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(54) **GOLF SWING TRAINING TEMPLATE**

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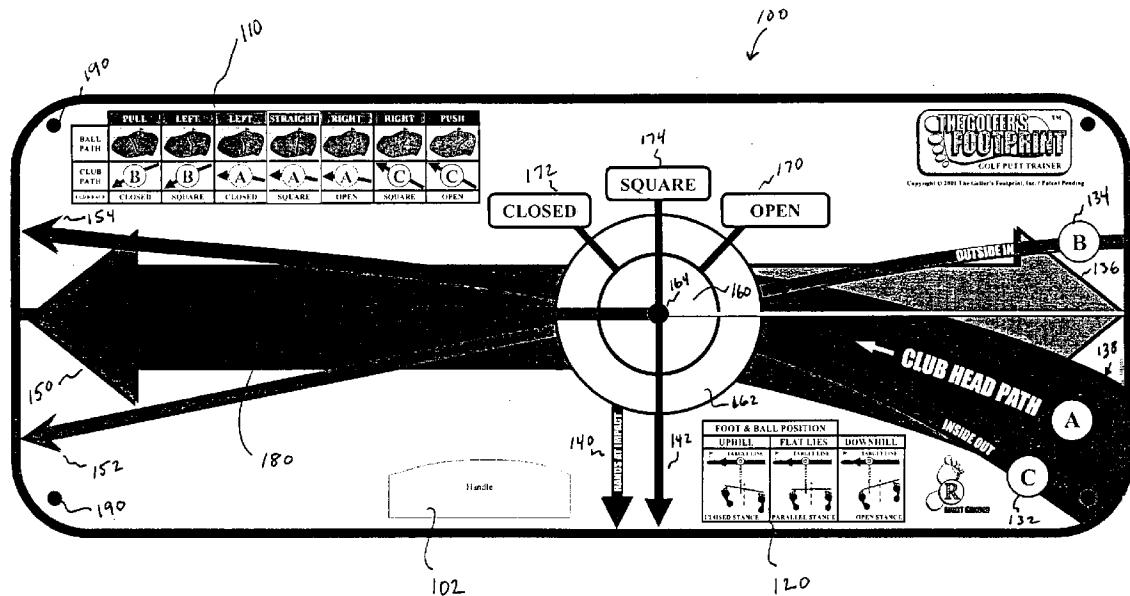
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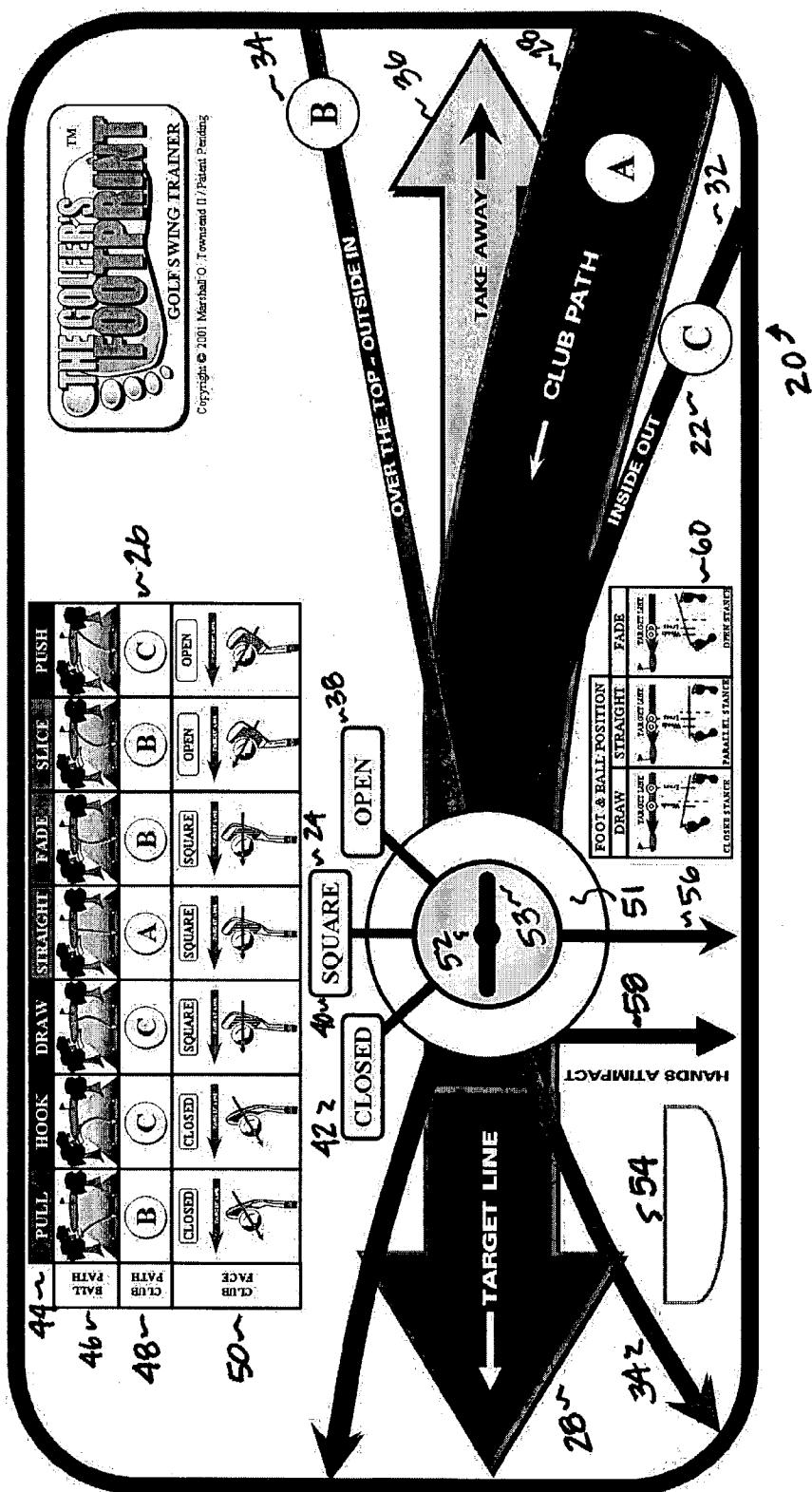
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#### ABSTRACT

A golf swing training device having a graphic design that illustrates a plurality of golf swing variables includes a club path indicator and a club face angle guide. The template is designed so that golfers may practice swinging a golf club over the top of the template to determine whether their swing follows a desired path. A swing reference guide is included and correlates shot selection, ball path, club path, and club face angle. In its form as a putt trainer, the device includes a groove within which a putted ball will travel if properly hit.





## FIGURE 1

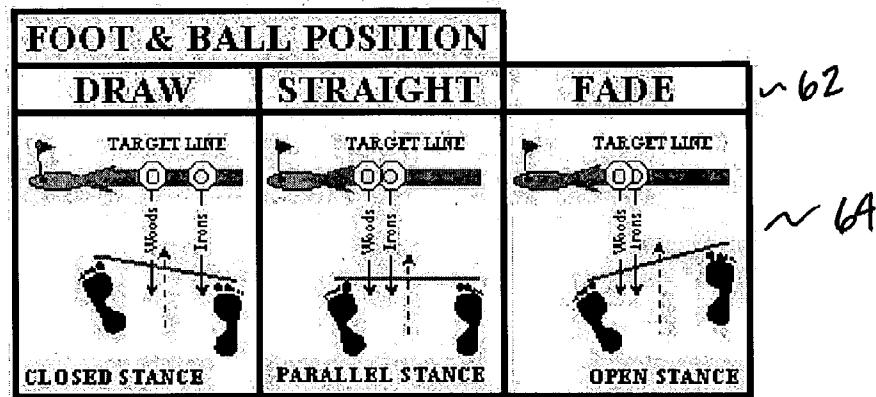


FIGURE 2

~26

	PULL	HOOK	DRAW	STRAIGHT	FADE	SLICE	PUSH	
BALL PATH								
CLUB PATH	(B)	(C)	(C)	(A)	(B)	(B)	(C)	
CLUB FACE								

~44

~46

~48

~50

FIGURE 3

FIGURE 4

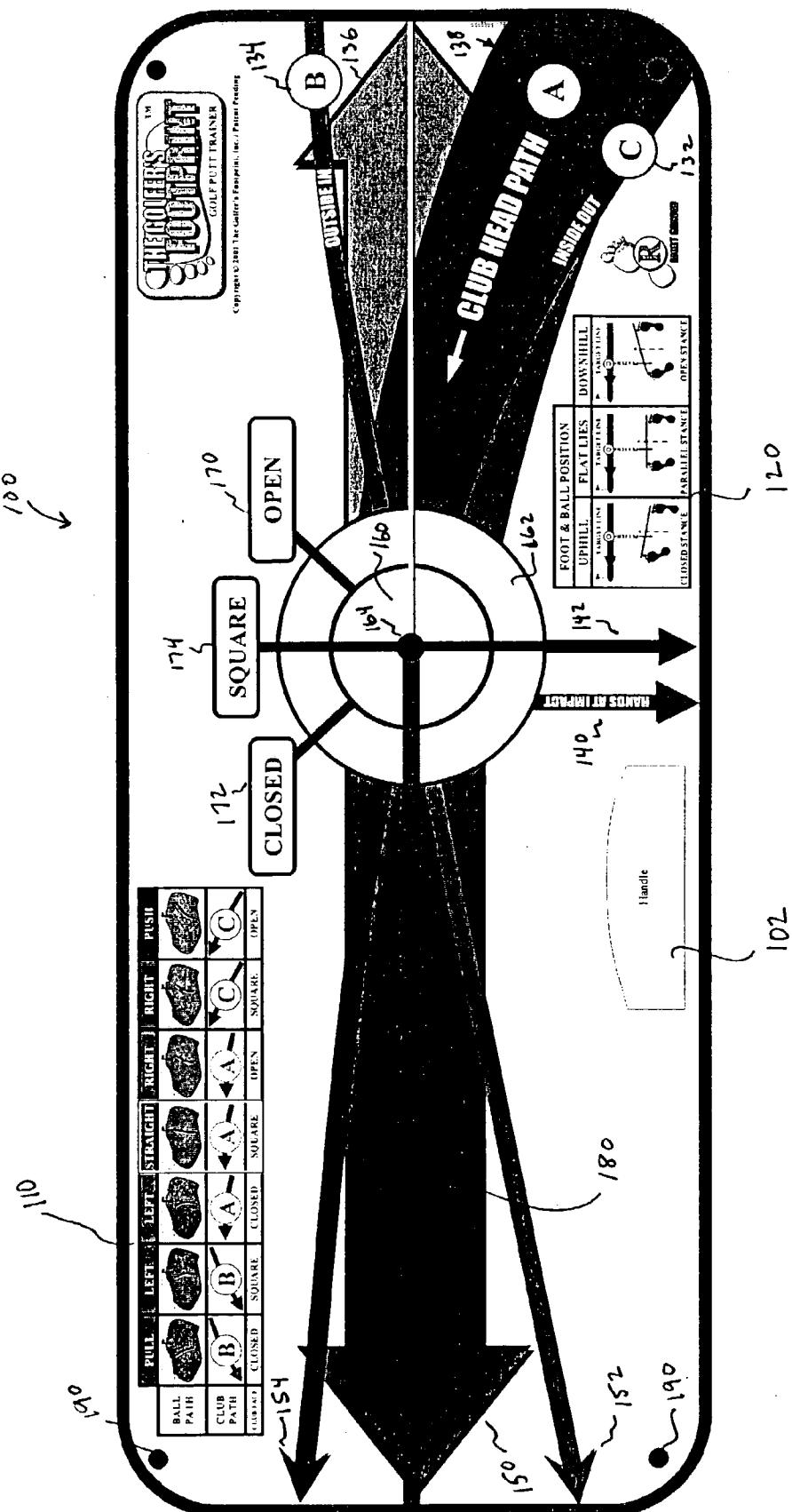
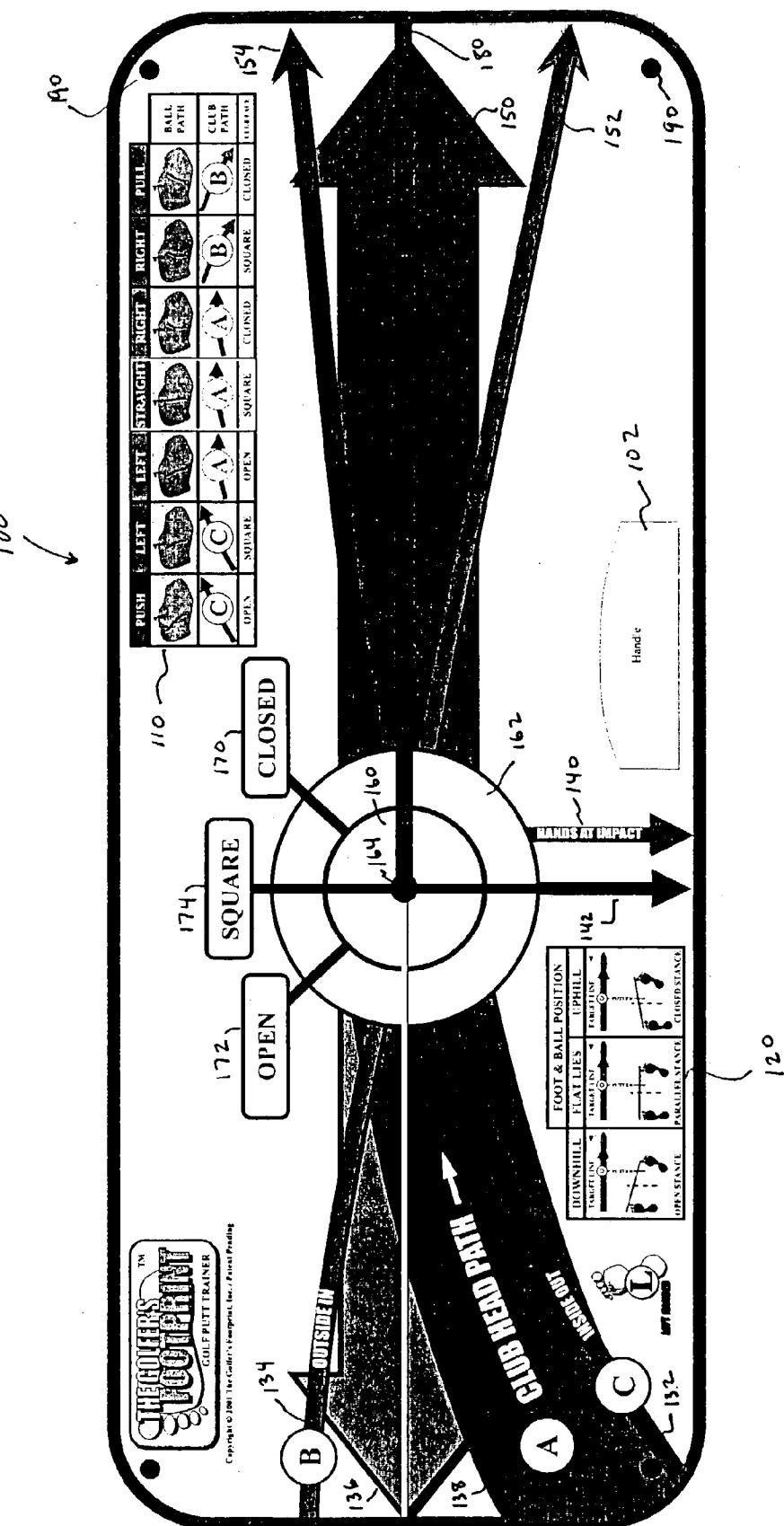


FIGURE 5



## GOLF SWING TRAINING TEMPLATE

### PRIORITY CLAIM

[0001] This application claims the benefit of prior U.S. utility application Ser. No. 10/041,836, filed Jan. 7, 2002, and provisional application serial No. 60/351,127, filed Jan. 22, 2002.

### FIELD OF THE INVENTION

[0002] This invention relates generally to instructional sports equipment and, more specifically, to a golf swing instructional tool.

### BACKGROUND OF THE INVENTION

[0003] Golf is a difficult sport in which slight swing errors can produce wildly undesirable results. Unfortunately, golfers do not always know the manner in which their swing deviated from the ideal. In an attempt to develop a better swing, many golfers turn to the countless books and other publications offering swing advice. Other golfers try some of the many gadgets that are intended to physically force or limit a golfer's swing to certain paths of motion in an attempt to develop a consistent swing. Neither written materials nor physical gadgets are able to provide the necessary feedback to allow a golfer to develop a consistent golf swing.

[0004] It is virtually impossible to develop a good swing solely by reading written coaching materials. The written text, even if accompanied by illustrations, does not provide a proper visual guide for replicating a desired golf swing when actually playing golf. The text of an article also does not allow golfers to actually experience what a proper swing feels like because there are no indicators to tell the golfers whether they are making the proper swing. Because learning a proper golf shot is largely an issue of developing the proper muscle memorization through repetition, an inability to feel a correct swing while training defeats the training. Worse yet, the muscles may actually train themselves to swing improperly because golfers repeatedly practice poor swings without knowing it.

[0005] The golf training gadgets currently on the market generally attempt to physically limit the range of motion during a swing. These gadgets often place golfers in uncomfortable positions in an attempt to fit all golfers into a single mold. The positions the golfers are forced into often result in a bad golf swing and potentially subjects golfers to injury associated with the unnatural form.

[0006] Another problem associated with present golf training gadgets is the social stigma associated with their use, at least for those training aids that are awkward, cumbersome, or overt. Still other training devices are large and inconvenient, expensive and inaccessible, or difficult to use in a variety of practice settings. Accordingly, there is a need for an improved golf training aid that provides the desired feedback to develop a consistent golf swing.

### SUMMARY OF THE INVENTION

[0007] The present invention is a golf swing training device. The training device includes a template having a graphic design that depicts a plurality of golf swing variables. In its preferred form, the graphic design includes a

club path indicator showing several possible swing paths though and beyond the ball location. It also includes a club face angle guide illustrating a plurality of angles—closed, square, and open—at which a club face may strike a ball. Additional markings show a desired take-away path and a preferred position of the hands at ball impact.

[0008] In accordance with other preferred aspects of the invention, the graphics include a swing reference guide that correlates shot selection, ball path, club path and club face with the flight of the ball. The guide allows golfers to determine the swing path and club face from the flight of the ball so that erroneous swings can be corrected.

[0009] In accordance with still other preferred aspects of the invention, the template is preferably constructed from an impact resistant plastic that is coated to limit degradation due to ultraviolet radiation.

[0010] In accordance with yet other preferred aspects of the invention, the preferred template includes a handle so that the template can be carried easily.

[0011] In accordance with additional preferred aspects of the invention, the template includes a tee bore that extends through the template and serves as a ball locator. Any of a variety of tees or other ball holders can be extended through the bore.

[0012] The preferred embodiment of the present invention further includes a method of training golfers to swing a golf club to achieve a desired ball path. Golfers can practice swinging with or without a ball and can observe whether their swing follows one of several swing paths depicted on the template. By repeating this process, golfers develop the proper "muscle memory" to reproduce a desired golf shot any time they want.

[0013] In an alternate embodiment of the invention, the template is designed to teach a proper putt, rather than a full swing. The preferred putt trainer employs many of the features of the preferred swing trainer in order to teach a proper putt stroke. It also includes other preferred features, including a groove in which the ball should travel if stroked properly.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0014] The preferred and alternative embodiments of the present invention are described in detail below with reference to the following drawings.

[0015] FIG. 1 is a top view of a golf swing training template;

[0016] FIG. 2 is a detailed view of a foot and ball position reference guide portion of a preferred golf swing training template;

[0017] FIG. 3 is a detailed view of a swing reference guide portion of a preferred golf swing training template;

[0018] FIG. 4 is a detailed view of a golf swing training template configured for use as a putt trainer with a right handed player; and

[0019] FIG. 5 is a detailed view of a golf swing training template configured for use as a putt trainer with a left handed player.

### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0020] The present invention provides a system and method for developing a golf swing for a variety of desired ball paths. The preferred embodiment focuses on four aspects of the golf swing: Club Path, Target Line, Club-face-angle, and Club Head Impact. With reference to FIG. 1, a preferred embodiment of the present invention includes a portable golf swing template 20 including club path indicator 22 used to illustrate the proper club path for a specific shot; a club face angle guide 24 used to indicate the angle of the club face at impact with a ball centered at a tee bore 52; and a swing reference guide used to reference the proper club path and club face angle to achieve the desired ball path or to assist in determining the club path and face angle that produced an observed ball flight. The structure and operation of the template 20 is described in more particularity below.

[0021] FIG. 1 depicts the golf swing template 20. For ease of discussion, only the right-hand version is disclosed, however, a left-hand version, with reversed graphics, is within the scope of this invention. Likewise, a single template may include right-hand graphics on one side and left-hand graphics on the other.

[0022] A handle 54 is provided so that an individual may easily carry the template 20 by the handle 54. Preferably, the handle is comprised of an opening at an outer edge of the template that is sized and shaped to accommodate a hand. While a single handle is preferred, multiple handles may be included. Likewise, other forms of handles such as finger holes or attached handles rather than holes are possible.

[0023] The template 20 is preferably made of a clear, high impact plastic that has been treated to minimize ultraviolet degradation. A graphic design is attached to the template 20. The graphic design includes a club path indicator 22, club face angle guide 24, a swing reference guide 26, and a foot and ball position reference guide 60. The graphic design is preferably attached to the backside of the template so that it will not be scratched or marked during use. However the graphic design may be located anywhere on the template 20, for example on the top surface or laminated within the template 20. Additionally, the graphics employ a variety of colors to make visualizing a proper golf stroke an easier task. In alternate embodiments, the graphic design is applied to the template via decals, painting, etching, or any other form of marking. The graphics are described in more detail below.

[0024] The club path indicator 22 includes a primary club path 28, an inside-out path 30, an outside-in path 32 and a take away path 34. Each club path intersects with the others at a ball position indicated by the tee bore 52. The various club paths are individually colored for visualization purposes.

[0025] A primary club path 28 is shown, in a preferred embodiment, as a wide red arrow to allow the golfer to see the contrast between it and the clubface as the clubface moves along the path. The primary club path 28 is labeled "A" to provide a link between it and the swing reference guide 26, discussed in more detail below. The primary club path 28 is approximately 2½ inches wide to assist in visualizing the clubface path during the swing. The path 28

traces a slight inside approach to the ball and a straight line from the ball location to the edge of the template in a direction of the intended ball flight.

[0026] An outside-in path 34, also known as an over the top path, is preferably shown as a green arrow. It is labeled "B" to provide a link to the swing reference guide 26. The width of the arrow indicating the outside-in path 34 is narrower than the primary club path 28. However, the club path 34 is wide enough to generate awareness of the club path 34, while not overly distracting the player from the primary club path 28. The outside-in club path 34 also allows a more advanced golfer to replicate this club path (along with a square club face) to hit a fade.

[0027] The inside-out club path 32, also known as a cutting the corner path, is preferably depicted by a blue arrow. The inside-out club path 32 is labeled "C" to provide a link to the swing reference guide. The width of the path-indicating arrow of the inside-out club path 32 is substantially the same as the path-indicating arrow of the outside-in club path 34. The inside-out club path 32 also allows a more advanced golfer to replicate this club path to hit a draw.

[0028] The take-away club path 36 is preferably depicted as a light blue arrow. The take away club path 36 provides a visual guide to the golfer as to the proper club path direction of the take-away at the start of the golf swing. The light blue color contrasts with the red primary club path 28 indicating arrow, and also shows that the primary club path 28 is slightly different than the take-away club path 36. Though the preferred embodiment uses red, blue, green, and light blue to provide visual contrasts, other color combinations, or even the same color for all of the club paths, may also be used.

[0029] A circular ball locator 51, having a substantially centrally located tee bore 52, is positioned at the intersection of the club path indicator arrows. The ball locator 51 is preferably yellow in color to contrast with a golf ball (not shown) and make it easier to visualize the ball's location in the clubface's path. The tee bore 52 is designed to receive either a golf tee (such as a standard wood or plastic tee, surgical tubing, or other ball holding device) or to directly cradle a golf ball without a tee. Consequently, the tee bore 52 allows the golfer to use any golf club with the golf swing template 20. In alternate embodiments, the tee bore may be replaced by any ball-holding device such as a permanently or removably affixed tee.

[0030] A tee slot 53 extends through the template 20 and runs generally parallel to the target line and perpendicular to the lines indicating the hands at impact 58 and foot locator 56. The tee slot 53 preferably extends a short distance on either side of the tee bore 52, both toward the target line 28 and the take away line 36. The purpose of the tee slot 53 is to allow a standard golf tee to tilt forward and kick up when the ball is struck, thereby preventing the tee from breaking if the tee slot 53 is not included.

[0031] The ball locator 51 also includes the club face angle guide 24. The club face angle guide 24 includes radially extending hash marks surrounding the tee bore 52, and their corresponding textual description depicting the different club face angles at the moment of ball contact. More specifically, the open, closed, and square club face positions, 38, 40 and 42, respectfully, are depicted.

[0032] Through the center of the ball locator 51 is a foot locator 56. The foot locator 51 assists the golfer in aligning his or her feet and body relative to the ball. While the foot locator 56 is preferably a line extending through the tee bore 52 and perpendicular to the take away path, it may be placed in other positions and can comprise multiple lines rather than a single line. In addition, the foot locator 56 in the preferred embodiment is not meant to indicate a position for the feet on every shot, but rather to provide a reference point so that the golfer can readily determine where the ball is placed relative to the stance.

[0033] A hand locator 58 is also graphically indicated on the template 20. The hand locator 58 indicates the most common location of the golfer's hands at impact. The hand locator is forward of the ball to aid in generating a downward force as the golfer makes impact with the ball. As with the foot locator 56 discussed above. The specific location of the golfer's hands during impact may vary. The hand locator 58, like the foot locator 56, is present to provide a frame of reference from which a golfer may analyze their golf swing.

[0034] The golf swing template 20 also includes a swing reference guide 26, best seen in FIG. 2. The swing reference guide 26 provides a tabular reference for shot selection 44, ball path selection 46, club path selection 48 and club face selection 50. The guide 26 is printed in large print and colors that correspond to the club path indicators 22 to assist in cross-referencing the ball's flight back to the club path 22 and club face angle 24.

[0035] While the swing reference guide 26 is described in the preferred embodiment as a tool for determining a swing path and club face to produce a desired shot, it may also work in reverse. That is, a golfer may use the guide, after hitting a shot, to determine the swing path and club face of the club at impact. Thus, while the guide is described as including a "shot selection" area, when used in reverse the shot selection becomes a shot result. The graphic itself, however, is the same in either convention. Moreover, the preferred embodiment depicts only a subset of the possible combinations of swing path and club face. For example, not shown are ball flight possibilities for a preferred swing path in combination with an open or closed club face. The swing guide may alternatively depict a different subset or can include all combinations.

[0036] The golf swing template also includes a foot and ball position guide 60, best seen in FIG. 3. The foot and ball position guide 60 provides a tabular reference for shot selection 62 and the corresponding foot and ball position 64 to accomplish the selected shot. The foot and ball position depiction 64 graphically illustrates the relative positions of the golfer's feet with respect to the ball and the target line.

[0037] To use the device, the golfer places the golf swing template 20 on the spot from which he or she intends to hit a ball. The golfer selects a golf club to use and chooses to tee-up the ball or place the ball directly on the template 20. To tee-up the ball, the golfer places a tee through the tee bore 52 and places the ball on the tee. Without the tee, the golfer simply places the ball on the tee bore 52 so that the tee bore 52 prevents the ball from rolling away.

[0038] The golfer then takes up a desired stance, based on club choice, relative to the foot locator 56 to align his or her feet and body to the ball. The golfer then conducts a normal

golf swing. He or she takes the club back along the take-away path 36, and then returns the club back to the ball along the desired club path, 28, 32 or 34. As the golfer conducts the golf swing, he or she compares the club path to the club path indicators 22 to see which path the club really took as it returned to the ball. In this way, the golfer can visually verify the club path before, during, and after ball impact. Through repetition, the golfer can adjust his or her golf swing to correct for a wrong club path. This adjustment to the swing path can be accomplished with or without a golf ball being placed on the template 20. The drill can be accomplished indoors or outdoors.

[0039] In addition to the club path, the golfer can also check the club face angle at impact by referring to the club face angle guide 22. The club face angle may also be pre-positioned as the golfer sets up for the golf swing. In this way, the golfer can get a before, during, and after visualization of the clubface angle. The golfer can better visualize and correct faulty club face angle during this process. As stated above, this process can be accomplished inside or outside, with or without a golf ball.

[0040] Once the ball has been struck, the golfer can observe the path of the ball in flight. Based on the ball's path, the golfer can use the swing reference guide 26 to quickly cross-reference the club path and clubface angle that generated the ball's path. This process provides immediate feedback for the golfer as to what caused the ball's flight and how to correct the problem. Because the golfer is hitting directly off of the training device, he or she can quickly tee-up another ball and correct the mistakes; there is no need to pull out a reference book or ask for an external evaluation.

[0041] While the golf swing template of FIG. 1 has been configured for full swing training, the golf swing template of FIGS. 4 and 5 are configured for putt training, with the two figures being substantially identical except that the template of FIG. 4 is intended for a right-handed player while the template of FIG. 5 is intended for a left-handed player.

[0042] The preferred dimensions of the putt trainer template 100 are approximately 30 inches (in the direction of the swing path) by 10 inches, although it may be larger or smaller, consistent with this invention. The template 100 is made of clear, high-impact plastic approximately  $\frac{3}{16}$  inches thick. As with the swing trainer, the plastic has ultraviolet protection to protect the plastic from deteriorating and becoming brittle after being exposed to the sun over time. A handle 102 is incorporated into the template to allow the golfer to carry the device with ease.

[0043] As with the full swing trainer version, the putt training template 100 includes graphics designs to assist in proper swing training, including a swing reference guide 100 and a foot and ball position guide 120. In its preferred form it also includes indicators for the ball position, a club take-away arrow 136, an inside-out path line 132, an outside-in path line 134, and a preferred club head swing path 138. Additionally, the template includes a hand position at impact indicator 140 and a ball center indicator 142. The graphics in the left-handed version are the same as with the right handed version, except that the direction in which the swing path arrows point is reversed.

[0044] The graphics designs are adhered to the back of the plastic, sandwiched between two sheets of plastic, or oth-

erwise constructed as with the full swing trainer. In an alternate embodiment, the mat is constructed of an opaque material so that graphics can be printed on both sides. Such a construction allows left-handed graphics to be printed on one side and right-handed graphics on the other. In yet another embodiment, putt-training graphics of **FIG. 4** or **FIG. 5** are printed on one-side and swing-training graphics of **FIG. 1** are printed on the other. In such an embodiment, the putt-training side preferably includes the putt groove, as discussed further below. Similarly, in a combined, two-sided embodiment, the full swing side will preferably include a tee bore and tee slot.

[0045] The primary club path **138** terminates with a red arrow **150** to allow the golfer to see the contrast between it and the clubface as the clubface moves along the path. The red path is labeled "A" to provide a link between it and the swing reference guide **110**. The red path is approximately 2½ inches wide to assist in visualizing the clubface path during the swing.

[0046] The outside-in path **134** terminates with a green arrow **152**. This is the club path that normally generates a pull. It is labeled "B" to provide a link to the swing reference guide **110**. This arrow is wide enough to generate awareness of the club path, but is not so wide as to distract from the primary red arrow path.

[0047] The inside-out path **132** terminates with a blue arrow **154**. This is the club path that normally generates a push. It is labeled "C" to provide a link to the swing reference guide **110**. This arrow is also wide enough to generate awareness of the club path, but not so wide as to distract for the primary red arrow path.

[0048] The take-away arrow **136** is shown in blue. This color is preferred in order to contrast with the red primary arrow and path **138** and give a visual guide to the golfer as to the direction of the take-away at the start of the putt swing.

[0049] A centrally-located circle indicates the location for placement of the golf ball. The golf ball locator comprises an inner yellow circle **160** and a white outer circle **162** to contrast with the white golf ball and make it easier to visualize the ball's location in the clubface's path. The three club paths red, green, and blue all cross through the center of the yellow circle. An indent **164** is drilled into the plastic at the center of this circle to cradle a golf ball. The indent may be merely a depression below the surface of the mat or may penetrate fully through the mat, as with a bore.

[0050] The circle surrounding the golf ball's position also includes graphics indicators for the different angles for an open **170**, closed **172**, and square putt face **174**. These lines are labeled for easy identification, and assist the golfer during set-up and impact.

[0051] Extending through the center of the ball position indent **164**, a black alignment arrow **142** assists the golfer in aligning his or her feet and body to the ball's location. The alignment arrow comprises a line starting at the base of the ball circle and continuing to the bottom edge of the device, terminating in an arrow head. The alignment arrow **142** provides a reference point so that the user may adjust the actual alignment based on the conditions and desired effect on the ball.

[0052] On the forward edge of the ball circle, there is a hand locator **140** in the form of a dark blue arrow depicting the most common location of the golfer's hands at impact. The arrow starts at the leading edge of the ball circle and runs to the bottom of the device.

[0053] The swing reference guide **110** shows the golf ball's path for pull, left, straight, right and push puts. The swing reference guide for the putt trainer includes linkage as with that of the full swing trainer to associate a swing type, ball path, club path, and club face. The swing reference guide is printed in the above the red arrow to allow for quick reference. The guide is printed in large print and colors that correspond to the club path arrows and with letters corresponding to club path arrows to assist in cross-referencing the ball's putt path back to the club path and clubface angle.

[0054] A foot and ball position chart **120** is shown below the red arrow. The graphic depicts the foot and ball locations for uphill, flat, and downhill lies along with target line and ball position for each. While the locations described for the club path indicator and foot and ball position chart are preferred, other locations are also possible.

[0055] Down the center of the red arrow **138**, starting at the center ball position, is a groove **180** that is approximately ¼ inches wide and extends to the edge of the mat. The groove **180** may be in the form of a trough or depression in the surface of the mat, or can form an opening completely through the mat. When the groove is a shallow depression, a properly stroked ball will travel within the groove, while a poorly hit ball will not. When the groove is in the form of a cut entirely through the plastic, it is preferably is wide enough for the ball to roll on the ground during the putt without hitting the edge of the plastic. As a training device, the putt trainer gives the golfer immediate feedback if the putt fails to follow the straight path.

[0056] The golf swing template is suitable for use on a variety of surfaces. For example, it may be placed directly on a hard surface such as concrete or asphalt. It may also be placed over carpet or synthetic grass. In addition, it may be used on grass or dirt. In such instances, it can be helpful to stake the template to the ground to ensure that it is flat and stable. For this purpose, one or more stake bores **190** are provided, preferably including four stake bores, one at each corner of the template. Consequently, nails, stakes, tie-downs, or other securing devices can be driven through the stake bores to secure the template for use.

[0057] One aspect of the golf swing template is that the training device allows the golfer to hit a golf ball directly off of the product. The combination of visual cues for the club path, clubface angle and the effects on the ball's path provides a powerful learning tool for the golfer. Golfers, from beginners to advanced, can take advantage of the golf swing template to shape their golf swings through multiple repetitions of hitting off of the device. Additionally, by simply standing over the swing trainer, the golfer can see the proper club path and mentally practice his or her swing. Because the device is portable and lightweight, the golfer can take it anywhere and use it anywhere, to include hotel rooms, the back yard, or the driving range. The device is effective and understandable for all ages.

[0058] While the preferred embodiment of the invention has been illustrated and described, as noted above, many changes can be made without departing from the spirit and

scope of the invention. Accordingly, the scope of the invention is not limited by the disclosure of the preferred embodiment.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

- 1.** A golf swing training device, comprising:
  - a template, the template having a top surface and a bottom surface;
  - a putt training graphic design attached to the template and visible when facing the top surface, the putt training graphic design depicting (i) a plurality of club path indicators, (ii) a swing reference guide comprising a plurality of shot selection types, and (iii) a link between each one of the plurality of shot selection types and one of the club path indicators; and
  - a groove in the top surface of the template, the groove extending along an expected line of travel for a properly hit golf ball.
- 2.** The training device of claim 1, further comprising a ball locator, and wherein the groove extends from the ball locator substantially to the end of the template.
- 3.** The training device of claim 1, wherein the groove further extends through the template, from the top surface to the bottom surface, substantially along the entire length of the groove.
- 4.** The training device of claim 2, wherein the ball locator further comprises a bore extending through the template.
- 5.** The training device of claim 2, wherein the club path indicators includes at least one of a primary club path, inside-out club path, outside-in club path or take away club path indicator.
- 6.** The training device of claim 5, wherein the swing reference guide further comprises a club face angle indicator associated with each of the shot selection types.
- 7.** The training device of claim 6, wherein the link comprises a first insignia associated with at least one of the plurality of shot selection types and a corresponding insignia associated with at least one of the club path indicators.
- 8.** The training device of claim 7, wherein the first insignia and corresponding insignia each comprise an alphanumeric character.
- 9.** The training device of claim 6, wherein the link comprises the use of a plurality of colors, such that each of the club path indicators is formed in a color that is substantially the same as a color used for at least one shot selection type.
- 10.** The training device of claim 9, wherein the graphic design depicting the plurality of shot selection types further comprises an illustration of a representative ball travel path for each of the plurality of shot selection types.
- 11.** The training device of claim 10, wherein the graphic design further depicts a foot and ball position guide.
- 12.** The training device of claim 1, further comprising a full swing graphic design attached to the template and visible when facing the bottom surface, the full swing graphic design depicting (i) a plurality of club path indicators, (ii) a swing reference guide comprising a plurality of shot selection types, and (iii) a link between each one of the plurality of shot selection types and one of the club path indicators..
- 13.** The training device of claim 11, further comprising a handle.
- 14.** The training device of claim 12, further comprising a plurality of stake bores.

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