

GRIP AND INTERNAL WEIGHT SYSTEM FOR SHAFT OF GOLF CLUB

CROSS-REFERENCE TO RELATED APPLICATIONS

5 **[0001]** This application claims priority to U.S. Utility Application No. 14/281,055, filed on May 19, 2014 and also claims the benefit of U.S. Provisional Application No. 61/824,662 filed on May 17, 2013. The entire disclosures of the above applications are hereby incorporated by reference.

FIELD

10 **[0002]** The present disclosure relates to a grip for a golf club, and more particularly, to a grip including an internal weight system for a golf club.

BACKGROUND

15 **[0003]** This section provides background information related to the present disclosure and is not necessarily prior art.

[0004] In addition to the refinement of a golfer's swing, the weight of a golf club can affect the distance and accuracy of a golf shot. Accordingly, it may be advantageous for a golfer to be able to adjust the weight of a golf club to improve and/or perfect the distance and accuracy of a golf shot.

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SUMMARY

[0005] In one form, the present disclosure provides a golf club grip comprising an elongated member having a first end and a second end. The first end is configured to receive a golf club shaft, and the second end includes an opening comprising a first threaded portion therein.

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[0006] In another form, the present disclosure provides a grip system for a golf club including a shaft comprising an elongated member having a first member end and a second member end. The first member end includes an opening having a first threaded portion, and the second member end is configured to receive the shaft. The system further comprises a weight having a first weight end and a second weight end. The first weight end includes a second

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threaded portion configured to engage the first threaded portion of the elongated member.

5 **[0007]** In yet another form, the present disclosure provides a golf club comprising a head, a shaft, a grip and a weight. The shaft has a first shaft end and a second shaft end, the second shaft end is secured to the head. The grip
has a first grip end and a second grip end. The first grip end includes a first grip opening having a first threaded portion, and the second grip end is configured to receive the first shaft end of the shaft. The weight has a first weight end and a second weight end. The first weight end includes a second threaded portion
10 configured to engage the first threaded portion of the grip.

[0008] Further areas of applicability will become apparent from the description provided herein. It should be understood that the description and specific examples are intended for purposes of illustration only and are not intended to limit the scope of the present disclosure.

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DRAWINGS

[0009] The drawings described herein are for illustrative purposes only of selected embodiments and not all possible implementations, and are not
20 intended to limit the scope of the present disclosure.

[0010] FIG. 1 is a front view of an exemplary golf club including the grip and the internal weight system in accordance with the teachings of the present disclosure, the exemplary golf club also includes a shaft and a head;

[0011] FIG. 2 is a partially exploded perspective view of the grip, the
25 internal weight system, and the shaft;

[0012] FIG. 3 is another partially exploded perspective view of the grip, the internal weight system, and the shaft;

[0013] FIG. 4 is a cross-sectional view of the internal weight system taken along line 4-4 of FIG. 3;

30 **[0014]** FIG. 5 is a bottom view of an insert in accordance with the teachings of the present disclosure together with the grip; and

[0015] FIG. 6 is a partially exploded view of a grip cap in accordance with the teachings of the present disclosure together with the grip and the shaft.

[0016] Corresponding reference numerals indicate corresponding parts throughout the several views of the drawings.

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DETAILED DESCRIPTION

[0017] The following description is merely exemplary in nature and is not intended to limit the present disclosure, application, or uses. For purposes of clarity, the same reference numbers will be used in the drawings to identify similar elements. Examples are provided so that this description will be thorough, and will fully convey the scope to those who are skilled in the art. Numerous specific details are set forth, such as examples of specific components, to provide a thorough understanding of examples of the present disclosure. It will be apparent to those skilled in the art that specific details need not be employed, that examples may be embodied in many different forms, and that neither should be construed to limit the scope of the description. Moreover, it should be understood that the teachings of the present disclosure may be applied to other applications where it may advantageous and/or desirable to adjust the weight of a device. For example, such applications may include, but are not limited to: a tennis racquet, a fishing pole, and/or a hockey stick.

[0018] With reference to FIG. 1, a golf club 10 including a head 12, a shaft 14, and a grip 16 is shown. The head 12 may be configured to hit a golf ball (not shown) from various locations on a golf course. For example, the head 12 may be configured to hit a golf ball from a putting green (i.e., a putter, as shown), from a tee box (i.e., a driver), or from a fairway, rough, or bunker (i.e., an iron or wedge).

[0019] With reference to FIGS. 1-3 and 6, the shaft 14 is an elongated member extending between a first end 18 and a second end 20. The shaft 14 may be fabricated from a suitable material, such as metal (i.e., a steel shaft) or carbon fiber (i.e., a graphite shaft). The first end 18 of the shaft 14 is configured to receive the grip 16, and the second end 20 the shaft 14 is secured to head 12. The shaft 14 may maintain a uniform cross-section between the ends 18, 20, or

the cross-section may taper between the first end 18 and the second end 20. The shaft 14 may be hollow throughout the ends 18, 20, or the shaft 14 may include a bore at least partially extending from the first end 18 towards the second end 20. Accordingly, the shaft 14 includes an outer surface 22 and at least near the first end 18, an inner channel or cavity 24.

[0020] The grip 16 is an elongated and hollow member that may be fabricated from a suitable material, such as a natural or synthetic rubber or elastomeric material. The grip 16 includes a first end 26, an opposing second end 28, an inner grip cavity 30, and an outer grip surface 32. The first end 26 of the grip 16 includes an opening 33 configured to receive an insert 34 for attaching an internal weight system 50 to the grip 16. The second end 28 of the grip 16 may include a second opening configured to receive the shaft 14 into the inner grip cavity 30. The shaft 14 may be received in the inner grip cavity 30 such that the first end 18 of the shaft 14 is generally flush with or aligned with the first end 26 of the grip 16. The shape of the inner grip cavity 30 may correspond to the shape of the outer surface 22 of the shaft 14, at least near the first end 18 of the shaft 14. Stated another way, if the outer surface 22 of the shaft 14, at least near the first end 18, includes a circular or pentagonal shape, then the inner grip cavity 30 may likewise include a circular or pentagonal shape, respectively. An adhesive or bonding agent may be applied between the inner grip cavity 30 and the outer surface 22 of the shaft 14 to restrict the grip 16 from slipping laterally and/or rotating axially relative to the shaft 14. The outer grip surface 32 may include any shape, such as a pentagonal, hexagonal, or ovoid shape, for example.

[0021] With reference to FIGS. 2 and 5, the insert 34 is an annular member that may be fabricated from a suitable material, such as metal or a polymeric material. The insert 34 includes an annular flange 36 and an annular body 38. The annular body 38 includes an outer surface 40 and an inner surface 42. The insert 34 may be received in the opening 33 the grip 16 such that an upper surface 44 of the annular flange 36 is generally flush with the first end 26 of the grip 16. A plurality of projections 46a, 46b, 46c, 46d extend radially outward from the outer surface 40 of the annular body 38. The projections 46a, 46b, 46c,

46d are configured to engage the inner grip cavity 30 and may prevent axial rotation and/or lateral movement of the insert 34 relative to the grip 16. A threaded portion 48 located within the inner surface 42 of the annular body 38 is configured to selectively threadably engage and attach the weight system 50 and a grip cap 52, both described below, to the insert 34 and ultimately to the grip 16. In another example, the insert 34 may be over molded or integrally formed with the grip 16.

[0022] With reference to FIGS. 1-4, the weight system 50 may be selectively inserted into the first end 26 of the grip 16 and into the cavity 24 of the shaft 14, and is configured to threadably engage the insert 34. The weight system 50 includes a weight cap 54, a spacer 56, a weight 58, and a sleeve 60.

[0023] The weight cap 54 is an annular member that may be fabricated from a suitable material, such as metal or a polymeric material. The weight cap 54 includes a first threaded portion 62, a second threaded portion 64 located below the first threaded portion 62, and a securing socket 66 located on a top end 68 of the first threaded portion 62. The first threaded portion 62 of the weight cap 54 is configured to threadably engage the threaded portion 48 of the insert 34 to secure the weight system 50 to the grip 16. The second threaded portion 64 of the weight cap 54 is configured to threadably engage the spacer 56, described below. The top end 68 of the weight cap 54 may be fabricated from, or over molded with, the same material as the grip 16 to provide a "finished" or uniform look when the weight system 50 is attached to the grip 16. The securing socket 66 may have a hexagonal shape, for example, which may be engaged with a securing key, such as a hex key (not shown), for example. The securing socket 66 may be used for tightening and attaching the weight cap 54 and the weight system 50 to the insert 34, or, alternatively, for loosening and separating the weight cap 54 and the weight system 50 from the insert 34.

[0024] The spacer 56 is an elongated member that may be fabricated from a suitable material, such as metal, graphite, or a polymeric material. The spacer 56 includes a first end 70 and an oppositely located second end 72. At the first end 70, the spacer 56 includes a first threaded portion 74 configured to threadably engage the second threaded portion 64 of the weight cap 54. At the

second end 72, the spacer 56 includes a second threaded portion 76 configured to threadably engage the weight 58, described below. The spacer 56 may include a variety of lengths, providing a user with the ability to customize the location of the center of gravity of the golf club 10 relative to the ends 18, 20 of the shaft 14. For example, a user may use a longer spacer to position the center of gravity of the golf club 10 closer to the head 12, or, alternatively, may use a shorter spacer to position the center of gravity of the golf club 10 closer to the grip 16.

[0025] The weight 58 is an elongated member that may be fabricated from a suitable material, such as metal or brass. The weight 58 includes a first end 78 and an oppositely located second end 80. At the first end 78, the weight 58 includes a first threaded portion 82 configured to threadably engage the second threaded portion 76 of the spacer 56. At the second end 80, the weight 58 may include a second threaded portion (not shown) for attaching additional weights (also not shown) thereto. The weight 58 may include various amounts of weight, providing a user with the ability to customize the amount of weight added to the golf club 10.

[0026] The sleeve 60 is a resiliently compressible member that may be fabricated from a suitable material, such as foam or a polymeric material. The sleeve 60 is configured to extend over the weight 58, or, alternatively, may be made integral with the weight 58. The sleeve 60 may be constructed larger than the cavity 24 of the shaft 14 so that when the weight system 50 is inserted into the grip 16 and into the cavity 24 of the shaft 14, the sleeve 60 compresses and forcefully engages the cavity 24. In this regard, the sleeve 60 may resist axial and/or radial movement of the weight 58 and the weight system 50 within the cavity 24 and may prevent the weight 58 and the weight system 50 from banging and/or vibrating against the cavity 24 during use.

[0027] With reference to FIGS. 1-5, an exemplary method of attaching the weight system 50 to the grip 16 will be described. A weight 58 may be selected having an amount of weight desired be added to the golf club 10. The sleeve 60 may be installed onto the weight 58. A spacer 56 may be selected having a length for positioning the center of gravity of the golf club 10 at a desired

location between the head 12 and the grip 16. The first threaded portion 82 of the weight 58 and the second threaded portion 76 of the spacer 56 may be threadably engaged. A securing adhesive such as Loctite ® may be applied between the threaded portions 82, 76 to keep the weight 58 and the spacer 56 from threadably disengaging. The first threaded portion 74 of the spacer 56 and the second threaded portion 64 of the weight cap 54 may be threadably engaged. A securing adhesive such as Loctite ® may be applied between the threaded portions 74, 64 to keep the spacer 56 and the weight cap 54 from threadably disengaging. The weight system 50 may be inserted into the opening 33 of the grip 16 and into the cavity 24 of the shaft 14. The securing key may be used to threadably engage the securing socket 66 of the weight cap 54 to the first threaded portion 62 of the weight cap 54. A securing adhesive such as Loctite ® may be applied between the threaded portions 62, 48 to prevent the weight cap 54 and the insert 34 from threadably disengaging. Once attached, it may be appreciated that the second end 80 of the weight 58 may be aligned with the second end 28 of the grip 16. Alternatively, the second end 80 of the weight 58 may be positioned elsewhere between the ends 26, 28 of the grip 16, such as closer to the first end 26 as shown in FIG. 1, for example.

[0028] The weight system 50 may be detached from the grip 16 by disengaging the first threaded portion 62 of the weight cap 54 from the threaded portion 48 of the insert 34. The securing key may engage the securing socket 66 of the weight cap 54 to loosen the engagement between the threaded portions 62, 48. Accordingly, the weight system 50 may be separated from the grip 16.

[0029] With reference to FIG. 6, if additional weight via the weight system 50 is not desired to be added to the golf club 10, the grip cap 52 may instead threadably engage the insert 34. The grip cap 52 is an annular member that may be fabricated from a suitable material, such as metal or a polymeric material. The grip cap 52 includes a threaded portion 86 and a securing socket 88 located on a top end 90 of the threaded portion 86. The threaded portion 86 is configured to threadably engage the threaded portion 48 of the insert 34 when the weight system 50 is not attached to the grip 16. The top end 90 of the grip cap 52 may be fabricated from, over molded with, the same material as the grip

16 to provide a “finished” or uniform look when the grip cap 52 engages the insert 34. The securing socket 88 may have a hexagonal shape, for example, and using a securing key, such as a hex key (not shown), for example, the threaded portion 86 of the grip cap 52 and the threaded portion 48 of the insert 34 may be threadably engaged and tightened. A securing adhesive such as Loctite ® may be applied between the threaded portions 86, 48 to prevent the grip cap 52 and the insert 34 from threadably disengaging.

[0030] The grip cap 52 may be detached from the grip 16 by disengaging the threaded portion 86 of the grip cap 52 from the threaded portion 48 of the insert 34. The securing key may be used to engage the securing socket 88 of the grip cap 52 to loosen the threaded portion 86, 48. Accordingly, the grip cap 52 may be separated from the grip 16.

[0031] Those skilled in the art can now appreciate from the foregoing description that the broad teachings of the disclosure can be implemented in a variety of forms. Therefore, while this disclosure includes particular examples, the true scope of the disclosure should not be so limited since other modifications will become apparent to the skilled practitioner upon a study of the drawings, the specification and the following claims.

CLAIMS

What is claimed is:

1. A golf club grip comprising:

an elongated member having a first end and a second end, the first
5 end is configured to receive a golf club shaft, the second end includes an opening
comprising a first threaded portion therein.

2. The golf club grip of claim 1 further comprising an insert received in
the opening, the insert comprises the first threaded portion.

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3. The golf club grip of claim 2, wherein the elongated member is
composed of a first material and the insert is composed of a second material that
is different from the first material.

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4. The golf club grip of claim 2, wherein the insert includes at least one
projection engaging the opening of the elongated member.

5. The golf club grip of claim 2, wherein the insert comprises a flange
comprising an upper surface, the upper surface is flush with the second end of
20 the elongated member when the insert is received in the opening.

6. A grip system for a golf club including a shaft, the system
comprising:

an elongated member having a first member end and a second member
25 end, the first member end comprising an opening with a first threaded portion, the
second member end is configured to receive the shaft; and

a weight comprising a first weight end and a second weight end, the first
weight end comprising a second threaded portion configured to engage the first
threaded portion of the elongated member.

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7. The system of claim 6, wherein the weight is received in the elongated member such that first weight end is flush with the first member end of the elongated member.

5 8. The system of claim 7 further comprising an insert comprising a flange, the flange and the first weight end are flush with the first member end of the elongated member.

9. The system of claim of claim 6, wherein the first weight end
10 includes a securing socket.

10. The system of claim of claim 6 further comprising a securing adhesive disposed between the first threaded portion and the second threaded portion.

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11. A golf club comprising:
a head;

a shaft having a first shaft end and a second shaft end, the second shaft end is secured to the head;

20 a grip having a first grip end and a second grip end, the first grip end includes a first grip opening with a first threaded portion, the second grip end is configured to receive the first shaft end of the shaft; and

a weight having a first weight end and a second weight end, the first weight end includes a second threaded portion configured to engage the first
25 threaded portion of the grip.

12. The golf club of claim 11, wherein the head comprises one of a putter, a wedge, and a driver.

30 13. The golf club of claim 11, wherein the weight is received in the grip such that the second weight end is flush with the second grip end.

14. The golf club of claim 11 further comprising an insert attached to the first grip opening, the insert includes the first threaded portion.

5 15. The golf club of claim 14, wherein the insert includes at least one projection engaging the first grip opening.

16. The golf club of claim 14, wherein the insert includes a flange having an outer surface, the outer surface of the flange is flush with the first grip end when the insert is attached to the first grip opening.

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17. The golf club of claim 16, wherein the first weight end is flush with the outer surface of the insert.

15 18. The golf club of claim 14, wherein the grip is fabricated from a first material and the insert is fabricated from a second material that is different from the first material.

19. The golf club of claim 11, wherein the first weight end includes a securing socket.

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20. The golf club of claim 11 further comprising an adhesive disposed between the first threaded portion and the second threaded portion.