of the two linear lines **12**, that is, a length between the two long sides **14** along a linear line perpendicular to the two long sides **14**, a linear line **13** having any size, preferably, having a length ranging from 20 to 50 cm and a width ranging from 2 to 10 mm, is formed to be parallel to the rectangular shapes of the two linear lines **12**, a linear line **13'** having any size, preferably, having a length that exceeds the inner distance d**2** between the two long sides **14** of the rectangular shapes of the two linear lines **12** and is less than the width of the mat II and having a width ranging from 2 to 10 mm, is formed to be orthogonal to the linear line **13** near a midpoint of the linear line **13**, and the linear lines **13** and **13'** orthogonal to each other form a cross shape. A user may easily combine the golf putting practice device I and the putting practice mat II by setting the mirror surface **4** of the half mirror **1** to be horizontal and then moving and installing the golf putting practice device I so that, for example, his or her eyes reflected in the mirror surface **4** are aligned with the center of the cross shape drawn on the mirror surface **4** and the center of the cross shape drawn on the putting practice mat II in a straight line, and the linear lines forming the two cross shapes overlap each other.

[0061] Hereinafter, a golf putting practice device and a method of using the same according to the present invention will be described in detail using examples, but the present invention is not limited by the examples.

EXAMPLES

Example 1

[0062] FIG. **3** illustrates a golf putting practice device of the present invention that is used in Example 1. The putting practice device is the same as the device illustrated in FIG. **1** and adopts the structure illustrated in FIG. **2** as a structure of a support portion B that allows an angle to be changed. A main body portion A has a half mirror **1** formed in a flat plate shape and a maintaining portion **2** maintaining the same, and the half mirror **1** is maintained by fitting one end of long sides of the half mirror **1** into the maintaining portion **2**. A mirror surface **4** of the half mirror **1** has a substantially rectangular shape whose long sides **8** have a size of 50 cm and whose short sides **9** have a size of 20 cm. On the mirror surface **4**, two linear lines that are orthogonal to each other at almost the center of the mirror surface **4**, are respectively parallel to the long sides and the short sides of the mirror surface **4**, and each have a width of about 2 mm are drawn by being printed across the entire length of each of the long sides and the short sides. In addition, due to a structure **5** configured to adjust a distance in the direction of gravity (a height h) from an installation surface g of the putting practice device to the mirror surface **4** of the half mirror **1**, the height h is adjustable within a range of 50 to 100 cm.

[0063] The mirror surface **4** of the half mirror **1** is installed in a substantially horizontal direction, and the height h of the mirror surface **4** is adjusted to 70 cm to correspond to the height (168 cm) of a player K and ensure that both eyes e of the player K are reliably reflected at a large size in the mirror surface **4**. Then, a commercially available putter mat (that has a ball cup provided at an end of strip-shaped artificial grass and does not have a ball guide line, such as a white line, drawn) is installed so that the ball cup is on an extension line of the linear line visibly drawn in the direction of the long sides of the mirror surface **4**. In the present example, the putter mat is used as described above for indoor practice at home, but such a commercially available putter mat may be used or not used, and whether or not the putter mat is used is irrelevant to the present invention.

[0064] The player K stands at address as illustrated in FIG. **3**. Then, a golf ball GB is placed so that a substantially center of the golf ball GB is almost directly below a point where the two linear lines drawn on the mirror surface **4** intersect. Here, since the left eye e of the player K is the dominant eye,

it is ensured that the left eye e of the player K is reflected in the mirror surface **4** directly above the golf ball visible through the half mirror **1**. In this state, a linear line connecting the substantially center of the golf ball GB, the point where the two linear lines drawn on the mirror surface **4** intersect (the center of the cross shape), and the left eye e becomes a straight line, and the left eye e of the player K is present directly above the golf ball GB. Then, the right eye e is placed on the linear line drawn in the direction of the long sides of the mirror surface **4** so that both eyes are almost parallel to the long sides of the mirror surface **4**. In addition, a face of a putter head PH is brought close to the golf ball and paused. FIG. **4** illustrates the golf ball GB and the putter head PH visible through the half mirror **1** and both eyes e, face, and part of the body, such as the shoulders, of the player reflected in the mirror surface **4** at this time. With such a state as default, the player K performs putting while maintaining such a state, that is, without moving the positions of the eyes e. The player K practices putting by repeating this movement.

[0065] Accordingly, in putting, it becomes possible for the player K to, while reliably looking at the golf ball GB in a direction that is 90° from a surface on which the golf ball GB is placed (a surface of the green), that is, while reliably looking at the golf ball GB from directly above the golf ball GB, check the moment the face of the putter head PH comes into contact with the golf ball GB and a following series of movement (a target line) of the golf ball GB, such as rolling of the golf ball GB, and perform repeated putting practice. Further, since the player K is able to view both eyes e, face, and part of the body, such as the shoulders, reflected in the half mirror **1**, it is possible for the player K to practice aligning both eyes e with the target line and placing the face and part of the body, such as the shoulders, parallel to the target line before and after putting. In addition, since the player K is able to reliably check the moment the face of the putter head PH comes into contact with the golf ball GB with both eyes, the player K is able to clearly check whether the face of the putter head PH is in contact with the golf ball GB at a right angle.

Example 2

[0066] The device of Example 1 is used in Example 2. The player K has experienced that the above-described effects are obtained when practice is done with the stance described in Example 1 using the putting practice device of Example 1. However, the player K has also realized that it is not easy to repeatedly continue the putting stance because the height of the player K is 168 cm, which is relatively short. Accordingly, the player K repeats putting practice in the same manner as in Example 1 while changing the angle of the mirror surface **4** of the half mirror **1** by 1° each time from a substantially horizontal direction) (90° to 80° and finds an angle at which the player K is able to hit the golf ball straight toward a first target while at his or her most comfortable stance. As a result, it becomes possible for the player K to continue the putting practice described in Example 1 with ease when the angle of the mirror surface **4** is set to 85°, that is, when the angle at which the player K views the golf ball (an angle between a contact surface of the golf ball and a line connecting the left eye of the player K, the point where the two linear lines drawn on the mirror surface **4** intersect, and the substantially center of the golf ball) is set to 85°. Accordingly, it is possible for the player K to acquire a putting posture suitable for the player K and increase reproducibility of the putting posture through repeated practice. In addition, as a result of using a putter that is customized for the player K and has a lie angle suitable for the above angle, the player K is able to significantly improve putting techniques through practice using the putting practice device.

Example 3

[0067] In Example 3, the player K of Example 1 uses the device of Example 1 to practice reliably checking a target line before and after putting. However, for both eyes e of the player K to be more reliably reflected at a larger size in the mirror surface **4**, the height h of the mirror surface **4** is adjusted to 100 cm. For checking the target line, it is fundamental to turn the neck so that both eyes e move along the target line as illustrated in FIG. **5**(I). However, it is very difficult to move both eyes in that manner, and even when the player thinks he or she is moving both eyes e in that manner, the player may actually be moving both eyes e as illustrated in FIG. **5** (II). The player K repeatedly practices turning the neck to move both eyes e along the line in the direction of the long side drawn on the mirror surface **4** of the half mirror **1** without hitting the golf ball. Then, the player K repeats the same practice after adjusting the angle of the mirror surface **4** to 85°.

[0068] In the golf putting practice device of the present invention, since both eyes e of the player K can be reliably reflected at a large size in the mirror surface **4**, the practice of moving both eyes e along the target line can be effectively performed. In addition, a device that allows both eyes e to be reliably reflected as described above is not present in golf putting practice devices known in the art, and thus putting practice cannot be effectively performed therewith.

Example 4

[0069] FIG. **6** illustrates a golf putting practice device of the present invention that is used in Example 4. The structure illustrated in FIG. **2** is adopted as a structure of a support portion B that allows an angle to be changed. A main body portion A has a half mirror **1** formed in a flat plate shape and a maintaining portion **2** maintaining the same. A mirror surface **4** of the half mirror **1** has a substantially rectangular shape whose long sides **8** have a size of 50 cm and whose short sides **9** have a size of 5 cm. On the mirror surface **4**, two linear lines that are orthogonal to each other at almost the center of the mirror surface **4**, are respectively parallel to the long sides and the short sides of the mirror surface **4**, and each have a width of about 2 mm are drawn by being printed across the entire length of each of the long sides and the short sides. In addition, due to a structure **5** configured to adjust a distance in the direction of gravity (a height h) from an installation surface g of the putting practice device to the mirror surface **4** of the half mirror **1**, the height h is adjustable within a range of 20 to 50 cm.

[0070] The mirror surface **4** of the half mirror **1** is installed in a substantially horizontal direction, and the height h of the mirror surface **4** is adjusted to 40 cm. The putting practice device being used is easy to transport due to being relatively compact and lightweight and is installed on the actual green to practice putting. The putting practice is performed in the same manner as in Example 1. FIG. **7** shows the golf ball GB and the putter head PH visible through the half mirror **1** and

both eyes e of the player K reflected in the mirror surface **4** while the putter head PH is paused. With such a state as default, the player K performs putting while maintaining such a state, that is, without moving the positions of the eyes e. The player K practices putting by repeating this movement. Then, the player K performs putting practice to practice putting without moving the positions of the eyes e until the moment the putter head PH comes into contact with the golf ball GB and then turning the neck to move both eyes along the target line to check whether the golf ball GB is reliably moving along the target line. In the putting practice, since the short sides of the mirror surface **4** are 5 cm, are short, and are not much different from 43 mm, which is the diameter of the golf ball, the player K is able to clearly check whether the golf ball GB advances along the target line after putting. In addition, the player K performs practice identical to that described above after adjusting the angle of the mirror surface **4** of the half mirror **1** to the angle found in Example 2 above, that is, to 85°.

Example 5

[0071] In the present example, putting is practiced using a golf putting practice device of the present invention shown in FIG. **8**. The golf putting practice device of the present invention shown in FIG. **8** is a golf putting practice device further including a half mirror **1'** allowing an angle of a mirror surface **4'** to be changed towards a movement direction (target line) of the golf ball, in comparison to the golf putting practice device used in Example 4 shown in FIGS. **6** and **7**. The mirror surface **4'** of the half mirror **1'** has a substantially rectangular shape whose long sides **8'** have a size of 10 cm and whose short sides **9'** have a size of 5 cm. On the mirror surface **4'**, two linear lines that are orthogonal to each other at almost the center of the mirror surface **4'**, are respectively parallel to the long sides and the short sides of the mirror surface **4'**, and each have a width of about 2 mm are drawn by being printed across the entire length of each of the long sides and the short sides. The angle of the mirror surface **4'** of the half mirror **1'** is adjustable in a range of 0 to 90° relative to the horizontal direction. This putting practice device is a device for allowing the player to, when previewing a target to which the golf ball GB should be hit or after hitting the golf ball GB, check whether both eyes e are moving along the target line and correct his or her neck movement for the neck to move along the target line to acquire a correct putting posture. FIG. **9** illustrates a perspective view of the golf putting practice device used here, and FIG. **10** illustrates an enlarged view of the half mirror **1'** of the golf putting practice device used here.

[0072] The player K performs putting practice in the same manner as in Example 4. The golf ball GB and the putter head PH visible through the half mirror **1** and both eyes e of the player K reflected in the mirror surface **4** while the putter head PH is paused are shown on the right side in FIG. **8**(I). With such a state as default, the player K first performs putting while maintaining such a state, that is, without moving the positions of the eyes e. The player K practices putting by repeating this movement. Then, the player K performs putting without moving the positions of the eyes e until the moment the putter head PH comes into contact with the golf ball GB, and then while checking whether the golf ball GB is reliably moving along the target line by turning his or her neck for both eyes to move along the target line, checks both eyes reflected in the mirror surface **4'** of the half mirror **1'** while the mirror surface **4'** has a predetermined angle (here, about 60° relative to the horizontal direction) towards the movement direction (target line) of the golf ball. At this time, the player K checks whether both eyes reflected in the mirror surface **4'** are on a central line (target line) in the longitudinal direction of the mirror surface **4'**. When both eyes are present on the central line (target line) as in the mirror surface **4'** shown on the left side in FIG. **8**(I), the turning of the neck after hitting the golf ball GB is favorable, but when both eyes are not present on the central line (target line), the turning of the neck is not favorable. The player K is able to acquire a better putting posture by performing repeated putting practice to improve the turning of the neck after hitting the golf ball GB.

[0073] Since it becomes possible for the player K to find his or her own proper putting posture and repeat the putting posture with high reproducibility by repeating the putting practice of Examples 1 to 5, putting techniques are rapidly improved. However, the player K has experienced some feelings of discomfort when looking at the golf ball GB during the practice. Then, the player K performs repeated practice using the putting practice device of FIG. **6** to find out where the feelings of discomfort come from. As a result, the player K has recognized that, when the left eye e, which is the dominant eye, is placed directly above the center of the golf ball GB at a point (the center of the cross shape) where the two linear lines drawn on the mirror surface **4** intersect, it is somewhat difficult to view the moment the putter head PH comes into contact with the golf ball GB. Then, the player K has thought that, when the golf ball GB is set so that a right end of the golf ball GB comes into contact with the point where the two linear lines drawn on the mirror surface **4** intersect, it may be possible to more clearly and reliably check the moment the putter head PH comes into contact with the golf ball GB. Then, as a result of repeating putting practice using the device while the ball is placed at such a position, the feelings of discomfort experienced before are eliminated, and putting techniques can be further improved. In this way, since the player K is also able to find the ball position most preferable for the player K, an improvement in putting techniques can be promoted. In addition, since the position at which the golf ball GB is placed may be different for each player and may also be somewhat different according to whether the dominant eye is the left eye or the right eye, it is necessary for each player to find a proper ball position using the golf putting practice device of the present invention, and the proper ball position can be easily found when the golf putting practice device of the present invention is used. Moreover, when the golf putting practice device of the present invention is used, both eyes of the player are always reflected in the mirror surface **4** of the half mirror **1** while putting is performed. Therefore, it becomes possible for the player to always place the golf ball, based on his or her eyes reflected in the mirror surface **4**, at an optimal golf ball position found as described above, regardless of the point (the center of the cross shape) where the two linear lines drawn on the mirror surface **4** intersect. Accordingly, even when the optimal golf ball position is slightly different for each player, it becomes possible for each player to always place the golf ball at an accurate position based on the player's eyes. In addition, each player may place the golf ball at his or her own optimal position and repeat putting practice by looking at the golf ball placed at the optimal position. Then, accordingly, it becomes possible

for the player to repeat a putting posture most suitable for the player with high reproducibility even without the putting practice device of the present invention.

Example 6

[0074] FIG. **11** illustrates a combination-type putting practice device of the present invention that is used in Example 6, and FIG. **12** illustrates a top view (A) of a half mirror **1** and a maintaining portion **2** maintaining the same that are included in a golf putting practice device I of the combination-type putting practice device and a top view (B) of a putting practice mat II used in combination with the putting practice device I. The overall configuration of the golf putting practice device I used here is basically the same as the device illustrated in FIG. **6**, but the golf putting practice device I has a structure in which the angle is changed in a so-called dial manner, and the angle is able to be changed and set more easily and accurately. A mirror surface **4** of the half mirror **1** has a substantially rectangular shape whose long sides **8** have a size of 12 cm and whose short sides **9** have a size of 4 cm. On the mirror surface **4**, two linear lines that are orthogonal to each other at almost the center of the mirror surface **4**, are respectively parallel to the long sides and the short sides of the mirror surface **4**, and each have a width of about 2 mm are drawn by being printed across the entire length of each of the long sides and the short sides. In addition, due to a structure **5** configured to adjust a distance in the direction of gravity (a height h) from an installation surface g of the putting practice device to the mirror surface **4** of the half mirror **1**, the height h is adjustable within a range of 20 to 100 cm. A main body portion A of the golf putting practice device I further has the maintaining portion **2** configured to maintain the half mirror **1**, and the maintaining portion **2** has two flat plates **10** substantially parallel to each other that are disposed along two long sides **8** of the mirror surface **4** having a substantially rectangular shape, face each other with the mirror surface **4** disposed therebetween, and are substantially perpendicular to the mirror surface **4**. In addition, upper surfaces **11** of the two flat plates **10** both have a substantially rectangular shape, and the short sides (widths d**3** and d**3'**) of the substantially rectangular shapes of the upper surfaces **11** of the two flat plates **10** are 5 mm, and the long sides (lengths) thereof are 500 mm. Moreover, the upper surfaces **11** of the two flat plates **10** are present on the same plane and are substantially parallel to the mirror surface **4**. In addition, an inner distance d**1** between the two long sides of the rectangular shapes of the upper surfaces **11** of the two flat plates **10** is 40 mm.

[0075] Meanwhile, the putting practice mat II used in combination with the putting practice device I is strip-shaped and has a substantially rectangular shape whose widths (short sides) have a size of about 20 cm and whose lengths (long sides) have a size of about 5 m. On the putting practice mat II, two linear lines **12** parallel to each other and each having a rectangular shape are provided across the entire length of the mat II while being substantially parallel to the long sides of the mat II. Widths d**4** and d**4'** of the rectangular shapes (short sides of the rectangular shapes) of the two linear lines **12** parallel to each other are both 10 mm, and an inner distance d**2** between the two long sides of the rectangular shapes of the two linear lines **12** is 60 mm. In addition, with a ½ point of the inner distance d**2** between the two long sides of the rectangular shapes of the two linear lines **12** as the center, a linear line **13** having a width of about 4 mm and a length of about 35 cm is formed parallel to the linear lines **12**, a linear line **13'** having a width of about 4 mm and a length of about 35 cm is formed to be orthogonal to the linear line **13** at almost the center of the linear line **13** in the longitudinal direction thereof, and a cross shape is formed by the two linear lines **13** and **13'**. On the putting practice mat II used here, at each of almost the center of the mat in the longitudinal direction of the mat, a point that is about 60 cm in front of almost the center, and a point that is about 60 cm behind almost the center, two linear lines forming a cross shape together are formed, and thus a total of three cross shapes are formed.

[0076] For use of the combination-type putting practice device of the present invention, the golf putting practice device I and the putting practice mat II are combined with each other so that the two linear lines **12** parallel to each other and each having a rectangular shape, which are provided at the mat II, become substantially parallel to the long sides of the rectangular shapes of the upper surfaces **11** of the two flat plates **10** of the maintaining portion **2** of the golf putting practice device I. A method of combining the golf putting practice device I and the putting practice mat II is not particularly limited, but in the combination-type putting practice device used in the present example, the mirror surface **4** of the half mirror **1** formed in a flat plate shape is set to be substantially horizontal by the support portion B of the putting practice device I, and the putting practice device I and the putting practice mat II are combined so that the cross shape formed by the two linear lines drawn on the mirror surface **4** and orthogonal to each other matches the cross shape at the center among the three cross shapes provided on the mat II. That is, a person combining the putting practice device I and the putting practice mat II, in this case, a player K, ensures that his or her eyes reflected in the mirror surface **4** of the half mirror **1** and the center of the two remaining cross shapes overlap in a straight line, and the corresponding lines constituting the two cross shapes overlap. Then, the player K stands at address while holding a putter and sets the golf ball GB on the linear lines forming the cross shape, which are parallel to the two linear lines **12** each having a rectangular shape, so that the right end of the golf ball GB comes into contact with the center of the cross shape. Then, the player K adjusts the distance in the direction of gravity (the height h) from the installation surface g of the putting practice device to the mirror surface **4** of the half mirror **1** so that the rectangular shapes of the upper surfaces **11** of the two flat plates **10** of the maintaining portion **2** and the two linear lines **12** parallel to each other and each having a rectangular shape, which are provided on the mat II, visibly constitute a straight line while the player K is at address. In the case of the player K, the height h is about 49 cm. Then, using the combination-type putting practice device set as described above, the player K performs repeated putting practice by turning the neck so that both eyes (gaze) of the player K are always present in a portion within the rectangular shapes of the upper surfaces **11** of the two flat plates **10** of the maintaining portion **2** and the two linear lines formed by the two linear lines **12** parallel to each other and each having a rectangular shape, which are provided on the mat II, along the long sides of the linear lines drawn on the mirror surface **4** of the half mirror **1** and orthogonal to each other and extension lines thereof, that is, along the straight line formed as described above. Accordingly, it is possible for the player K to acquire a putting

posture suitable for the player K and repeat the posture with high reproducibility even without using the combination-type putting practice device.

[0077] Then, using the combination-type putting practice device, the player K practices putting in the same manner as in Example 2, and by changing the angle of the mirror surface **4** of the half mirror **1** of the putting practice device I from a substantially horizontal direction) (90°, finds an angle at which the player K is able to hit the golf ball straight toward a target while at his or her most comfortable stance. As a result, it is confirmed that, when the angle of the mirror surface **4** is set to 85° as in the case of Example 2, the player K is able to continue the putting practice with ease. The player K sets the mirror surface **4** of the half mirror **1**, formed in a flat plate shape, of the putting practice device I to an angle of 85° and combines the putting practice device I and the putting practice mat II in the same manner as described above to prepare the combination-type putting practice device. At this time, while the angle of the mirror surface **4** is 85°, the player K ensures that his or her eyes reflected in the mirror surface **4** and the center of the two cross shapes overlap in a straight line, and the corresponding lines constituting the two cross shapes overlap. Then, the player K performs repeated putting practice in the same manner as described above. Accordingly, it is possible for the player K to acquire a putting posture suitable for the player K and repeat the posture with high reproducibility even without using the combination-type putting practice device. Then, in order to prevent forgetting the putting posture acquired as described above, the player K repeatedly practices frequently using the combination-type putting practice device to be able to almost perfectly reproduce his or her putting posture. In addition, the putting practice device I illustrated in FIGS. **8** to **10** may also be used.

INDUSTRIAL APPLICABILITY

[0078] Since a golf putting practice device of the present invention can promote a significant improvement in putting techniques of a golf player, the golf putting practice device is expected to be used by many golf players in the future and is expected to eventually make a great contribution to the golf industry.

DESCRIPTION OF REFERENCE NUMERALS

[0079] A: main body portion of golf putting practice device

[0080] B: support portion of golf putting practice device

[0081] GB: golf ball

[0082] PH: putter head

[0083] e: player's eyes

[0084] g: installation surface of golf putting practice device

[0085] h: distance (height) in direction of gravity from installation surface g of golf putting practice device to mirror surface **4** of half mirror **1**

[0086] **1**: half mirror formed in flat plate shape

[0087] **2**: maintaining portion of half mirror **1**

[0088] **3**: coupling portion between support portion B and maintaining portion **2** of half mirror **1**

[0089] **4**: mirror surface of half mirror **1**

[0090] **5**: structure for height adjustment

[0091] **6**: angle indicator

[0092] **7**: angle scales

[0093] **8**: long sides of mirror surface **4** of half mirror **1**

[0094] **9**: short sides of mirror surface **4** of half mirror **1**

[0095] **10**: two flat plates of maintaining portion **2** maintaining half mirror **1**

[0096] **11**: upper surfaces of two flat plates of maintaining portion **2** maintaining half mirror **1**

[0097] **12**: two linear lines parallel to each other and each having rectangular shape that are provided on putting practice mat II

[0098] **13**, **13'**: linear lines forming cross shape on putting practice mat II

[0099] **14**: two long sides of rectangular shapes of two linear lines **12** of putting practice mat II

[0100] I: golf putting practice device of combination-type putting practice device

[0101] II; putting practice mat of combination-type putting practice device

[0102] d**1**: inner distance between neighboring long sides **8** of rectangular shapes of upper surfaces **11** of two flat plates of maintaining portion **2** maintaining half mirror **1**

[0103] d**2**: inner distance between neighboring long sides **14** of rectangular shapes of two linear lines **12** parallel to each other of putting practice mat II

[0104] d**3**, d**3'**: widths of substantially rectangular shapes (lengths of short sides of rectangular shapes) of upper surfaces **11** of two flat plates **10** parallel to each other

[0105] d**4**, d**4'**: widths of rectangular shapes of two linear lines **12** parallel to each other and each having rectangular shape that are provided on putting practice mat II

1. A golf putting practice device comprising:

a main body portion (A) having at least a half mirror (**1**) formed in a flat plate shape; and

a support portion (B) maintaining the main body portion (A) in the air,

wherein the support portion (B) has a structure configured to maintain a mirror surface (**4**) of the half mirror (**1**), which is provided at the main body portion (A), in a substantially horizontal direction.

2. The golf putting practice device of claim **1**, wherein the support portion (B) further has a structure that allows an angle of the mirror surface (**4**) of the half mirror (**1**), which is provided at the main body portion (A), to be changed within 20° from the horizontal direction.

3. The golf putting practice device of claim **2**, wherein:

the main body portion (A) further has a maintaining portion (**2**) configured to maintain the half mirror (**1**); and

the structure of the support portion (B) that allows the angle to be changed has a coupling portion (**3**) between the support portion (B) and the maintaining portion (**2**) and allows the angle of the mirror surface (**4**) of the half mirror (**1**) to be changed with the coupling portion (**3**) as a center of rotation by moving an end portion of the mirror surface (**4**), which faces the coupling portion (**3**), in a vertical direction relative to an installation surface (g) of the support portion (B).

4. The golf putting practice device of any one of claim **1**, wherein the support portion (B) has a structure configured to adjust a distance in a direction of gravity (height (h)) from

the installation surface (g) of the golf putting practice device to the mirror surface (**4**) of the half mirror (**1**).

5. The golf putting practice device of any one of claim **1**, wherein the mirror surface (**4**) of the half mirror (**1**) has a substantially rectangular shape whose long side ranges from 5 to 60 cm and whose short side ranges from 2 to 30 cm.

6. A combination-type putting practice device comprising:

a golf putting practice device (I) including a main body portion (A) having at least a half mirror (**1**) formed in a flat plate shape and a support portion (B) maintaining the main body portion (A) in the air, wherein the support portion (B) has a structure configured to maintain a mirror surface (**4**) of the half mirror (**1**), which is provided at the main body portion (A), in a substantially horizontal direction, the main body portion (A) further has a maintaining portion (**2**) configured to maintain the half mirror (**1**), the mirror surface (**4**) of the half mirror (**1**) has a substantially rectangular shape, the maintaining portion (**2**) at least has two flat plates (**10**) that are disposed along two long sides of the mirror surface (**4**) having the substantially rectangular shape, are parallel to and face each other, and are perpendicular to the mirror surface (**4**) while the mirror surface (**4**) is disposed therebetween, and upper surfaces (**11**) of the two flat plates (**10**) are present on the same plane and each have a rectangular shape substantially parallel to the mirror surface (**4**); and

a putting practice mat (II) including two linear lines (**12**) that are parallel to each other, each have a rectangular shape, and are substantially parallel to long sides of the rectangular shapes of the upper surfaces (**11**) of the two flat plates (**10**) of the maintaining portion (**2**), wherein an inner distance (d**2**) between two long sides of the rectangular shapes of the two linear lines (**12**) is greater than an inner distance (d**1**) between the two long sides of the rectangular shapes of the upper surfaces (**11**) of the two flat plates (**10**), and widths (d**4**, d**4'**) of the rectangular shapes of the two linear lines (**12**) are greater than widths (d**3**, d**3'**) of the rectangular shapes of the upper surfaces (**11**) of the two flat plates (**10**).

7. The combination-type putting practice device of claim **6**, wherein the support portion (B) further has a structure that allows an angle of the mirror surface (**4**) of the half mirror (**1**), which is provided at the main body portion (A), to be changed within 20° from the horizontal direction.

8. The combination-type putting practice device of claim **6**, wherein the inner distance (d**1**) between the two long sides of the rectangular shapes of the upper surfaces (**11**) of the two flat plates (**10**) ranges from 20 to 60 mm, the inner distance (d**2**) between the two long sides of the rectangular shapes of the two linear lines (**12**) parallel to each other of the putting practice mat (II) ranges from 50 to 70 mm, the widths (d**3**, d**3'**) of the rectangular shapes of the upper surfaces (**11**) of the two flat plates (**10**) both range from 3 to 10 mm, and the widths (d**4**, d**4'**) of the rectangular shapes of the two linear lines (**12**) parallel to each other of the putting practice mat (II) both range from 8 to 12 mm.

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