GOLF PUTTER WITH A DETACHABLE
SOFT PAD UTILIZING MAGNETS

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ABSTRACT

A golf putter, for increasing the accuracy of the direction of the putted ball, has a soft and flexible pad on the surface of the putter. The soft and flexible pad is attached on a metal plate. Magnets are embedded in the putter head to hold the soft and flexible pad, which is attached to the metal plate. The soft and flexible pad absorbs the repulsion of the ball, and expands the contact point to offset with movement of angles. The soft and flexible pad helps to improve the accuracy of the putted golf ball's direction.
FIG. 1  Prior Art
FIG. 2  Prior Art
FIG. 5

FIG. 6
GOLF PUTTER WITH A DETACHABLE SOFT PAD UTILIZING MAGNETS

FIELD OF THE INVENTION

Current application is related to a golf putter, more specifically, a golf putter head, which has an attachable and removable soft flexible pad which is connected to a metal plate. Magnets, which are strategically placed in the putter’s face surface, can then attach the pad, utilizing the metal plate that is attached with the pad, to the putter’s head.

BACKGROUND OF THE INVENTION

In order to increase the distance for the drive or iron club shots in golf games, people maximize forced repulsion for those clubs. However, for a putter, the accuracy and direction of the putted golf ball is more important than the flying distance. Looking at a geometric perspective, if the ball is a circle, the point where the flat head surface of the putter meets the ball is one point. So, if there is a minute change in the angle when the putter hits the ball, the direction of the ball will be changed dramatically due to the change in angular direction and strong repulsive force developed by the hard and repulsive materials of the golf ball and the putter. In addition to this, there is also the situation where a golfer would indeed putt the golf ball through a long range. For that, a stronger force of repulsion is required. Contrarily, short range putting needs much more accuracy. Therefore, both strong repulsion force and minimum repulsion force are required from one putter. It is the purpose of the current application to meet such dual contrary requirements through one putter.

SUMMARY OF THE INVENTION

To solve these problems, a soft and flexible pad is attached on the surface of the putter head to absorb the repulsion of the ball. It expands the contact point to offset with the movement of angles to improve the directional stability. However, there is a situation when the golfer would want to put the golf ball through a long range. For such long range putting, a stronger force of repulsion is required. Contrarily, short range putting does not require repulsion but relies heavily on accuracy in control over the direction of the ball. Therefore, strong repulsion force for long range putting and accuracy for short range putting are required from one putter. Since it is almost impossible to clear the two facts abovementioned with one putter, most all of the putters these days are made only for long putts. It is the purpose of this current application to resolve such controversy of one putter. The golf putter of this current application enables a golfer to do long and short putting with one putter by attaching a soft and flexible pad utilizing magnets on the surface of the putter, and a thin slice of iron plate that the soft pad is attached to thereon. The soft and flexible pad is attached on a metal plate that and is attachable and detachable upon will on the putter’s head surface. The magnets that are embedded on the putter head holds the iron strip, which the soft pad is attached to. The soft and flexible pad absorbs some of the repulsion of the ball, and expands the contact area of offset with the movement of angles. The soft pad also helps to improve the accuracy of the putted golf balls direction because the contact point is expanded.

BRIEF DESCRIPTION OF THE DRAWINGS/FIGURES

FIG. 1—is a perspective drawing of a putter head of the conventional putter, the prior art, which has solid and hard front surface and head body.

FIG. 2—is a schematic drawing that shows the impact movement of a putter with a golf ball of the prior art.

FIG. 3—is a perspective view of the putter head of the current application showing the metal plate and soft pad attached to the putter head.

FIG. 4—is a schematic drawing that shows the impact moment of a putter with a soft pad of the current application.

FIG. 5—is a perspective drawing of the soft pad and iron plate of the current application.

FIG. 6—is a side view of the soft pad and iron plate of the current application.

FIG. 7—is a perspective drawing of the putter head of the current application showing three holes for receiving permanent magnets.

FIG. 8—is a side view of the putter head of the current application.

FIG. 9—is a front view of the putter head of the current application showing arrangement of magnets on the head.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIG. 1: is a perspective drawing of a conventional putter head or one of the prior art (1), which has front surface (2) that is different from the head body (3) connected to a putter rod (4). FIG. 2: is a schematic drawing that shows the impact moment of a conventional putter (1) with a conventional golf ball (5) in prior arts. Though the materials of the head body (3) and front surface (2) are made of different material, they are still made of hard materials such as metal, plastic, or wood. Here, the meaning of hard is that it is very hard to deform the material by force. Meanwhile, all the golf balls are made of composite materials based on rubber. Therefore, the golf ball deforms a bit more than the putter head at the moment of impact. However, the degree of deformation of the golf ball due to the putting force is so very slight that it is negligible (5). Therefore, the contact area between the golf ball (5) and the putter’s front surface (2) is a tangent point (6). In this case, the direction (7) of the golf ball (5), due to the bouncing force (8) is very unstable. A slight fluctuation of a putter’s impacting angle (9) from a hard and flat surface (10) that is perpendicular to the approaching line (11) of the putter head (1) will drastically change the direction (7) of the putted golf ball (5). To solve such problems, the inventor put the soft pad (12) on the surface of the putter head (3), to increase the area of contact (13) during impact.

FIG. 3: is a perspective view of the putter head (14) of the current application showing the iron plate (15) and soft pad (12) attached to the putter head (16).

FIG. 4: is a schematic drawing that shows the impact moment of a putter (1) with a soft pad (12) of the
current application. The soft pad (12) is made of an easily deformable material even by the minor force of putting. As the pad (12) is deformed more easily than the golf ball (5), the distorted surface of the pad (12) provides an increased contacting area than before (13) and the area (13) surrounds the golf ball (5). After the pad is distorted (12), resilient force (The force of rubbery material that try to return to the original shape) (17) is developed perpendicularly to the distorted surface. The vector summation (18) of these resilient forces is directed to the perpendicular direction to the putter head’s front surface (19). The stability of the golf ball’s direction (5), is much more stable than that of the prior arts’ case because the golf ball’s direction of the current application (5) is summation of such minor forces (17) applied to the golf ball (5). And due to the extended contact time, the putter head (1) hold the golf ball (5) longer than the prior art’s case. During the extended time, the course of the golf ball (5) is stabilized.

[0016] FIG. 5: is a perspective drawing of the soft pad (12) and iron plate (15) of the current application. FIG. 6: is a side view of the soft pad and iron plate thereof. The soft pad (12) is a material that has a combination of plasticity, elasticity and resiliency at the same time to meet a requirement of easy deformation and return to the original shape with proper time-interval. Too much plasticity will hold the golf ball and too much elasticity will bounce the golf ball off with additional force. The most profitable material for the purpose is, including but not limited to, EPR [Ethylene Propylene Rubber], EPDM [Copolymer of Ethylene Propylene Monomer], natural rubber, polyurethane, silicone rubber, natural fibers, textiles, and composite of those materials. The soft pad (12) is attached to an iron plate (15) by proper method of, including but not limited to, adhesives such as gluing, riveting, cementing, and soldering. Other solid material can be used instead of the iron plate.

[0017] FIG. 7: is a perspective drawing of the putter head body of the current application (16) showing three holes (17) for receiving magnets (18). Two outer holes (17-a) are spaced equal distance from the center hole (17-b). FIG. 8: is a side view of the putter head of the current application (16). FIG. 9: is a front view of the putter head of the current application showing arrangement of the magnet plates on the head (22). The depth (20) and diameter (21) of the holes (17) are equal to those of the permanent magnet plates (22). The two side magnet plates (22) are arranged to face alternative pole sequences from the center of the putter head (19).

What is claimed is:

1. A golf putter having a soft and flexible pad which is detachably attached on the putter’s front surface.

2. A golf putter having a soft pad of claim 1, wherein the soft and flexible pad is attached on a metal plate, which is detachably attached to magnets that are permanently embedded within the face surface of the putter.

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