PAIR OF ADJUSTABLE HANDLES FOR USE WITH A GOLF CLUB

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ABSTRACT

A pair of adjustable handles for use with a golf putter includes a sleeve having an interior area with a diameter at least as large as a diameter of the golf club shaft, the sleeve having first and second shafts extending outwardly. A first handle is rotatably coupled to the first shaft. A first locking mechanism is biased to fix a position of the first handle relative to the first shaft and movable to allow the first handle to rotate relative to the first shaft. A second handle is rotatably coupled to the second shaft, the first and second handles being rotatable about a common axis of rotation. A second locking mechanism is biased to fix a position of the second handle relative to the second shaft and movable to allow the second handle to rotate relative to the second shaft. The sleeve is locked to the golf club shaft.
Fig. 5
Fig. 6
PAIR OF ADJUSTABLE HANDLES FOR USE WITH A GOLF CLUB

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of provisional application, U.S. Ser. No. 61/271,201, filed on Jul. 17, 2009, titled Putt Pend.

BACKGROUND OF THE INVENTION

[0002] This invention relates generally to golf accessories and, more particularly, to a pair of connectable adjustable handles to facilitate the pendulum-like motion of a golf swing.

[0003] The game of golf is very popular amongst persons of virtually all ages. Many golfers begin playing as elementary or junior high school age and continue on even when elderly. Golf is a game that may be played without a great amount of physical stamina being necessary. One of the most important parts of the game involves putting the golf ball from its position on the golf green into a respective hole. This action requires a golfer to bend over slightly and also to make a very smooth stroke.

[0004] Various accessory devices have been proposed in the art to aid a golfer in making a smooth putting motion, including adjustable handles for use with a putter. For instance, U.S. Pat. No. 5,976,030 to Hsieh describes an adjustable golf club handle mounting arrangement including a threaded adjustment rod member. Further, U.S. Pat. No. 5,716,287 to Levoz describes an adjustable golf putter having a shaft, a putter head, and an angle adjusting adapter for adjusting the angle between the shaft and the putter head. Still further, U.S. Pat. No. 5,413,339 to Martin describes a rotating golf club handle comprising a sleeve mounted to the handle shaft so that the sleeve permits rotation of the lowermost hand during a golf swing.

[0005] Although assumably effective for their intended purposes, the existing devices and proposals do not provide a structure that imitates an authentic pendulum motion during the putting stroke. Therefore, it would be desirable to have a pair of adjustable handles for use with a golf putter that enable a pendulum like swing to be performed.

SUMMARY OF THE INVENTION

[0006] A pair of adjustable handles for use with a golf putter according to the present invention includes a sleeve having an interior area with a diameter that is at least as large as a diameter of the golf club shaft, the sleeve having first and second shafts extending outwardly therefrom. A first handle is rotatably coupled to the first shaft. A first locking mechanism is biased to fix a position of the first handle relative to the first shaft and movable to allow the first handle to rotate relative to the first shaft. A second handle is rotatably coupled to the second shaft, the first and second handles being rotatable about a generally common axis of rotation. A second locking mechanism is biased to fix a position of the second handle relative to the second shaft and movable to allow the second handle to rotate relative to the second shaft. The sleeve is locked to the golf club shaft.

[0007] The present invention is known commercially as the “Putt Pend” which is short for the “Putting Pendulum.” This invention comprises a specially designed golf putter accessory featuring a pendulum-imitating motion that occurs while putting. In this manner, the Putt Pend proves an invaluable training tool, while also helping elderly golfers with their putting swing.

[0008] The Putt Pend was primarily designed with the mature golfer in mind, facilitating comfort for these golfers during the putting motion. An adjustable handle that is affixed directly to the handle of the putter, the Putt Pend is fashioned from a durable aluminum and plastic material, measuring approximately 6” in length and 9” in width. The product comprises two comfortable, easy grip rubber handles integrally attached to the base of the unit. Contoured, these handles comfortably facilitate a natural grasp. Ergonomically designed for optimal swing, the Putt Pend also features a gel insert that protects the club from damage. Once placed onto a putter, the Putt Pend provides 360 degree handle rotation when in use. As a result, this invention provides a helpful assist in developing the proper position to emulate a pendulum-like motion, thus improving the put in addition to making it more comfortable to execute.

[0009] There are several significant benefits and advantages associated with this clever invention. Foremost, the Putt Pend provides golfers with a more versatile instrument for completing their best shots. A specially designed golf accessory featuring an adjustable, swivel action handle, this handy product can be expediently tailored for the user. As a result, golfers will enjoy better usability and spin control for all shots, along with the optimum potential for shot control and lower scores. In this manner, the Putt Pend proves especially ideal for the elderly, as well as children, women, and novice players, helping them to more easily master a putter that is amenable to their size and strength.

[0010] Additionally, this product eliminates the need to purchase putters of various sizes, thus saving consumers money when purchasing golf equipment. In addition to its practical purposes, the Putt Pend’s unique configuration lends an attractive, attention-getting air to the club, encouraging the admiration of other golfers. Compact and lightweight, the Putt Pend can be easily stored in a golf bag, readily accessible whenever needed. Constructed of durable, high quality materials and components, this product will withstand years of continued use and play.

[0011] The Putt Pend is an innovative invention which readily enhances the game for novices and professionals alike. With this uniquely designed accessory, golfers effortlessly improve their scores, and glean much more enjoyment from the relaxing and satisfying sport. Affordably priced, the Putt Pend will be well received by golf aficionados everywhere, a very sizable market potential.

[0012] Therefore, a general object of this invention is to provide a pair of handles for use with a putter.

[0013] Another object of this invention is to provide a pair of handles, as aforesaid, that enables a golfer to imitate a pendulum like motion when swinging the putter.

[0014] Still another object of this invention is to provide a pair of handles, as aforesaid, that may be locked in selected configurations.

[0015] Yet another object of this invention is to provide a pair of handles, as aforesaid, that is easy to use.

[0016] A further object of this invention is to provide a pair of handles, as aforesaid, that is economical to manufacture.

[0017] Other objects and advantages of the present invention will become apparent from the following description taken in connection with the accompanying drawings.
wherein is set forth by way of illustration and example, embodiments of this invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018] FIG. 1 is a perspective view of a pair of handles in use with a golf putter according to a preferred embodiment of the present invention;

[0019] FIG. 2 is a perspective view of the pair of handles from another angle and removed from the putter;

[0020] FIG. 3 is an exploded view of the handles in FIG. 2;

[0021] FIG. 4 is a perspective view of a first handle separated from a second handle;

[0022] FIG. 5 is an exploded view of the first handle as in FIG. 4;

[0023] FIG. 6 is a perspective view of a second handle as in FIG. 2;

[0024] FIG. 7 is an exploded view of the second handle as in FIG. 6;

[0025] FIG. 8 is an isolated perspective view of the second handle; and

[0026] FIG. 9 is an exploded view of the handle as in FIG. 8.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0027] Pairs of adjustable handles according to the present invention will now be described in detail with reference to FIGS. 1 through 9 of the accompanying drawings. More particularly, a pair of adjustable handles 100 according to one embodiment for use with a golf club having a shaft 10 (FIG. 1) includes a sleeve 110, a first handle 130, a second handle 140, and structure for selectively locking the sleeve 110 to the golf club shaft 10.

[0028] The sleeve 110 has an interior area 112 (FIG. 2) with a diameter that is at least as large as a diameter of the golf club shaft 10, allowing the sleeve 110 to surround the golf club shaft 10 as shown in FIG. 1. In some embodiments, the sleeve 110 may have two or more portions (e.g., portions 111a, 111b) hingedly coupled together to allow the sleeve 110 to be easily placed around the golf club shaft 10. The sleeve 110 may be constructed of metal, plastic, and/or any other appropriate material, as will be appreciated by those skilled in the art. To prevent damage to the golf club shaft 10, a foam, gel, or rubberized pad 113 (FIGS. 2, 3, 6, 7) may be inside the interior area 112.

[0029] First and second shafts 114, 115 (FIGS. 1 through 7), discussed in further detail below, extend outwardly from the sleeve interior area 112. While the shafts 114, 115 are shown to be generally linear and aligned, as is currently preferred, other configurations could alternately be used.

[0030] As shown, for example, in FIGS. 1 and 2, the first handle 130 is rotatably coupled to the first shaft 114, and the second handle 140 is rotatably coupled to the second shaft 115. It may be desirable for both handles 130, 140 to be rotatable about a generally common axis of rotation, as shown. Further, it may be preferable for each handle 130, 140 to be elongate and include an ergonomically contoured hand grip 132, 142 (e.g., for receiving four fingers), and for the handles 130, 140 to generally be mirror images of one another. Appropriate materials for the handles include, for example, metal and plastic, and the ergonomically contoured hand grips 132, 142 may in particular include a rubberized or otherwise cushioned material (FIG. 2).

[0031] Turning now specifically to FIGS. 5, 7, and 9, locking mechanisms 150 restrict motion between the handles 130, 140 and the respective shafts 114, 115. More particularly, one locking mechanism 150 is biased to fix a position of the first handle 130 relative to the first shaft 114 and is movable to allow the first handle 130 to rotate relative to the first shaft 114, and another locking mechanism 150 is biased to fix a position of the second handle 140 relative to the second shaft 115 and is movable to allow the second handle 140 to rotate relative to the second shaft 115. While a single type of locking mechanism 150 is described herein as being used with both shafts 114, 115, those skilled in the art will appreciate that different locking mechanisms may be used with the respective shafts 114, 115.

[0032] Each locking mechanism 150 may for example include a gear 152, an interaction member 154, and a biasing member 158, as shown in FIG. 9. Each gear 152 is fixedly coupled to a respective shaft 114, 115 (FIGS. 5 and 7) and rotatable about the same axis of rotation as the handles 130, 140, and each interaction member 154 may be slidably inside the respective handles 130, 140. An input 155 of each interaction member 154 is accessible at the respective handles 130, 140, and each interaction member 154 has structure for interacting with a respective gear 152. For example, each interaction member 154 may include a hole 156 that is larger than the corresponding gear 152, and at least one tooth 157 complementary to the corresponding gear 152 may be located at a wall 156a of each hole 156.

[0033] The biasing member 158 (e.g., a spring) of each locking mechanism 150 causes the corresponding tooth 157 to restrict motion of the corresponding gear 152. The tooth 157 and the gear 152 may directly interact, as shown, or may interact through an intermediary (e.g., another gear), and interaction between the tooth 157 and the gear 152 fixes the position of the handle and the shaft associated with the respective locking mechanism 150 (e.g., the handle 130 and the shaft 114, or the handle 140 and the shaft 115). However, when a respective input 155 is utilized, the force imparted by the corresponding biasing member 158 is overcome and the corresponding tooth 157 is moved to allow rotation between the handle and the shaft associated with the respective locking mechanism 150 (e.g., the handle 130 and the shaft 114, or the handle 140 and the shaft 115).

[0034] Various structures for selectively locking the sleeve 110 to the golf club shaft 10 may be used. For example, inserts of different sizes may be positionable inside the interior area 112 of the sleeve 110, or one or more set screw may extend through the sleeve 110 such that adjustment with a tool or thumbwheel couples the sleeve 110 to the golf club shaft 10. A currently-preferred structure is incorporated into the pair of adjustable handles 100, which allows rotation of the handle 130 to cause the golf club shaft 10 to be locked to the sleeve 110.

[0035] More particularly, in the pair of adjustable handles 100, the first shaft 114 has proximal and distal ends 114a, 114b (FIGS. 4 and 5), the proximal and distal ends 114a, 114b are rotatable relative to one another, and a non-circular channel 118a extends through the sleeve first portion 111a and into the first shaft 114. It may be desirable for the shaft proximal end 114a and the sleeve first portion 111a to have a unitary construction. As shown in FIG. 5, a push member 172 has a clamping end 172a, a support end 172b that is configured
complementary to the non-circular channel 118a, and a threaded element 173 (e.g., located inside the support end 172b). The clamping end 172a extends inside the sleeve interior area 112, and the support end 172b is at least partially positioned inside the non-circular channel 118a to limit the push member 172 to generally linear, non-rotatable motion relative to the sleeve first portion 111a. The clamping end 172a may include a foam, gel, or rubberized pad 174 to prevent damage to the golf club shaft 10.

[0036] A threaded actuator 175 (FIG. 5) extends from and is fixed relative to the first shaft distal end 114b, and the threaded actuator 175 extends through the first shaft proximal end 114a and is threadably coupled to the push member threaded element 173. The threaded actuator 175 may be, for example, a bolt having a head 175a, and the shaft distal end 114b may be a bolt cap 176 (FIG. 5) affixed around and generally immovable relative to the bolt head 175a.

[0037] Returning now to the second shaft 115, the second shaft may be constructed generally similar to the described first shaft 114, as shown in FIG. 7. As it may be unnecessary to have two push members 172, however, a nut 180 may be positioned in a non-circular channel 118b in the sleeve second portion 111b, and a bolt 182 extending through the second shaft 115 may be coupled to the nut 180 to prevent proximal and distal ends 115a, 115b of the shaft 115 from moving relative to one another. While the bolt 182 and the nut 180 may be omitted and the second shaft 115 may simply be a uniaxial member in some embodiments, the bolt 182 may provide additional strength and stability to the second shaft 115. Though not shown in the drawings, the first shaft 114 and/or the second shaft 115 may be telescopic (e.g., through a telescopic distal end 114b, 115b) to allow distance between the handles 130, 140 to be adjusted.

[0038] In use, the sleeve 110 is placed about the golf club shaft 10, such that the shaft 10 is located inside the interior area 112 (FIG. 1). The first handle 130 is then rotated, causing the first shaft distal end 114b to rotate due to the locking mechanism 150 interacting between the first handle 130 and the first shaft distal end 114b. In turn, rotation of the first shaft distal end 114b causes the push member clamping end 172a (FIG. 5) to move inside the sleeve interior area 112 through interaction between the threaded actuator 175 and the push member threaded element 173, as discussed above.

[0039] Once the push member clamping end 172a exerts sufficient force upon the golf club shaft 10 that the shaft 10 does not move relative to the sleeve 110, friction may additionally restrict the proximal and distal ends 114a, 114b of the first shaft from rotation relative to one another—though this friction may be overcome when desired by exerting sufficient rotational force on the handle 130. The inputs 155 may then be actuated, allowing the handles 130, 140 to rotate relative to the shafts 114, 115 (as discussed in detail above) until a desired positioning is obtained, and the inputs 155 may then be released, locking the positioning of the handles 130, 140 relative to the shafts 114, 115 (again, as discussed in detail above). The user may then grip the handles 130, 140 and swing the golf club (e.g., a putter) like a pendulum. By providing two handles 130, 140, a pendulum motion may be easier to obtain than is possible with a single handle, and particularly the elderly and those with arthritis may benefit from a configuration that is easier for them to grip. Moreover, as the sleeve 110 is adjustable along the shaft 10, the original size and dimensions of the golf club being swung may be less critical.

[0040] It is understood that while certain forms of this invention have been illustrated and described, it is not limited thereto except insofar as such limitations are included in the following claims and allowable functional equivalents thereof.

1. A pair of adjustable handles for use with a golf club having a shaft, the pair of adjustable handles comprising:
a sleeve having an interior area with a diameter that is at least as large as a diameter of said golf club shaft, said sleeve having first and second shafts extending outwardly therefrom;
a first handle rotatably coupled to said first shaft;
a first locking mechanism biased to fix a position of said first handle relative to said first shaft and movable to allow said first handle to rotate relative to said first shaft;
a second handle rotatably coupled to said second shaft, said first and second handles being rotatable about a generally common axis of rotation;
a second locking mechanism biased to fix a position of said second handle relative to said second shaft and movable to allow said second handle to rotate relative to said second shaft; and
means for selectively locking said sleeve to said golf club shaft.

2. The pair of adjustable handles of claim 1, wherein:
said first locking mechanism includes:
a first gear fixedly coupled to said first shaft and rotatable about said axis of rotation;
a first interaction member having a first input accessible at said first handle and having at least one tooth; and
a first biasing member causing said at least one tooth of said first interaction member to restrict movement of said first gear and thereby fix said position of said first handle relative to said first shaft, activation of said first input overcoming a force imparted by said first biasing member and moving said at least one tooth of said first interaction member to allow said first handle to rotate relative to said first shaft; and
said second locking mechanism includes:
a second gear fixedly coupled to said second shaft and rotatable about said axis of rotation;
a second interaction member having a second input accessible at said second handle and having at least one tooth; and
a second biasing member causing said at least one tooth of said second interaction member to restrict movement of said second gear and thereby fix said position of said second handle relative to said second shaft, activation of said second input overcoming a force imparted by said second biasing member and moving said at least one tooth of said second interaction member to allow said second handle to rotate relative to said second shaft.

3. The pair of adjustable handles of claim 2, wherein:
said first interaction member is slidable inside said first handle and has a hole larger than said first gear;
said at least one tooth of said first interaction member is located at a wall of said first interaction member hole;
said second interaction member is slidable inside said second handle and has a hole larger than said second gear; and
said at least one tooth of said second interaction member is located at a wall of said second interaction member hole.
4. The pair of adjustable handles of claim 3, wherein said first biasing member is a spring and said second biasing member is a spring.

5. The pair of adjustable handles of claim 4, wherein:
   said sleeve has first and second portions hingedly coupled together;
   a non-circular channel extends through said sleeve first portion and into said first shaft;
   said first shaft has proximal and distal ends selectively rotatable relative to one another; and
   said means for selectively locking said sleeve to said golf club shaft includes:
   a push member having a clamping end and a support end configured complementary to said non-circular channel; said clamping end extending inside said sleeve interior area; said support end at least partially positioned inside said non-circular channel to limit said push member to generally linear, non-rotatable motion relative to said sleeve first portion; said push member having a threaded element; and
   a threaded actuator extending from and fixed relative to said first shaft distal end, said threaded actuator extending through said first shaft proximal end and being threadably coupled to said push member threaded element, rotation of said first shaft distal end causing said push member clamping end to move inside said sleeve interior area through interaction between said threaded actuator and said push member threaded element.

6. The pair of adjustable handles of claim 5, wherein:
   said first handle is elongate and includes an ergonomically contoured hand grip; and
   said second handle is elongate and includes an ergonomically contoured hand grip.

7. The pair of adjustable handles of claim 6, wherein:
   said shaft proximal end and said sleeve first portion have a unitary construction;
   said threaded actuator is a bolt having a head; and
   said shaft distal end is a bolt cap affixed around and generally immovable relative to said bolt head.

8. The pair of adjustable handles of claim 2, wherein:
   said sleeve has first and second portions hingedly coupled together;
   a non-circular channel extends through said sleeve first portion and into said first shaft;
   said first shaft has proximal and distal ends selectively rotatable relative to one another; and
   said means for selectively locking said sleeve to said golf club shaft includes:
   a push member having a clamping end and a support end configured complementary to said non-circular channel; said clamping end extending inside said sleeve interior area; said support end at least partially positioned inside said non-circular channel to limit said push member to generally linear, non-rotatable motion relative to said sleeve first portion; said push member having a threaded element; and
   a threaded actuator extending from and fixed relative to said first shaft distal end, said threaded actuator extending through said first shaft proximal end and being threadably coupled to said push member threaded element, rotation of said first shaft distal end causing said push member clamping end to move inside said sleeve interior area through interaction between said threaded actuator and said push member threaded element.

9. The pair of adjustable handles of claim 8, wherein:
   said shaft proximal end and said sleeve first portion have a unitary construction;
   said threaded actuator is a bolt having a head; and
   said shaft distal end is a bolt cap affixed around and generally immovable relative to said bolt head.

10. The pair of adjustable handles of claim 1, wherein:
    said sleeve has first and second portions hingedly coupled together;
    a non-circular channel extends through said sleeve first portion and into said first shaft;
    said first shaft has proximal and distal ends selectively rotatable relative to one another; and
    said means for selectively locking said sleeve to said golf club shaft includes:
    a push member having a clamping end and a support end configured complementary to said non-circular channel; said clamping end extending inside said sleeve interior area; said support end at least partially positioned inside said non-circular channel to limit said push member to generally linear, non-rotatable motion relative to said sleeve first portion; said push member having a threaded element; and
    a threaded actuator extending from and fixed relative to said first shaft distal end, said threaded actuator extending through said first shaft proximal end and being threadably coupled to said push member threaded element, rotation of said first shaft distal end causing said push member clamping end to move inside said sleeve interior area through interaction between said threaded actuator and said push member threaded element.

11. The pair of adjustable handles of claim 10, wherein:
    said shaft proximal end and said sleeve first portion have a unitary construction;
    said threaded actuator is a bolt having a head; and
    said shaft distal end is a bolt cap affixed around and generally immovable relative to said bolt head.

12. The pair of adjustable handles of claim 11, wherein:
    said first handle is elongate and includes an ergonomically contoured hand grip; and
    said second handle is elongate and includes an ergonomically contoured hand grip.

13. The pair of adjustable handles of claim 10, wherein said first locking mechanism includes:
    a first gear fixedly coupled to said first shaft and rotatable about said axis of rotation;
    a first interaction member having a first input accessible at said first handle and having at least one tooth; and
    a first biasing member causing said at least one tooth of said first interaction member to restrict movement of said first gear and thereby fix said position of said first handle relative to said first shaft, activation of said first input overcoming a force imparted by said first biasing member and moving said at least one tooth of said first interaction member to allow said first handle to rotate relative to said first shaft.

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