

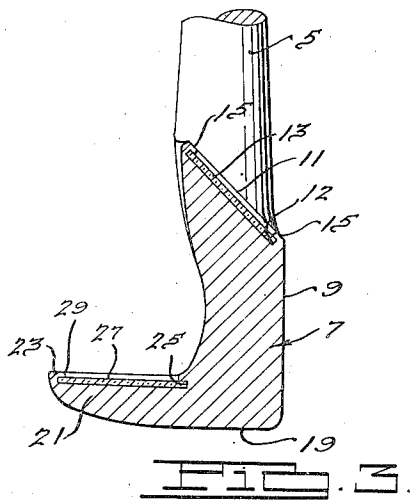
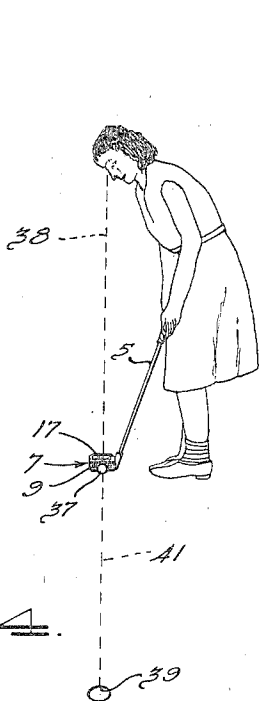
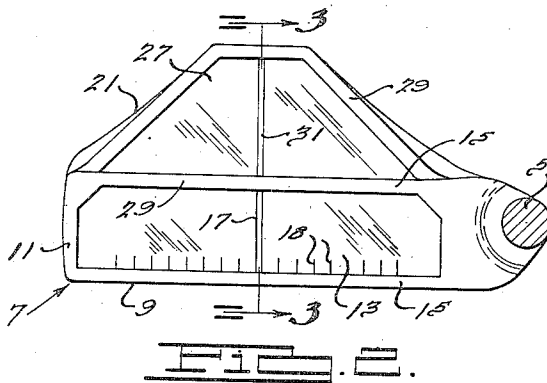
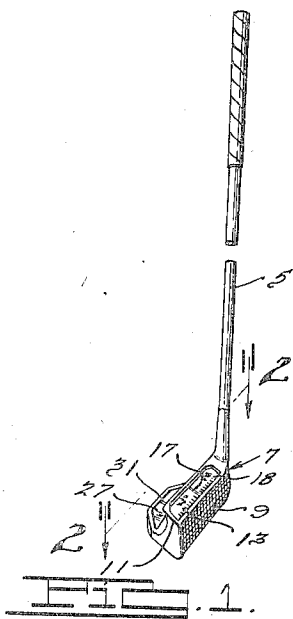
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GOLF PUTTER

2,463,798

Filed March 24, 1948

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

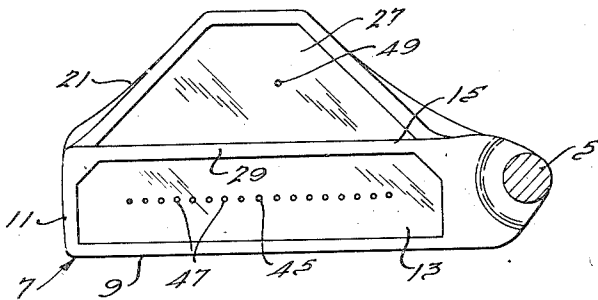


FIG. 5.

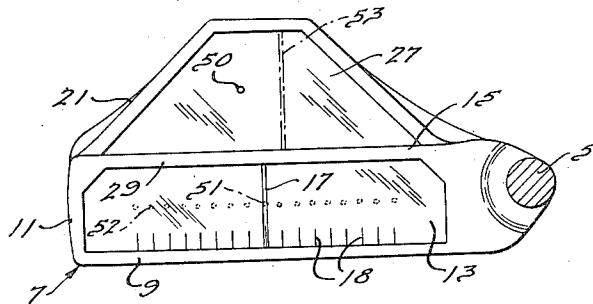


FIG. 6.

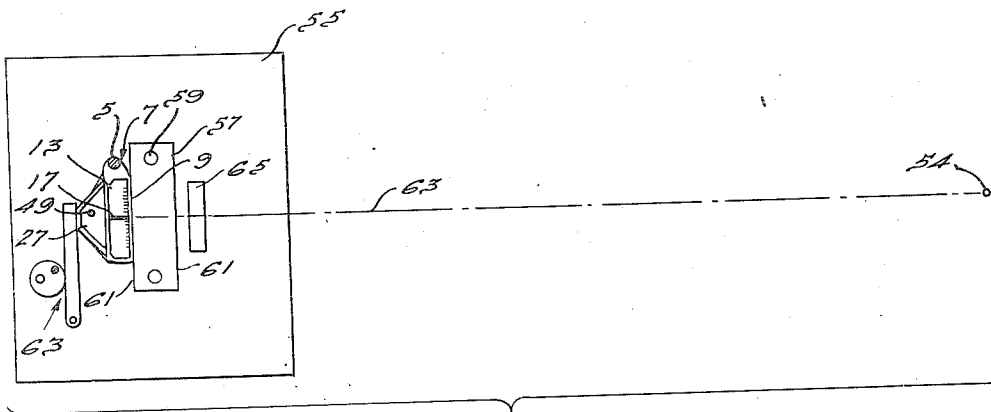


FIG. 7.

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2,463,798

GOLF PUTTER

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Application March 24, 1948, Serial No. 16,691

8 Claims. (Cl. 273-77)

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This invention relates generally to a golf putter for putting a golf ball into a conventional cup in a golf course green, and more particularly to a golf putter employing a sighting device for enabling the user of the putter to positively position the striking face of the latter perpendicular to the desired path of movement of a golf ball between the putter and the cup in the golf course green.

This invention is a continuation in part of my copending application, Serial No. 778,887, filed October 9, 1947, which has become abandoned.

The principal objects of this invention are to provide an improved golf putter having a sighting device incorporated in the head thereof so as to permit the user of the putter to positively position the striking face thereof in a perpendicular relationship to the desired path of movement of a golf ball between the putter head and the cup in the golf course green; to provide a golf putter of the aforementioned type in which the sighting device incorporates an inclined mirror disposed above the striking face of the putter, which has a reference indicia thereon adapted to be aligned by a user with a flag pin, in the cup in a golf course green, and a horizontal mirror having a reference indicia thereon with which the user of the putter aligns the image of his eyes; to provide a golf putter of the aforementioned type in which the aforementioned mirrors are embedded in the putter head so as to be protected against any flat blows to which the putter head may be subjected; to provide an improved golf putter of the aforementioned type in which the horizontal mirror is disposed rearwardly of the inclined mirror and the striking face of the putter head and below the inclined mirror so as to be adjacent the bottom of the putter head so as to provide a more desirably balanced and weighted putter; to provide a golf putter of the aforementioned type which is especially neat in appearance, relatively inexpensive to manufacture, exceptionally efficient in operation, and rugged in construction.

These and other objects of this invention will become apparent from the following detailed description taken in conjunction with the accompanying drawings in which:

Figure 1 is a perspective view of one embodiment of the golf putter of this invention;

Fig. 2 is a view partially in elevation and partially in section of the putter illustrated in Fig. 1, taken along the line 2-2 thereof;

Fig. 3 is a sectional view of the structure illustrated in Fig. 2, taken along the line 3-3 thereof;

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Fig. 4 is a view of a person using the putter, illustrating the manner in which the putter is used in order to properly align the striking face thereof with a cup in a conventional golf course green;

Fig. 5 is a top view similar to Fig. 2, illustrating a further embodiment of the invention;

Fig. 6 is a top view similar to Fig. 5, illustrating a still further embodiment of the invention;

Fig. 7 is a top plan view of the target range and alignment devices by means of which the mirrors and indicia on said mirrors are positioned so as to provide a positively accurate finished putter.

Referring now to the drawings, and more particularly to Figs. 1-3, it will be seen that the putter includes a conventional shaft 5 having a putter head 7 connected to the lower end thereof in any suitable manner. The head 7 may be made of any suitable material, such as metal, plastic or wood, and is provided with a front substantially vertical striking face 9 which is adapted for use in striking a golf ball in order to drive the same toward a cup in the golf course green. The putter head 7 is formed with a rearwardly inclined face 11 which extends upwardly from the upper edge of the putter head striking face 9. The inclined face 11 is provided with a generally rectangular-shaped, laterally extending recess 12 in which a reflecting element, such as a flat mirror 13, is disposed. The mirror 13 is secured in the recess 12 in any suitable manner, such as by cementing the mirror in the recess 12 within the confines of the peripheral edges 15. The upper surface of the mirror is therefore disposed below the upper surface of the inclined putter head face 11 so as to be protected against any flat blows which may strike the putter head face 11. The mirror 13 is etched or otherwise suitably marked to provide a central sighting line 17, and a plurality of laterally spaced auxiliary sighting lines 18, on each side of the central sighting line, for use which will hereinafter appear. The lines 17 and 18 lie in vertical planes which are normal to the plane of the striking face 9.

The putter head 7 is formed, adjacent the bottom face 19 thereof, with a rearwardly extending boss or projection 21 which has a substantially flat and horizontal upper face 23. The face 23 is recessed at 25 to receive therein a reflecting element, such as a generally rectangular-shaped flat mirror 27. The mirror is secured in the recess 25, within the confines of the peripheral edges 29, by a suitable cement or the like. The

mirror 27 is thus embedded in the face 23 and protected against any flat blows which may be struck against the face 23. The mirror 27 is etched or otherwise suitably marked to provide a sighting line 31 which, as can be seen in Fig. 2, extends parallel to the sighting line 17 of the mirror 13. While the mirror 27 is illustrated as being disposed below the mirror 13, it will be appreciated that the vertical position of the mirror 27 with respect to the mirror 13 may be varied, and the mirror may, if desired, be disposed directly behind and in horizontal alignment with the upper edge of the mirror 13. By providing the projection 21 adjacent the bottom of the putter head 7, the putter head is weighted and balanced in a more suitable manner so that, when the striking face 9 engages a golf ball, the latter will be driven in an easier and more efficient manner.

The embodiment of the invention illustrated in Fig. 5 is identical with the embodiment previously described with the exception of the markings on the mirrors 13 and 27. In this embodiment, the inclined mirror 13 has a central dotlike mark 45 and a plurality of laterally spaced auxiliary dotlike marks 47 etched or otherwise suitably marked thereon. The horizontal mirror 27 has a dotlike reference mark 49 etched or otherwise suitably marked thereon. The positions of the marks 45, 47 and 49 on their respective mirrors are determined in a manner which will be hereinafter pointed out.

The embodiment of the invention illustrated in Fig. 6 is identical with the previous embodiments described with the exception of the indicia or markings on the mirrors 13 and 27. In this embodiment, the mirror 13 is provided with the central sighting line 17 and auxiliary sighting lines 18 as described in connection with the embodiments illustrated in Figs. 1 to 3. The horizontal mirror 27 has an indicia in the form of a dotlike reference mark 50 etched or otherwise suitably marked thereon in the same manner as illustrated on the mirror 27 in the embodiment shown in Fig. 5. The position and location of the sighting lines 17 and 18 and the reference mark 50 are determined in a manner which will hereinafter appear. While in this embodiment the mirror 13 is provided with a reference indicia in the form of a line and the mirror 27 is provided with a reference indicia in the form of a dotlike mark 50, it will be appreciated that the mirror 13 of this embodiment may be provided with a central dotlike mark 51 and auxiliary laterally spaced dotlike marks 52 as illustrated in dotted lines in Fig. 6. When the mirror 13 has dotlike marks thereon, the mirror 27 may be provided with a reference indicia in the form of a line 53 as illustrated in dot and dash lines in Fig. 6. That is, if desired, one mirror may be provided with indicia in the form of a line while the other mirror is provided with indicia in the form of dotlike marks and the sighting device and putter will operate satisfactorily irrespective of the type of marking or indicia on each mirror.

It will thus be seen that in the three embodiments described above, the construction of the putter and sighting devices is identical with the exception of the type of indicia on the mirrors, and the putter may be used satisfactorily, in order to produce extremely accurate results, with any of the aforementioned or other suitable types of indicia on the mirrors.

The inclined mirror 13 is provided to enable the user of the putter to view a target, such as

a flag pin in the cup of a golf course green, therein; and the indicia on the mirror 13 is provided in order to enable the user to superimpose the image of the target on the indicia. The use of only a single mirror or reflecting surface, such as the mirror 13, would not enable the user to positively position the striking face 9 of the putter perpendicular to the desired path of movement of a golf ball between the striking face and the target, and it is therefore necessary to provide a reference mark to be used in conjunction with the indicia on the mirror 13 in order to insure that the striking face will always be perpendicular to the desired path of movement of the golf ball. In other words, if only the mirror 13 were employed, the user would have no way of knowing that he was viewing the indicia on the mirror 13 from the same position every time he used the putter. It is for this reason that the mirror 27 and the indicia thereon are provided. By using the reference indicia on the mirror 27, in a manner which will hereinafter appear, the user is assured that the striking face of the putter head will be perpendicular to the desired path of movement of the golf ball at all times.

In order to position the indicia on the mirrors 13 and 27 so as to produce this desired result, a target range, such as that illustrated in Fig. 7, is employed by the manufacturer to properly locate and position the indicia on each mirror. The target range illustrated in Fig. 7 includes a suitable target 54 which may be of any suitable type, such as a pin point of light. A stand, such as a block of cement 55, is spaced a substantial distance from the target 54 and has a plate 57 rigidly secured thereto, such as by bolts 59. The plate 57 is provided with flat, opposed edges or side faces 61 and the plate 57 is mounted on the block 55 so that the edges or faces 61 are at right angles to a line 63 which intersects the target 54. In other words, the faces 61 are at right angles to a line drawn between the target 54 and the faces 61. The golf putter, on which the reference and sighting indicia are to be aligned, is set on the block 55 with the striking face 9 thereof engaging and abutting the back edge or face 61 of the plate 57. A suitable clamping device 63 is mounted on the block 55 for clamping the putter head in the position shown. Thus, when the putter head is clamped in this position, the striking face 9 is positively positioned at right angles to the line or path of travel 63. Mounted on the block 55 ahead of the plate 57 is an inclined mirror 65 which has the same type of indicia thereon as the mirror 13 which is mounted on the putter head being aligned. The mirror 65 is located so that the image of the target 54 will be superimposed on the central indicia thereof.

When the putter head is clamped in position as previously described, the mirrors 13 and 27, with the indicia marked thereon, are movably positioned in their respective putter head recesses, which have suitable mastic-type material or the like disposed therein. An operator then stands or positions his head above the clamped putter head and moves the mirror 13 in its recess 12 until the central indicia thereon, whether it be the sighting line 17 or a dot 45 or 51, is aligned with the central indicia of the mirror 65 which is mounted on the block 55. The operator will then be able to view the target 54 through the mirror 13 and will have the image of the target superimposed on the central indicia of the mirror 13. It will be appreciated, however, that the

fixed mirror 65 on the block is not necessary, but it does aid in permitting the operator to obtain a quick alignment. The important thing is that the operator position the mirror 13, in the putter head, so that the target image is superimposed on the sighting indicia. The mirror 13 is then in its final set position and can be anchored in this position in the manner described heretofore.

The operator then, while maintaining the image of the target 54 in coincidence with the central indicia of the mirror 13, moves the horizontal mirror 27 to a position in which the image of his eye, or eyes, will be superimposed on the reference indicia of the mirror 27, whether the same be the reference line 31 or the dotlike mark 49 or 50. There is only one position or location of the reference indicia on the mirror 27, which with respect to the operator's eyes will permit the operator to both superimpose the image of his eye, or eyes, on the reference indicia while at the same time maintaining the image of the target in coincidence with the sighting indicia on the mirror 13. The indicia on the mirror 27 will not be for all putters in the same vertical plane as the indicia on the mirror 13 and the fact that the indicia are in alignment with each other, or in the same vertical plane, may only be coincidental. The exact position of the indicia of various putters will vary in accordance with the position of the mirrors and the position of the operator when the mirror indicia are in alignment. However, regardless of whether the indicia on the mirror 13 are in the center of the mirror or putter head and whether the indicia on the mirror 27 are in the center of the mirror or in one corner thereof, there is only one location of both indicia which will accomplish the desired result, and this location of the indicia is determined by positioning the mirrors with the indicia thereon so that the user or operator simultaneously superimposes the image of his eye, or eyes, on the indicia on mirror 27 and the target image on the indicia on mirror 13. The mirror 27 is then permanently clamped or secured in its recess 25, as described above, so that, when the putter is removed from the target range and placed in the hands of a user, the striking face 9 will always be perpendicular to the desired path of movement between it and the target when the user has positioned the putter head so as to place the image of the target in coincidence with the sighting indicia on the mirror 13 and at the same time have the image of his eye, or eyes, in coincidence with the reference indicia on the mirror 27.

In this way, the manufacturer positions and locates the sighting and reference indicia of the mirrors and clamps or mounts with mirrors permanently in this position so that the user of the putter will always be able to obtain the above-mentioned desired result.

Thus, in operation as can be seen in Fig. 4, the user of the putter grasps the handle on the end of the putter shaft 5 in a conventional manner and places the striking face 9 of the putter head in an abutting relation to, or immediately behind, a golf ball 37 which is to be puttied. If the putter being used is of the type illustrated in Fig. 2, that is, wherein both a sighting line 17 and reference line 31 are employed, the user positions the putter and looks down into the horizontal mirror 27, as indicated by dot and dash line 33, so that the image of his eyes will be bisected by the reference line 31 and at the same time the user makes sure that the image of the target,

such as a flag pin in the cup 39 in a conventional golf course green, is superimposed on the central sighting line 17 or one of the auxiliary sighting lines 18 of the inclined mirror 13. If the golf ball is to be puttied on a straight line into the cup 39, the central sighting line 17 is used; but, if irregularities or a roll in the golf course green have to be compensated for, one of the sighting lines 18 is used, depending upon the necessary amount of compensation. Thus, when the user has the target superimposed on the sighting line 17 and the image of his eyes superimposed on the reference line 31, the striking face 9 of the putter head will lie in a plane perpendicular to the desired path of movement of a golf ball 37 toward the cup 39 as indicated by the dot and dash line 41. Therefore, if the user swings the putter head rearwardly and then forwardly on a straight line, the striking face 9 will hit the golf ball 37 and move the same along the path 41 and into the cup 39.

If the putter head being used has indicia thereon, such as illustrated in Fig. 5, the user follows the same procedure as mentioned above except that he superimposes the image of one of his eyes on the reference dot 49 on the mirror 27 and superimposes the image of the target on the sighting dot 45, or one of the auxiliary sighting dots 47 on the mirror 13. It will thus be readily appreciated that the employment of dotlike marks will work as satisfactorily as the employment of line-type indicia.

If the putter being used is of the type illustrated in Fig. 6, the same procedure as above described is followed; that is, the user either bisects the image of his eyes with the reference line 53 or superimposes the image of one of his eyes on the reference dot 59 and then superimposes the image of the target on either the sighting dot 51 or sighting line 17 on the mirror 13.

It will thus be appreciated that the type of sighting and reference indicia employed is not important; but rather the importance resides in the fact that a reference indicia is provided for insuring that the user will view the sighting indicia in the same way at all times, thus permitting the user properly and positively to align the striking face 9 with respect to the target and therefore eliminate the present inaccuracies in putting wherein it is impossible for the user to positively determine that the striking face of the putter is properly aligned with respect to the flag pin in the cup of the golf course green. It will also be apparent that this putter is relatively rugged in construction because of the embedded mirrors in the golf club head so that the mirrors will not be easily broken. Likewise, the putter of this invention is of a sufficient size and shape with respect to conventional putters now in use that it can easily be carried in a golf bag in the same manner as conventional putters.

What is claimed is:

1. A golf putter including a putter head having a substantially vertical striking face, means carried by said putter for enabling the user thereof to positively position said striking face in a position normal to the desired path of movement of a golf ball between the putter face and a desired target including an angularly disposed reflecting surface in which the user can view an image of said target, a reference mark on said reflecting surface, a second reflecting surface arranged on said putter head adjacent said first reflecting surface, and a reference mark on said second reflecting surface, said striking face auto-

atically assuming the desired normal relationship relative to said path of movement when the putter head is moved by the user to a position where, simultaneously with the coincidence of the target image on said first reference mark, the image of the user's eyes is superimposed on said second reference mark.

2. A golf putter including a putter head having a substantially vertical striking face, means carried by said putter head for enabling the user thereof to positively position said striking face in a position normal to a line intersecting a desired target, including an angularly disposed reflector element in which the user can view an image of said target, a reference mark carried by said element, a second reflector element arranged on said putter head adjacent said first reflector element, and a second reference mark carried by said second reflector element, said striking face automatically assuming the desired normal relationship relative to said target line when the putter head is moved by the user to a position where, simultaneously with the coincidence of the target image on said first reference mark, the image of the user's eyes is superimposed on said second reference mark.

3. A golf putter including a putter head having a substantially vertical striking face, a reflecting surface on said putter head extending upwardly and rearwardly with respect to said striking face so that a user of said putter can view a target therein, a reference indicia positioned with respect to said reflecting surface so that, when said striking face is disposed perpendicular to the desired path of movement of a golf ball between the striking face and the target, the image of the target on said reflecting surface will be disposed in superimposed relationship to said reference indicia, a second reflecting surface on said putter head on which the image of the user's eyes can be projected when the golf putter is being used, a reference indicia positioned with respect to said second reflecting surface so that, when the striking face is disposed perpendicular to said desired path of travel and the image of the target is disposed in superimposed relationship to the first reference indicia, the image of the user's eyes will be disposed in superimposed relationship to said second reference indicia whereby, when the user superimposes the image of his eyes in relation to said second reference indicia and aligns said first reference indicia with the target, the striking face of said putter head will be positively positioned perpendicular to said desired path of movement of a golf ball between the striking face and the target at all times.

4. A golf putter including a putter head having a substantially vertical striking face, a reflecting surface on said putter head extending upwardly and rearwardly with respect to said striking face so that a user of said putter can view a target therein, a sighting line positioned on said reflecting surface so that when said striking face is disposed perpendicular to the desired path of movement of a golf ball between the striking face and the target the image of the target on said reflecting surface will be superimposed on said sighting line, said sighting line lying in a vertical plane which is normal to the plane of said striking face, a second reflecting surface on said putter head on which the image of the user's eyes can be projected when the golf putter is being used, a reference line positioned on said second reflecting surface and extending parallel to said sighting line on said first reflecting surface so that

when said striking face is disposed perpendicular to said desired path of travel and the user has aligned the sighting line with said target the image of the user's eyes will be bisected by said reference line whereby, when the user bisects the image of his eyes with said reference line and bisects the image of said target with said sighting line, the striking face of said putter head will be positively positioned perpendicular to said desired path of movement of a golf ball between the striking face and the target at all times.

5. A golf putter including a putter head having a substantially vertical striking face, a reflecting surface on said putter head extending upwardly and rearwardly with respect to said striking face so that the user of said putter can view a target therein, a dotlike mark positioned on said reflecting surface so that when the striking face is disposed perpendicular to the desired path of movement of a golf ball between the striking face and the target the image of the target on said reflecting surface will be superimposed on said dotlike mark, a second reflecting surface on said putter head on which the image of the user's eyes can be projected when the golf putter is being used, a dotlike mark positioned on said second reflecting surface so that, when said striking face is disposed perpendicular to said desired path of travel and the user has superimposed said target on said first dotlike mark, the image of the user's eye will be superimposed on said second dotlike mark whereby, when the user superimposes the image of his eye on said second dotlike mark and superimposes the image of the target on said first dotlike mark, the striking face of said putter head will be positively positioned perpendicular to said desired path of movement of a golf ball between the striking face and the target at all times.

6. A golf putter including a putter head having a substantially vertical striking face, a reflecting surface on said putter head extending upwardly and rearwardly with respect to said striking face so that a user of said putter can view a target therein, a sighting line positioned on said reflecting surface and lying in a vertical plane which is normal to the plane of said striking face so that, when said striking face is disposed perpendicular to the desired path of movement of a golf ball between the striking face and the target, the image of the target on said reflecting surface will be bisected by said sighting line, a second reflecting surface on said putter head on which the image of the user's eyes can be projected when the golf putter is being used, a reference mark positioned on said second reflecting surface so that, when said striking face is disposed perpendicular to said desired path of travel and the user has bisected the image of said target with said sighting line, the image of the user's eye will be superimposed on said reference mark whereby, when the user superimposes the image of his eye on said reference mark and bisects the image of said target with said sighting line, the striking face of said putter head will be positively positioned perpendicular to said desired path of movement of a golf ball between the striking face and the target at all times.

7. A golf putter including a putter head having a substantially vertical striking face, a reflecting surface on said putter head extending upwardly and rearwardly with respect to said striking face so that a user of said putter can view a target therein, a reference mark positioned on said reflecting surface so that, when said striking face is disposed perpendicular to the desired path

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of movement of a golf ball between the striking face and the target, the image of the target on said reflecting surface will be superimposed on said mark, a second reflecting surface on said putter head on which the image of the user's eyes can be projected when the golf putter is being used, a reference line on said second reflecting surface lying in a vertical plane which is normal to the plane of said striking face so that, when said striking face is disposed perpendicular to said desired path of travel and the user has superimposed the image of the target on said mark, the image of the user's eyes will be bisected by said reference line whereby, when the user bisects the image of his eyes with said reference line and superimposes the image of said target on said mark, the striking face of said putter head will be positively positioned perpendicular to said desired path of movement of a golf ball between the striking face and the target at all times.

8. A golf putter including a putter head having a substantially vertical striking face, a mirror disposed above and extending upwardly and rearwardly from the striking face at an angle of substantially 45° with respect to the striking face so that a user of the putter can view a target therein, said mirror being embedded in said putter head so as to be partially protected from blows on the putter head, a reference indicia positioned on said inclined mirror so that, when the striking

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face is disposed perpendicular to the desired path of movement of a golf ball between the striking face and the target, the image of the target on said inclined mirror will be superimposed on said 5 indicia, a second mirror disposed rearwardly of said first mirror in a substantially horizontal plane with respect to the striking face of said putter head on which the image of the user's eyes can be projected when the putter is being 10 used, said second mirror being disposed below and behind said inclined mirror and being embedded in said putter head adjacent the bottom thereof, reference indicia positioned on said second mirror 15 so that, when said striking face is disposed perpendicular to said desired path of travel and the user has superimposed the image of said target on said first reference indicia, the image of the user's eye will be superimposed on said second reference 20 indicia whereby, when the user superimposes the image of his eye on said second reference indicia and superimposes the image of the target on said first reference indicia, the striking face of the 25 putter head will be positively positioned perpendicular to said desired path of movement of a golf ball between the striking face of the putter head and the target at all times.

TAYLOR PAISLEY.

No references cited.