GOLF PRACTICE MAT RECORD SHEET

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ABSTRACT
A mark retaining layer for the recording of the contact area of a golf club swing with the mark retaining layer. The mark retaining layer may have one or many golf ball likenesses printed thereon.
Figure 8

- Hook
- Slicing the Ball
- Fat or Casting Hands and Standing too close to ball
GOLF PRACTICE MAT RECORD SHEET
CROSS REFERENCE TO RELATED APPLICATIONS


BACKGROUND OF THE INVENTION

[0002] 1. Field of Invention

[0003] This invention relates to a golf practice mat for the practice and refinement of the golf swing, and more particularly to a golf and divot practice mat with a mark retaining layer having one or more images of a golf ball printed or otherwise illustrated thereon, and method for using same.

[0004] 2. Description of Related Art

[0005] Hereinafore a wide variety of golf and golf related practice devices have been proposed and developed for improving golf skills. Prior devices have attempted to provide such practice tools in various different manners. A significant limitation of all prior devices however, is that such devices are often cumbersome, expensive, unreliable, and not particularly convenient for improving golf skills. Prior art devices that recorded the contact area of the golf club to the golf ball do not give the same type of information about the swing as one can have with a record of the contact area of the golf club to the ground. A record of how club contacted the ground, represented as the path that the club made across the ground as it was in contact with it, gives the observer the distinct advantage of acquiring additional information with regard to the swing, as discussed below. By recording the contact area of the club on the ground (as represented by the practice mat) as the club is swung through, a “dynamic” record of the contact is made. As the club is moved through the swing, and across the ground (mat), the amount of contact between club and ground may change. This temporal aspect of the record can be observed with the present invention. This record is akin to the divot that a golfer may leave on the grass surface of the golf course on which actual swings are taken. A record merely of where the ground struck the club, in terms of a record on the club head, by contrast, gives limited information. A record of how the ball contacted the club face represents a different type of information. In addition, devices that record the contact area of the golf ball to the golf club carry the distinct disadvantage of requiring modification to the golf club.

[0006] For example, U.S. Pat. No. 2,660,436 to Grossman discloses a device wherein a laminated layer is secured to the face of the golf club. When a mark is left upon this device, it is not readily observed, but instead one must look closely at the face of the club. In addition, only one swing can be taken per device, or else one no longer knows which swing had caused which contact mark. Thus, a change to the equipment must be made between each swing. In addition, the device requires that an actual golf ball be struck. This is a limitation on where and how the device can be used.

[0007] U.S. Pat. No. 5,609,530 to Butler discloses an invention to record the “toe up” or “toe down” attitude of a golf club as it is swung through past the ground. This device once again carries the limitation that the recording is done on the club, requiring modification of the club to be swung. Also, only one swing can be made before a disruption to the practice round must be made to replace the device on the club. Also, although this device does give some information about the way in which the club and the ground have come into contact with each other, the information is limited in that no “dynamic” record is made.

[0008] What is called for is a device that allows for the dynamic recording of the contact area of the golf swing to the ground. Ideally, the device would allow for multiple swings, and make multiple records, before any modification be needed to the device. In addition, the device should be able to record such detailed information in a way that allows for easy storage of the information at relatively low cost.

BRIEF SUMMARY OF THE INVENTION

[0009] The present invention provides a golf or divot practice mat that is convenient to use, reliable, inexpensive to manufacture, and may be used either inside or outside. The divot mat of the present invention is easy to use, and provides instant and reliable feedback about a user’s golf swing by leaving a mark around and near a simulated golf ball imprinted on a paper or other impressionable surface. This visible mark gives immediate information to the user as to the quality and characteristic of the swing, and guides the user to improve the golf swing.

[0010] Although various types of golf practice devices are known in the prior art, none are directed to a mat having a surface with simulated printed golf balls which are marked by the swing of a golf club by the user, thereby indicating instantly and recording permanently characteristics of the swing. There is a need for a device which can record the contact of the golf club with the ground (or ground as simulated by the mat).

[0011] The present invention provides for the practice of a golf swing and the recording of the contact area of the club to the apparatus. This contact area is recorded as a retained mark. The mark is similar to the divot one would see on the ground after swinging the club on turf. Review of the mark, which represents a divot, allows for analysis of the swing which made the mark. A trained eye may make such an analysis, or a guide may be used to help the layman with such an analysis.

[0012] The present invention allows the contact area to be recorded on an easily removable and replaceable layer such as a piece of no carbon required paper. One can also remove the paper and save the paper in order to create a history of one’s swing at any point in time. The records are lightweight and relatively inexpensive. In addition, when multiple balls are printed on such a piece of paper, the golfer may practice his swing many times before needing to remove and replace the paper, while still having separate records of individual swings.

[0013] By using printed likenesses of golf balls on the recording layer, the golfer gains the experience of looking at a golf ball during swing practice. In addition, by utilizing a likeness of a golf ball, the golfer may also learn to focus on the ball and keep his or her head down while practicing the swing. This is an important aspect of a golf swing.
[0014] The ease in which the record of the contact areas can be removed and replaced from the apparatus allows for a continuous practice session without long interruptions.

[0015] The present invention provides a golf or divot practice mat which is highly efficient at training a user to be a better golfer. The golf or divot practice mat of the present invention may be used successfully by beginning golfers, intermediate-level golfers, or expert golfers at many locations, either inside or outside, without the need for any other equipment or accessories other than a golf club.

[0016] Accordingly, it is an object of this invention to provide a divot or golf practice mat with an impressionable surface having one or more imprinted simulated golf balls thereon. The impressionable surface is preferably composed of a no carbon required (NCR) type paper, but may alternatively be composed of or contain a wax, a carbon paper, or the like. The invention allows for the recording of the contact area between a golf club and the recording surface, which simulates the ground. The invention also allows for multiple swings to be recorded without the golfer having to do more than to slightly relocate his or her stance. When the recording sheet has been used up, the recording sheet is easily removed and replaced. The sheet then becomes a permanent record of the contacts between the golf club and the apparatus (which simulates the golf course).

[0017] Additional objects and advantages of the invention will be set forth in the description which follows, and in part will be obvious from the description, or may be learned by practice of the invention.

[0018] The present invention is a golf or divot practice mat, comprising a base element and a mark retaining layer removable secured or mounted to a base element. The mark retaining layer may be a no carbon required paper, carbon paper, or wax containing surface, and has one or more simulated golf balls imprinted thereon. The mark retaining layer may be secured to the base element by dowels, adhesives, hook and loop fastening material, or other fastening mechanism. A mark is left on the mark retaining layer which instantly records the contact area of the golf club with the practice mat. Analysis of the mark allows for characterization of a golf swing’s position and angle of contact with the simulated golf ball. The practice mat may be conveniently used anywhere, indoors or outdoors.

[0019] A method for the practice of a golf swing, including attaching a mark retaining layer to a base element, and swinging a golf club using the mark retaining surface as a simulated golf course surface.

[0020] A mark retaining layer for the recording of the contact area of a golf club swing with the mark retaining layer. The mark retaining layer may have one or many golf ball likenesses printed thereon.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] The accompanying drawings, which are incorporated in and constitute a part of the specification, illustrate embodiments of the invention and, together with a general description given above and the detailed description of the embodiments given below, serve to explain the principles of the invention.

[0022] FIG. 1 is a perspective view of a golf or divot practice mat using dowels to secure the mark retaining layer to the base element, according to the invention.

[0023] FIG. 2 shows a mark retaining means with a plurality of simulated golf balls imprinted thereon, according to the invention.

[0024] FIG. 3 is a perspective view of a golf or divot practice mat using adhesives to secure the mark retaining layer to the base element, according to the invention.

[0025] FIG. 4 is a perspective view of a golf or divot practice mat using hook and loop fastening elements to secure the mark retaining layer to the base element, according to the invention.

[0026] FIG. 5 is an exploded view of a golf or divot practice mat using adhesives to removeably attach the mark retaining layer to the base element.

[0027] FIG. 6 is a side view of the golf or practice mat illustrating a simulation of a golf club swing as the golf club is contacting the mark retaining layer.

[0028] FIG. 7 is a top view of a mark retaining layer illustrating the temporal aspect of the information contained in the mark.

[0029] FIG. 8 is a top view of a mark retaining layer illustrating different types of marks and examples of what these marks indicate about the golf swing.

DETAILED DESCRIPTION OF THE INVENTION

[0030] Reference will now be made in detail to embodiments of the invention as illustrated in the accompanying drawings.

[0031] In accordance with the present invention, there is provided a golf or divot practice mat, comprising a base element and a mark retaining surface removably secured or mounted to the base element. In some embodiments, the mark retaining layer may be a no carbon required paper, and have one or more simulated golf balls imprinted thereon. In some embodiments, the mark retaining layer may be secured to the base element by dowels, adhesives, hook and loop fastening material, or other fastening mechanism. A mark is left on the mark retaining layer which instantly records the contact area of the golf club with the simulated golf ball. The practice mat may be safely and conveniently used anywhere, indoors or outdoors.

[0032] In some embodiments, as shown in FIG. 1, the golf or divot practice mat 10 has a base element 12 and a mark retaining layer 20. The base element 12 has a rigid or semi-rigid base layer 18. This base layer 18 may be made of polycarbonate plastic. An example of an appropriate plastic is a ½ inch thick polycarbonate plastic manufactured by Sheffield Plastics, Inc., under the trade name Makroten. Other similar and suitable materials may be used.

[0033] A surface gripping layer 14 may be added in some embodiments. For example, gripping layer 14 may be a rubber mat for preventing slipping or skidding of the mat 10 on a surface. In some embodiments the surface gripping layer 14 is composed of polyurethane rubber, but other durable resilient materials may also by used such as soft plastics, cloth, composites or the like. In some embodiments, surface gripping layer 14 is secured to base layer 18 by...
adhesive layer 16, which can be adhesives or adhesive tape or a combination of adhesives and other layers. In some embodiments fasteners such as rivets, screws, dowels, or the like are used.

A sheet of durable rigid material can be used for base layer 18, such as polycarbonate plastic. Such a layer provides a firm support means. However, other durable, resilient yet rigid materials may also be used, such as composites, rubber, plastics, wood, metal, or the like. Preferably base layer 18 is of a substantially planar configuration, but may be otherwise. For example, it is possible to provide golf and divot practice mat 10 in a non-planar configuration, such as a curved, concave, or convex configuration.

A mark retaining layer 20 is used for recording an impression resulting from contact with a golf club head. In some embodiments, the mark retaining layer 20 is an impression retaining paper such as no carbon required paper (NCR). An example of such a product is a self contained carbonless paper manufactured by Appleton Corp., of Appleton, Wis. In some embodiments, wax, carbon paper or the like may be used. In some embodiments the surface of mark retaining layer 20 is printed or otherwise impressed with images 22 of one or more golf balls.

In some embodiments, the mark retaining layer may be removable secured to base element 12 using dowels 24. Further fastening may be accomplished using a fastening flap 26, with apertures 25, that fits over dowels 24. Fastening flap 26 may be made of a sheet of durable, rigid, yet resilient material. In some embodiments, as seen in FIG. 1, a fastening flap 26 of clipboard, composite, plastic, wood, metal, or other durable material may be drilled and used to match dowels 25, and prevent paper 20 from sliding out.

In some embodiments, as shown in FIG. 2, a mark retaining layer 20 is shown with a plurality of simulated golf ball images 22 printed thereon. In some embodiments, mark retaining layer 20 is a sheet of no carbon required paper. Alternatively, a carbon paper, a wax impregnated surface, or the like may be substituted for NCR paper. Also, if desired, the mark retaining surface may show only one golf ball, or more than one. A mark 35 is immediately made on mark retaining surface by contact with the head or other part of a golf club, and provides immediate insight to the user as to the angle, quality, and characteristic of the swing of the golf club.

In some embodiments, as shown in FIG. 3, mark retaining layer 20 is removeably fastened to base element 12 with an adhesive layer 28. The adhesive layer 28 secures the mark retaining layer 20 to base element 12 such that the horizontal force exerted onto the paper, which may tend to slide the paper along the top surface of base layer 12, is resisted. Adhesive layer 28 is of a type that allows for easy removal and replacement of mark retaining layer 20 as needed.

In some embodiments, as shown in FIG. 4, hook and loop fastening elements 30 are used to secure the mark retaining layer 20 to base element 12.

In some embodiments, as shown in FIG. 5, mark retaining layer 20 is removeably secured to base element 12 by adhesive layer 28. In some embodiments, adhesive layer 28 is made up of a first adhesive interlayer 51, a center layer 52, and a second adhesive interlayer 53. Adhesive layer 28 may be made from a paper with adhesive on it, such as Starliner Pressure Sensitive—white cut, manufactured by MacTac. In such an embodiment, this product would provide paper layer 52 and second adhesive interlayer 53. A second adhesive may then be applied on the top surface 54 of center layer 52 to create first adhesive interlayer 51 using methods known to those of skill in the art. An adhesive such as GetTac 101 Adhesive by Advanced Polymers Intl. may be used. In some embodiments, the adhesive layer 28 will be of sufficient strength to prevent the slippage of mark retaining layer 20 relative to base element 12 when mark retaining layer 20 is struck by a golf club during a practice session using practice mat 10. Also, mark retaining layer 20 may be easily removed and replaced without the tearing or damaging of mark retaining layer 20. After quite a few mark retaining layer 20 replacements, adhesive layer 28 may need to be replaced.

As illustrated in FIG. 6, practice mat 10 is struck by golf club 60 as it swings through arc 61. Golf club shaft 62 propels golf club head 63 through arc 61. Golf club head 63 is in contact with the top surface 64 of mark retaining layer 20 at point or area 65. Base element is of sufficient hardness and rigidity as a backing plate that the impact of club head 63 is able to mark the mark retaining surface 20.

FIG. 7 illustrates the temporal aspect of the mark that is retained on mark retaining layer 20. In some embodiments, golf ball image 22 is on mark retaining layer 20. The strike of a golf club has left mark 70 on mark retaining surface 20. Arrow 71 shows the direction of the club during the swing. Portion 70a of mark 70 was recorded earlier in time that portion 70b. Thus, the mark retaining layer has recorded not just the overall contact area of the club to the ground but recorded the contact area 70 in a time dependent fashion.

FIG. 8 is used for illustrative purposes only to show how different practice swings may leave different types of marks 81, 82, 83 and examples of analysis comments 84, 85, 86 that may be used. The sample comments are not meant to be an authoritative analysis of these marks in this example.

In operation and use golf or divot practice mat 10 is easy to use, convenient, and very efficient for improving a users golf swing. Golf and divot practice mat 10 may be used indoors or outdoors, and is a very cost effective practice means. To use golf and divot practice mat 10, the user simply places the mat on a suitable surface, such as a floor, a deck, a lawn, of the like, and commences practice. The used sheets of NCR paper or other mark retaining surface may be kept as a record and compared with later sheets to note improvement.

As evident from the above description, a wide variety of mats may be configured from the description given herein and additional advantages and modifications will readily occur to those skilled in the art. The invention in its broader aspects is, therefore, not limited to the specific details, representative apparatus and illustrative examples shown and described. Accordingly, departures from such details may be made without departing from the spirit or scope of the applicant's general inventive concept.
I claim:

1. A mark retaining layer comprising:
   a recording layer; and
   an image layer.

2. The mark retaining layer of claim 1 wherein said recording layer is a layer of no carbon required paper.

3. The mark retaining layer of claim 2 wherein said image layer comprises images of golf balls.

4. The mark retaining layer of claim 1 wherein said recording layer comprises:
   a layer of paper; and
   a layer of dry ink.

5. The mark retaining layer of claim 1 wherein said mark retaining layer is adapted to be used with a golf practice mat.

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