United States Patent

Shambaugh

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[54] GOLFING AID

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[52] **U.S. Cl.**.....**273/32 R,** 273/187 R, 273/186 C, 33/46 G, 35/29 A

[51] **Int. Cl.**.....**A63b 57/00,** A63b 69/36

[58] **Field of Search**.....273/183, 186, 187, 32, 35; 33/46 G; 35/29 A

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Attorney—Fitch, Even, Tabin & Luedeka

[57] **ABSTRACT**

A device for aiding in the playing of the game of golf, particularly where playing on a sidehill such that the golf ball lies at a level above or below the golfer's feet. The device indicates the proper alignment of club and line of swing to compensate for the inclination of the sidehill. The device includes a base formed of pivotally connected members which define a first plane and a pointer element which extends upwardly from the base. When the pointer element is aligned along the line of sight from the ball to the point where the ball is to be hit, an indicator element positioned in the plane of the base lies parallel to the line of swing which will result in a line of flight of the ball along the above mentioned line of sight. The pointer element is adjustable to various marked positions which are functionally related to the lofts of the various club heads used in striking golf balls.

5 Claims, 4 Drawing Figures

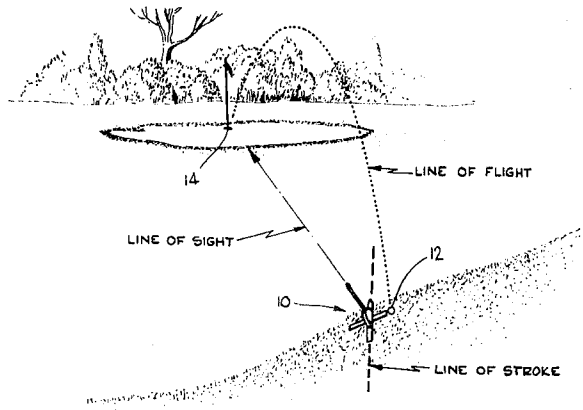

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FIG.1

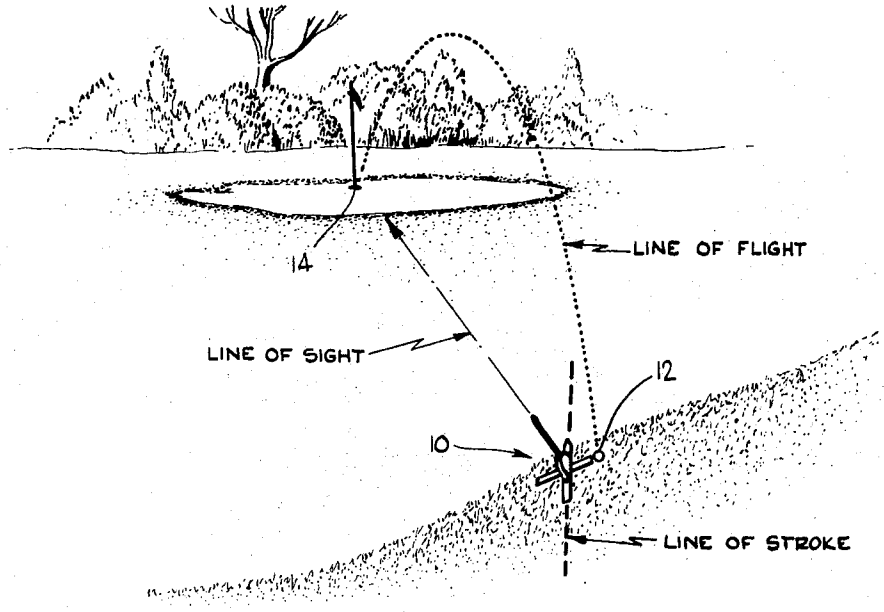


FIG.2

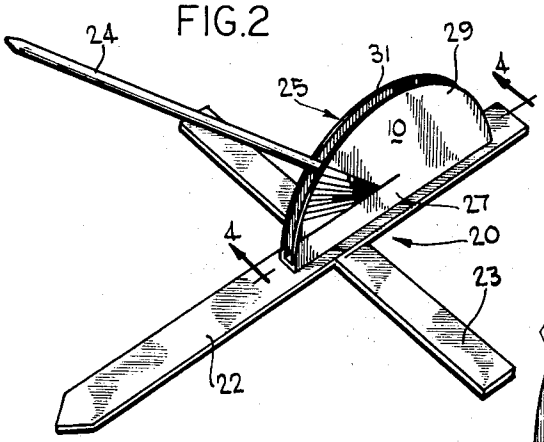
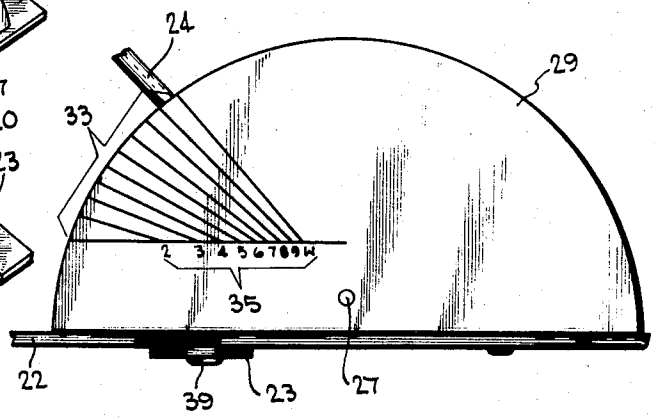


FIG.3



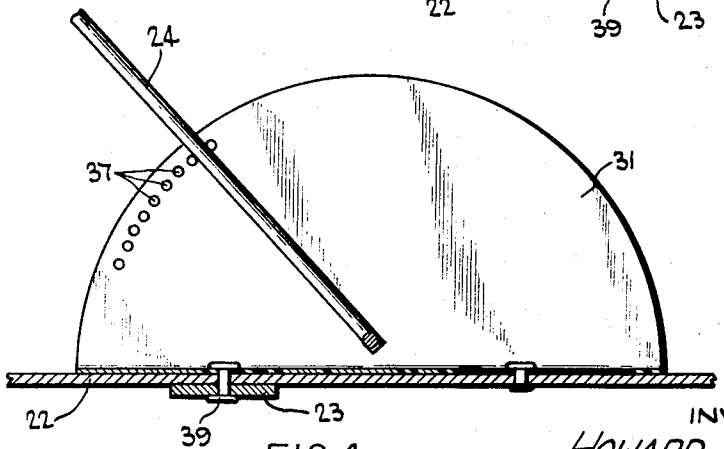


FIG.4

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GOLFING AID

The present invention relates to a device for aiding the golfer, and, more particularly, the invention relates to a device for determining the proper club alignment and line of swing for a golf ball where the ball lies on a sidehill.

There are four lies in which a golf ball may be above or below the level of the golfer's feet when he addresses the ball for his swing. Two of such lies are where the ground slopes toward or away from the direction in which the ball is to be hit. The other two lies are where the ground slopes at right angles to the direction in which the ball is to be hit, oftentimes called sidehill lies, and it is the sidehill lies toward which the present invention is particularly directed.

It is a common but mistaken belief of those not thoroughly familiar with the game that where the ball is on a sidehill lie on an upslope relative to a right-handed golfer and the ball is hit directly toward the hole or a selected intermediate point, the ball "hooks", i.e., the ball acquires a counterclockwise spin which causes it to curve toward the golfer's side of the hole, and that where the ball is on a downslope, the ball "slices" because it acquires a clockwise spin. Although it is of course possible to impart a spin to the ball on a sidehill lie, the ball will nevertheless depart from its intended line of flight even if it does not acquire any spin unless compensation is made. Because the ball leaves the club face at right angles to the plane of the face, and because the plane of the club face is not perpendicular to the line of sight to the hole unless the ball is on a level lie, the ball will leave the club face at an angle to the line of sight to the hole if the ball is either uphill or downhill from the golfer's feet. This can be visualized by imagining a situation where the ball is attached to a vertical wall at the height of a golfer's shoulders. If the ball were to be struck by a golf club in this position it is obvious that the ball, instead of going in a direction parallel to the wall, would go away from the wall, and at an angle from the wall which is related to the loft of the club with which it is struck. This is, of course, an extreme example, but it should serve to illustrate the problem presented when a ball lies uphill from the golfer's feet. The opposite effect would, of course, be obtained if the ball lay downhill from the golfer's feet.

Expert golfers are aware that where the ball lies on a sidehill, the club should not be lined up directly toward the hole or an intermediate selected point. They employ experience and intuition to use a stance, club alignment and line of swing which compensates for the sloping surface and the loft of the particular club used.

A principal object of the present invention is to provide an improved golfing aid for use where the ball is on an uphill or downhill lie from the golfer's feet.

Another object of the invention is to provide an improved golfing aid for use where the ball is on an uphill or downhill lie from the golfer's feet which will indicate the correct compensation for the inclination of the hill and also for the loft of the particular club being used.

These and other objects of the invention will become apparent with reference to the following detailed description and accompanying drawings, in which:

FIG. **1** is a view of one embodiment of a golf aid means in accordance with the present invention in place on a lie where the ball is uphill from a right-handed golfer's feet;

FIG. **2** is an enlarged perspective view of the golf aid means of FIG. **1**;

FIG. **3** is a fragmentary, side elevational view of the golf aid means; and

FIG. **4** is a fragmentary, sectional elevational view of the golf aid means taken along the line **4**—**4** in FIG. **2**.

Very generally, and with reference to FIG. **1** of the drawings, a golf aid means or device in accordance with the present invention is designated by the reference numeral **10** and is illustrated in the position in which it is employed on a sidehill lie when a shot is to be made approaching the green. The device permits the golfer to determine the proper line of swing to direct a golf ball **12** toward the hole **14**. By using the device **10**, the golfer can determine the required quantitative compensation for his swing for the degree of slope of the surface and for the loft of the particular club which is to be used to reach the hole. In this manner, the guess work heretofore used by golfers to compensate for these factors is eliminated.

As best seen in FIG. **2**, one embodiment of the golf aid means or device **10** generally includes a base **20** comprising an indicator **22** and a cross member **23**. The indicator **22** and the cross member **23** of the base define a plane, and when the device is disposed on a sloping surface between the ball **12** and the golfer's feet the base **20** is disposed at the same angle as the sloping surface.

Extending upwardly from the base **20** at an acute angle thereto is a pointer **24**. In the illustrated embodiment the pointer **24** is pivotably attached to a bracket **25** by a rivet **27**. The bracket **25** comprises two upstanding disc-shaped plates **29** and **31** which are secured to the indicator **22** of the base **20**. The pointer **24** is disposed between the plates **29** and **31**, and is pivotable about the rivet **27** into one of several positions which, as subsequently to be described, are functionally related to the loft of the particular club with which the ball is hit.

The pointer **24** and the indicator **22** define a second plane which intersects the plane of the base **20** at a right angle. The device **10** is used by placing it on the ground between the ball **12** and the golfer's feet. If the device **10** is aligned with respect to the hole **14** so that the indicator **22** is pointed toward the hole **14** parallel to the line of sight from the ball to the hole, the pointer **24** will indicate the line of flight which the ball will take if the ball is struck by a club swung along a line of swing parallel to the line of sight. If the ball is not on a sidehill, i.e., lies at the same level as the golfer's feet, the pointer **24** will also point along the line of sight. If, however, the ball is higher than the golfer's feet and if no compensation is made therefor, as by changing the line of swing, the pointer **24** will point in a direction to the left of the line of sight, and the line of flight of the ball would be in the same direction as the pointer. The ball would therefore land to the left of the hole **14**. Conversely, if the ball **12** is lower than the golfer's feet and no compensation is made, the pointer **24** will point in a direction to the right of the line of sight, and the line of flight of the ball would also be to the right of the hole **14**.

Thus, the device **10** is useful as a teaching aid in helping the golfer to visualize the line of flight which will result from a sidehill lie if no compensation is made. However, the primary function of the device is to provide a quantitative indication of how much compensation should be made and in what direction. This is accomplished by disposing the device **10** on the ground between the ball **12** and the golfer's feet with the pointer **24** aligned along the line of sight to the hole **14**. When so disposed, the indicator **22** will indicate the line of swing which should be used to compensate for the sidehill lie of the ball.

It will be apparent that the amount of compensation or correction which should be made is functionally related not only to the slope of the sidehill but also to the loft of the club being used, i.e., the greater the loft of the club, the more compensation or correction is needed. In accordance with the present invention, the acute angle between the pointer **24** and the plane of the base **20** may be selectively adjusted to compensate for the loft of standard clubs. As best illustrated in FIG. **3**, one or both of the plates **29** and **31** are provided with calibrated markings **33** which indicate predetermined acute angles between the pointer **24** and the base **20** corresponding to the various clubs. Thus, as shown in FIG. **3**, the calibrated markings **33** are identified by symbols **35** standing for irons **2** through **9** and for a wedge. As shown in FIG. **4**, detents **37** are provided on the interior face of one or both of the plates **29** and **31** which provide stops for the pointer **24** at each of the positions corresponding to a particular club number.

The cross member **23** of the base **20** of the illustrated embodiment is secured to the indicator **22** by a rivet **39** which permits the cross member to be folded into parallel relationship with the indicator **22**. This results in a more compact

package for carrying in the golfer's bag, but it should be understood that the base **20** may also comprise a single piece of generally planar configuration.

In addition to providing the foregoing functions of teaching the inexperienced golfer and providing a quantitative indication of the correction or compensation to be made for sidehill lie, the apparatus of the present invention provides still another function. The pointer **24**, when aligned with the line of sight between the ball **12** and the hole **14** (FIG. **1**) also indicates the vertical angle at which the ball will rise when stuck by a particular club. Thus, when the ball is behind a shrub, tree, edge of a bunker or the like which presents a vertical obstruction between the ball and the hole, the device **10** can be used to indicate to the golfer which club number should be used in order to clear the obstruction.

Thus, there has been provided a golfer's aid which can be used in a variety of ways both for educational purposes and for providing a quantitative indication of corrective or compensatory adjustments to be made to improve a golfer's game.

Various of the features of the present invention are set forth in the following claims.

What is claimed is:

. A golfer's aid for use where playing on a sloping surface such that the golf ball lies at a level above or below the golfer's feet, comprising a base defining a first plane, a pointer extending upwardly from said base at an acute angle thereto, said acute angle being functionally related to the loft of the club with which the ball is to be hit, and an indicator disposed parallel to the plane of said base which together with said pointer defines a second plane intersecting said first plane at a right angle, whereby, when the golfer's aid is disposed on the sloping surface between the ball and the golfer's feet and with said pointer aligned along the line of sight from the ball to the point where the ball is desired to be hit, said indicator lies parallel to the line of swing which will compensate for the sloping surface and result in a line of flight of the ball along the line of sight.

2. A device in accordance with claim **1** further comprising means for adjusting the angular position of the pointer relative to the plane of the base to permit adjustment thereof for clubs having different lofts.

3. A device in accordance with claim **2** wherein the adjusting means comprises a bracket mounted on said base and having angularly spaced indicia thereon, the angularly spaced indicia respectively corresponding to the loft of various clubs.

4. A device in accordance with claim **2** wherein the adjusting means comprises detent means for holding the pointer at a selected one of a plurality of angular positions.

5. A device in accordance with claim **1** wherein the base and pointer members are pivotally interconnected such that the device can be folded to lie in a single plane.

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