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Ferguson et al.(10) **Pub. No.: US 2007/0293336 A1**(43) **Pub. Date: Dec. 20, 2007**(54) **GOLF SWING TRAINING DEVICE**(30) **Foreign Application Priority Data**

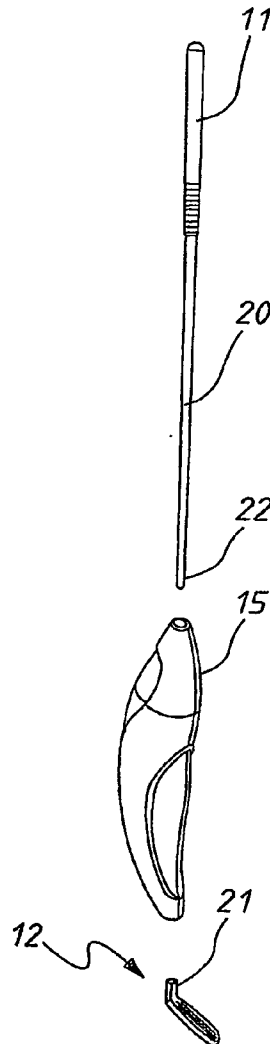
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NEW YORK, NY 10023 (US)(51) **Int. Cl.**
A63B 69/36 (2006.01)(52) **U.S. Cl.** **473/238**(57) **ABSTRACT**

A golf swing training device (10) including a handle (11) to be gripped by a user to swing the device (10) to practice a golf swing. The lower end of the device (10) includes a removable golf club head (12). Attached to the handle (11) is a reservoir member (15) that encloses a hollow to receive a flowable material such as water. A desired weight for the device (10) is determined by the volume of water located in the reservoir member (15). A golf swing can then be practiced including striking a ball.

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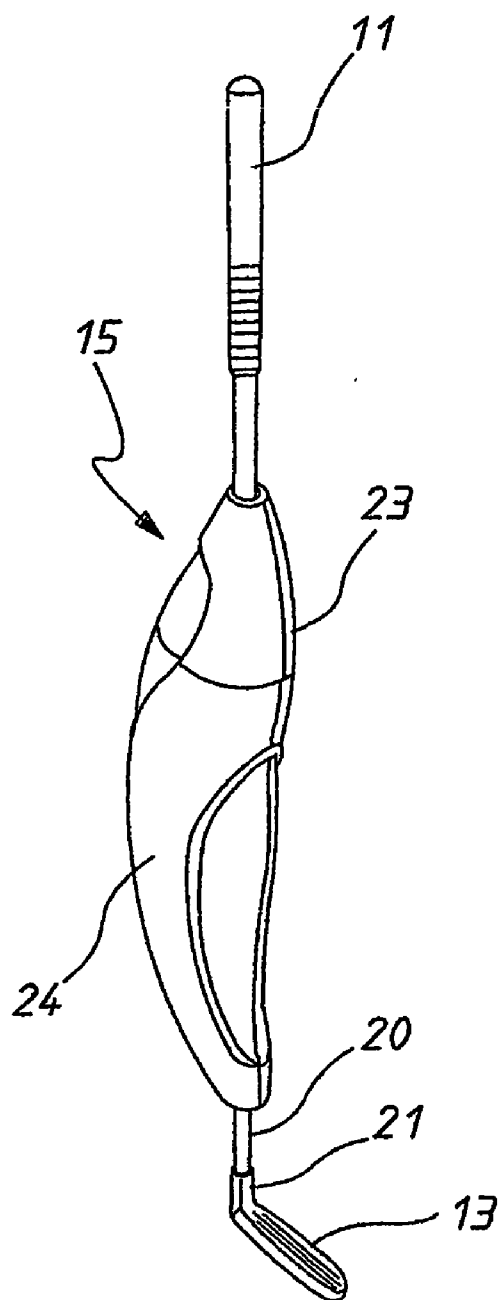


FIG. 4

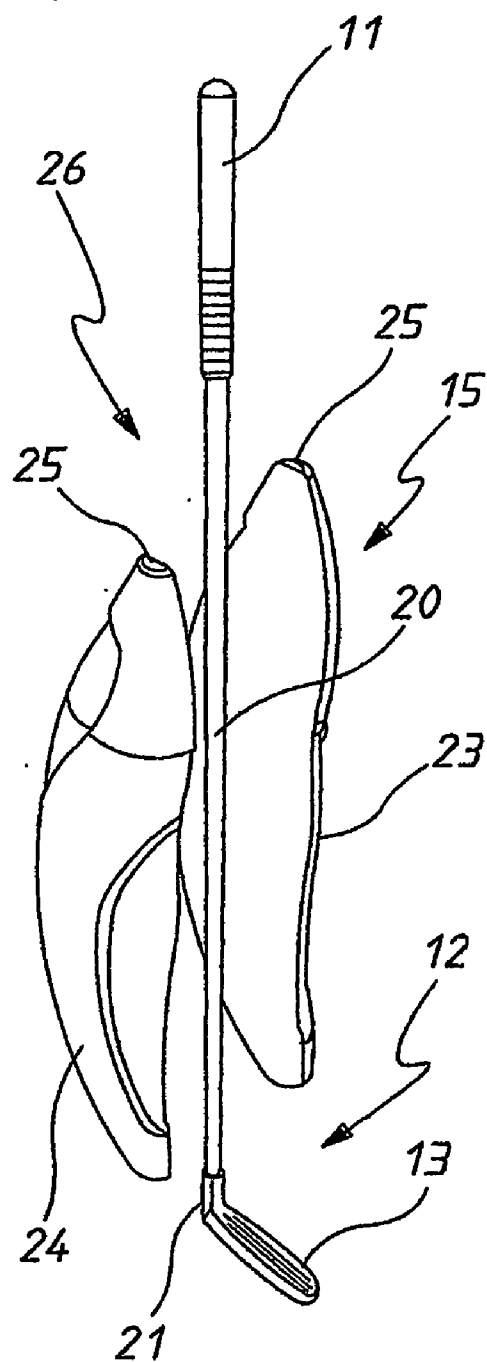
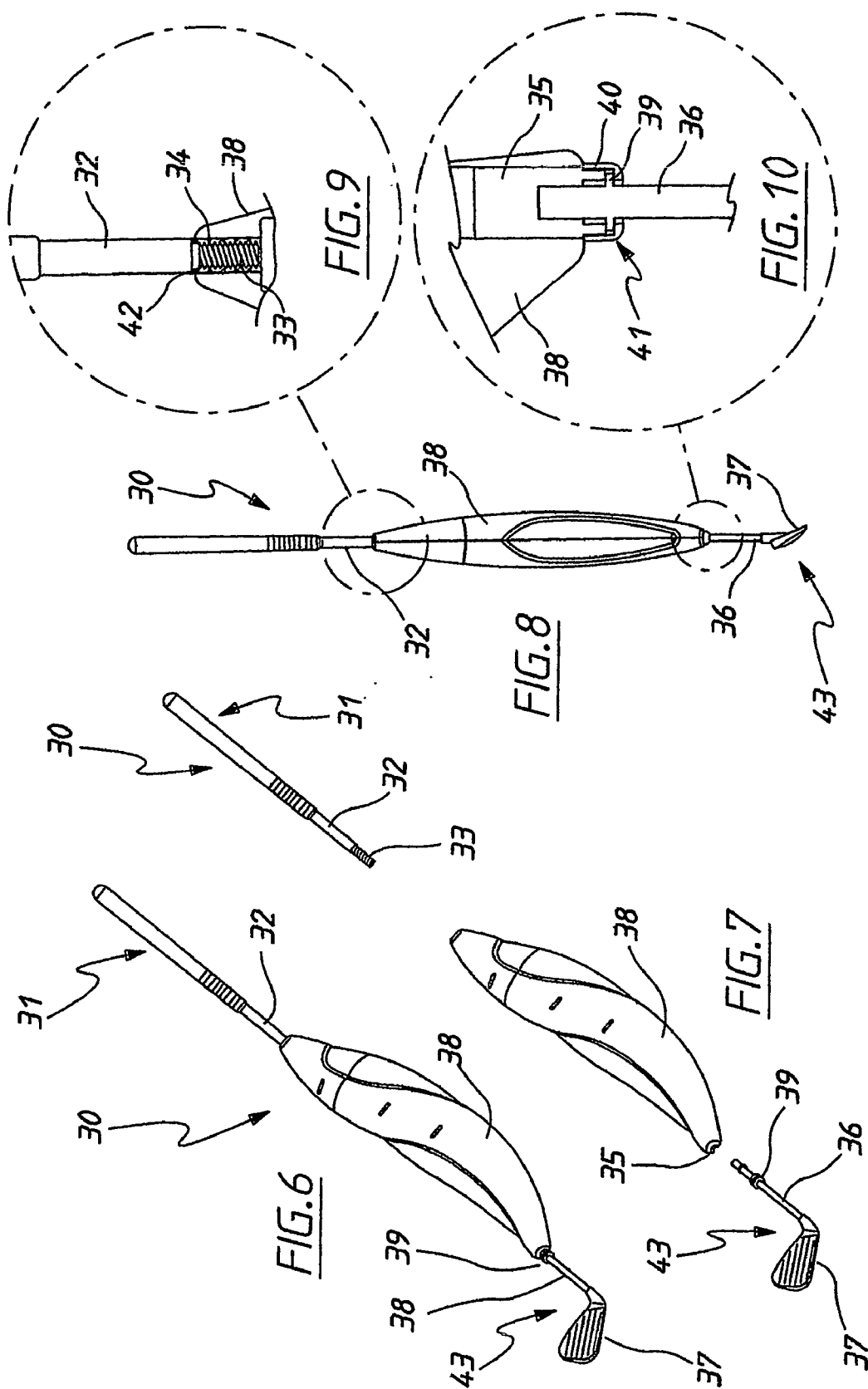
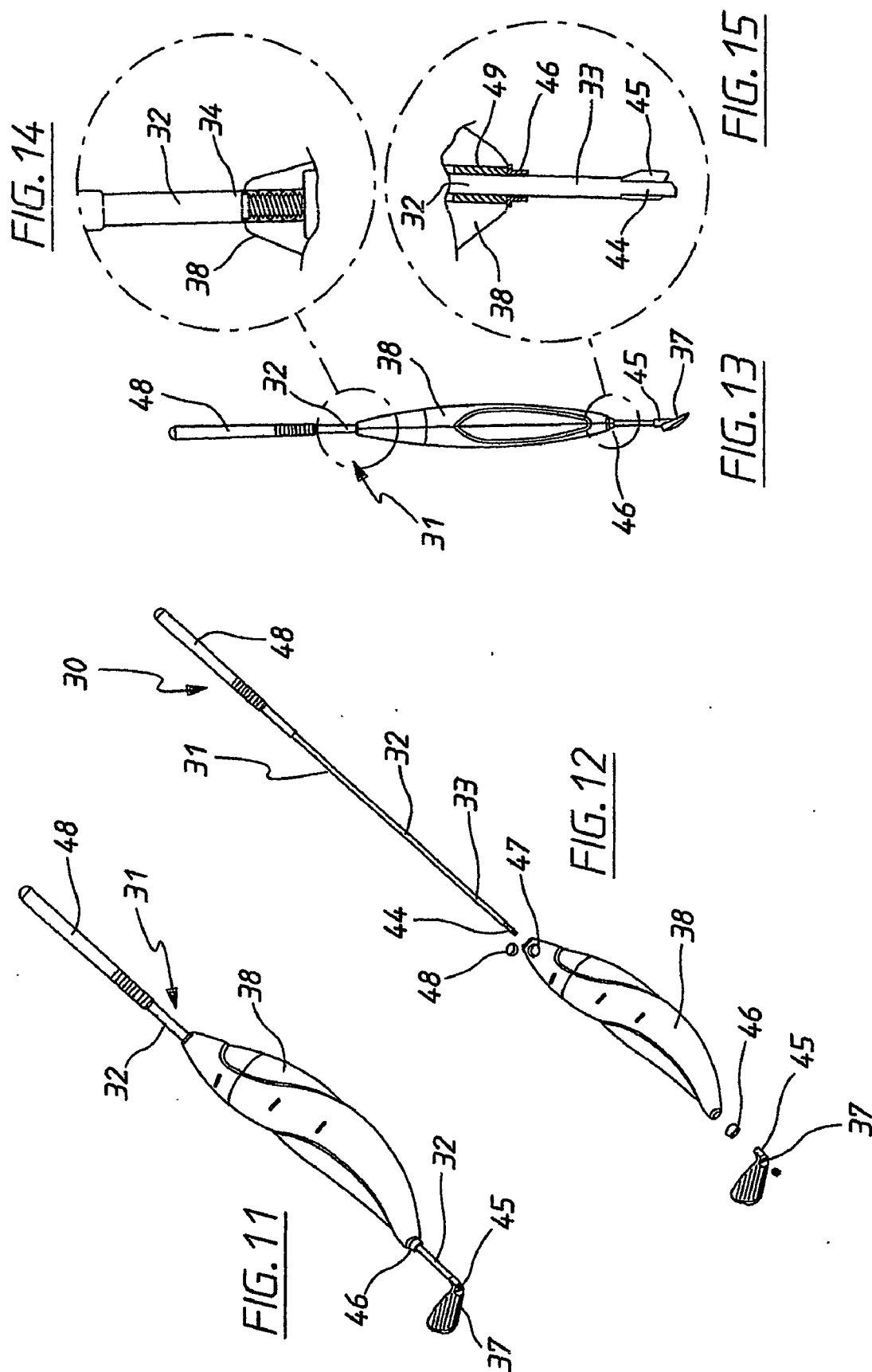


FIG. 5





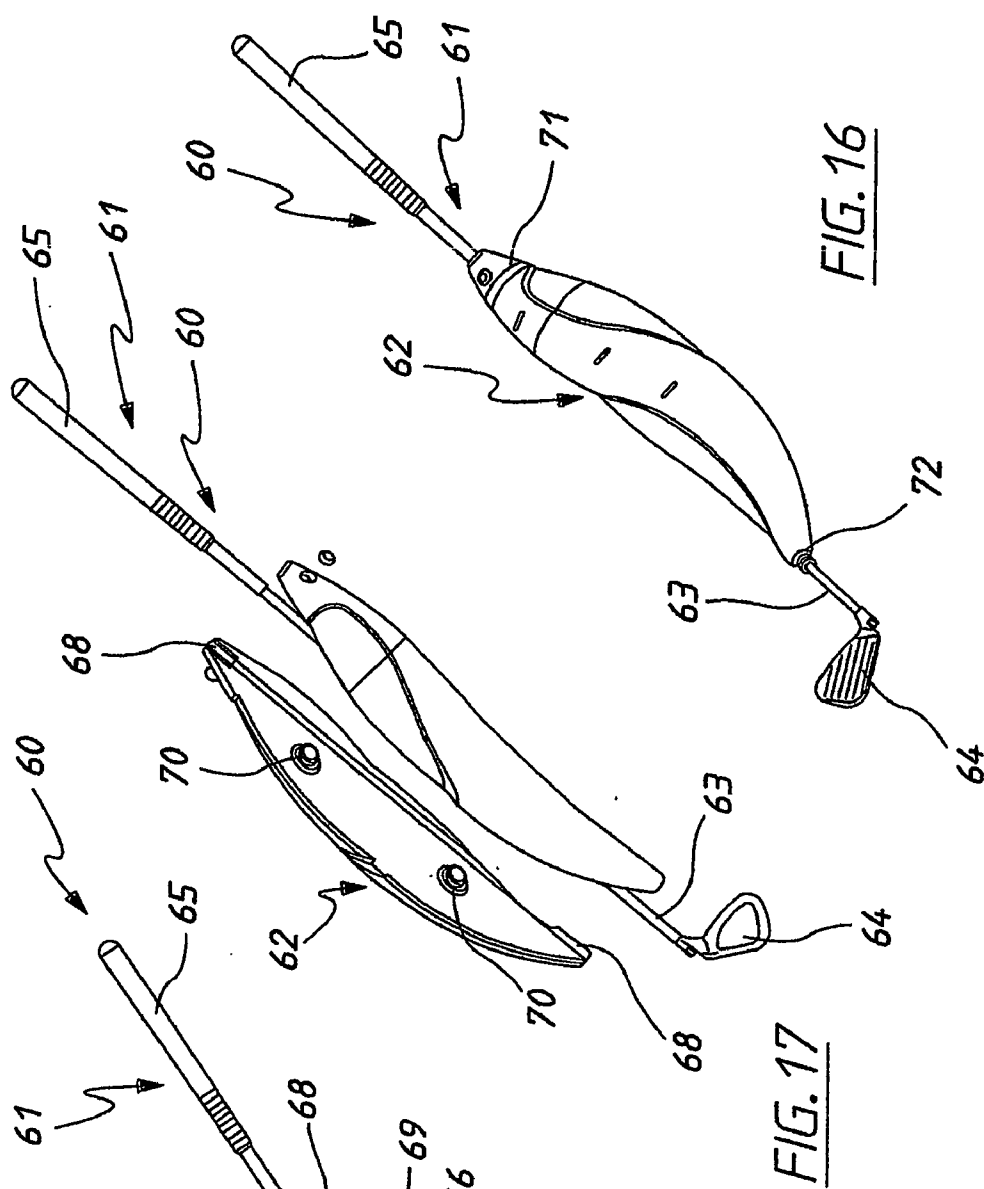
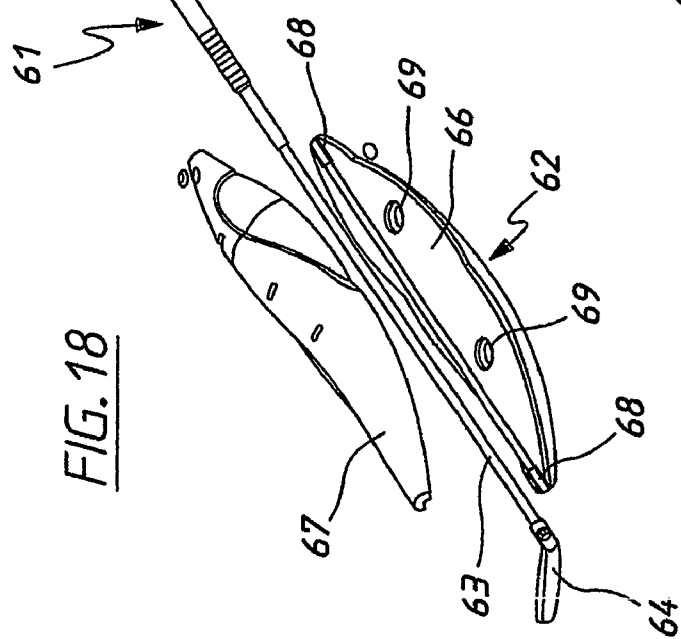


FIG. 18



GOLF SWING TRAINING DEVICE

TECHNICAL FIELD

[0001] The present invention relates to golf training devices and more particularly to golf training devices that have a variable weight.

BACKGROUND OF THE INVENTION

[0002] Devices such as those disclosed in U.S. Pat. No. 5,580,321 provide a handle to be gripped by a user, which handle has attached to it a hollow chamber to receive a liquid such as water. The volume of water in the chamber determines the weight of the device. This particular device has the disadvantage that it cannot be used to simulate the striking of a golf ball. Another device is described in International Patent Application PCT/IB99/01268. The device of this specification includes a weight that can be positioned along the shaft of a golf club. This device has the disadvantage that the weight of the device cannot be varied.

OBJECT OF THE INVENTION

[0003] It is the object of the present invention to overcome or substantially ameliorate at least one of the above disadvantages.

SUMMARY OF THE INVENTION

[0004] There is disclosed herein a golf swing training device to have a desired weight, said device including:

[0005] an elongated handle to be gripped at an upper portion by a user to swing the device to strike a ball;

[0006] a golf club head to strike the ball;

[0007] a hollow reservoir member attached to the handle to receive a flowable material having a volume, which volume can be varied to adjust said weight; and wherein

[0008] said golf club head is removably attached to said reservoir member.

[0009] Preferably, said reservoir member has an upper end to which said handle is removably attached, and a lower end to which said club head is removably attached.

[0010] Preferably, said upper end has a threaded passage that is threadably engaged by said handle and said lower end includes a threaded passage within which a portion of said head is threadably secured.

[0011] In an alternative embodiment, said handle includes a shaft that extends through said reservoir member and that is removably attached to said club head, so that said club head is removably attached to said reservoir member.

[0012] Preferably, said reservoir member is formed of plastics material, and has fixed to it at an upper portion thereof a metal sleeve through which said shaft extends so as to aid in mounting the reservoir member on the shaft.

[0013] Preferably, said reservoir member includes a metal sleeve secured to a lower portion thereof and through which said shaft extends to aid in mounting the reservoir member on the shaft.

[0014] In an alternative embodiment, said device includes an insert mounted in a lower portion of said reservoir member so as to be fixed thereto, and said shaft includes a

threaded portion threadably engaged in said insert and said club head includes a threaded portion threadably engaged with said insert so as to be removably attached thereto.

[0015] Preferably, the training device includes a golf club providing said handle and club head, with said reservoir member being removably attached to said handle so that said club head is removably attached to said reservoir member.

[0016] Preferably, said reservoir member includes a first and a second reservoir portion, which reservoir portions co-operate to be secured to said handle.

[0017] Preferably, each reservoir portion includes friction members to engage the handle to inhibit relative movement between the reservoir member and the handle.

[0018] Preferably, said device includes straps that are tensioned to secure the reservoir member to the shaft.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] A preferred form of the present invention will now be described by way of example with reference to the accompanying drawings wherein:

[0020] FIG. 1 is a schematic side elevation of a golf swing training device;

[0021] FIG. 2 is a schematic parts exploded isometric view of the device of FIG. 1;

[0022] FIG. 3 is a schematic parts exploded isometric view of an alternative construction to the device of FIGS. 1 and 2;

[0023] FIG. 4 is a schematic isometric view of a still further modification of the device of FIGS. 1 and 2;

[0024] FIG. 5 is a schematic parts exploded isometric view of the device of FIG. 4;

[0025] FIG. 6 is a schematic isometric view of a further golf swing training device;

[0026] FIG. 7 is a schematic parts exploded isometric view of the device of FIG. 6;

[0027] FIG. 8 is a schematic front elevation of the device of FIG. 6;

[0028] FIG. 9 is a schematic enlarged sectioned elevation of portion of the device as shown in FIG. 8;

[0029] FIG. 10 is a schematic enlarged sectioned elevation of a further portion of the device of FIG. 8;

[0030] FIG. 11 is a schematic isometric view of a modification of the device as shown in FIG. 6;

[0031] FIG. 12 is a schematic parts exploded isometric view of the device of FIG. 11;

[0032] FIG. 13 is a schematic front elevation of the device of FIG. 11;

[0033] FIG. 14 is a schematic sectioned elevation of portion of the device of FIG. 13;

[0034] FIG. 15 is a schematic sectioned side elevation of a further portion of the device of FIG. 13;

[0035] FIG. 16 is a schematic isometric view of a still further golf swing training device; and

[0036] FIGS. 17 and 18 are parts exploded isometric views of the device of FIG. 16.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0037] In FIGS. 1 and 2 of the accompanying drawings there is schematically depicted a golf swing training device 10. The device 10 includes a handle 11 to be gripped by a user to swing the device 10. The lower end of the device 10 includes a golf club head 12 that includes a blade 13 and a spigot shaft 14. Extending between the handle 11 and head 12 is a reservoir member 15 that encloses a hollow to receive a flowable material such as water.

[0038] The reservoir member 15 includes an upper threaded passage 16 within which the lower portion 17 of the handle 11 is threadably engaged. The lower end of the reservoir member 15 includes a threaded passage 18 within which the upper portion of the shaft 14 is threadably engaged.

[0039] The reservoir member 15 includes markings 19 that indicate the level of the flowable material within the reservoir member 15.

[0040] A user of the device 10 fills the reservoir member 15 so that the device 10 has a desired weight. The user then can practice a golf swing and strike a ball. The golf club head 12 can be changed depending on the stroke being practiced.

[0041] Preferably, the reservoir member 15 is filled via the passage 16 that is closed by the handle 11.

[0042] In the embodiment of FIG. 3, the handle 11 has attached to it a shaft 20 that it extends through the reservoir member 15 to be threadably engaged in a threaded socket 21 of the head 12. Accordingly, the head 12 can be changed by removing the head 12 from the lower end 22 of the shaft 20.

[0043] Preferably, the reservoir member 15 would frictionally engage the shaft 20 and be located so as to abut the upper end of the socket 21.

[0044] In the embodiment of FIGS. 4 and 5 the reservoir member 15 is formed by half portions 23 and 24 that are secured together so as to be attached to the shaft 20. Each portion 23 and 24 would have a removable cap 25 through which material would be added to the interior of the portions 23 and 24. Again, the club head 12 is detachable with respect to the reservoir member 15 by being removably attached to the shaft 20 and/or replacement of the golf club 26 consisting of a handle 11, shaft 20 and head 12. Accordingly, the reservoir member 15 can be removed from one golf club and attached to an alternative golf club.

[0045] In FIGS. 6 to 10 there is schematically depicted a golf swing training device 30. The device 30 includes an elongated handle 31 including a shaft 32 formed of metal tube or reinforced plastics material, and provided at its upper end with a "grip". The shaft 32 includes a lower length 33 threadably engaged in a sleeve 34 preferably formed of metal. Threadably received within an insert 35 is a lower shaft portion 36 to which the golf club head 37 is attached.

[0046] Attached to the sleeve 34 and insert 35 is a reservoir member 38 that is hollow and would receive a flowable material such as water.

[0047] The lower shaft portion 36 has an annular flange 39 that abuts the annular extremity 40 of the insert 35. A cap 41 threadably engages the extremity 40 and "sandwiches" the

flange 39 between the cap 41 and extremity 40 to secure the lower shaft portion 36 to the insert 35.

[0048] A seal 42 connects the shaft 32 with the sleeve 34 to inhibit the loss of water from within the reservoir member 38.

[0049] In use of the above described preferred embodiment, a user delivers water to the interior of the reservoir member 38 until a desired weight is reached. Thereafter a user uses the device 30 to practice a golf swing including hitting the ball with the head 37. In this respect it should be appreciated the head portion 43, consisting of the lower shaft portion 36 and head 37, is removable so that an alternative head 37 may be employed. This is achieved by removal of the cap 41.

[0050] In the embodiment of FIGS. 11 to 15, the shaft 32 extends through the entire length of the reservoir member 38 and engages the golf club head 37. More particularly the lower extremity of the shaft 32 has a threaded length 44 that threadably engages within a threaded socket 45 of the head 37. To aid in securing the shaft 32 to the reservoir member 38 a nut 46 is threadably engaged on the length 44 and would bear against the lower extremity of the reservoir member 38 as seen in FIG. 15. In this embodiment, a metal sleeve 49 is attached to the reservoir member 38 and has extending through it the shaft 32. The reservoir member 38 has an upper aperture 47 closed by a lid 48, through which aperture 47 the flowable material is inserted or drained.

[0051] In the embodiment of FIGS. 16 to 18, the golf swing training device 60 includes a golf club 61 to which a reservoir member 62 is removably attached so that the club head 64 is removable with respect to the reservoir member 62. The golf club 61 includes a shaft 63 extending to the head 64 from a grip 65. The reservoir member 62 is formed of half portions 66 and 67 that are removably secured to each other and enclose a length of the shaft 63 to be secured thereto. Each of the halve portions 66 and 67 is provided with upper and lower friction members 68 that frictionally engage the shaft 63 to inhibit relative movement between the reservoir member 62 and shaft 63 when secured thereto.

[0052] The reservoir member half portion 66 is provided with sockets 69 that receive projections 70 of the half portion 67 to correctly locate the halve portions 66 and 67 and to aid in securing them together. However to retain the halve portions 66 and 67 together, straps 71 and 72 are provided and are tensioned about the reservoir member 62 to removably attach the reservoir member to the shaft 63.

[0053] The above described preferred embodiment of FIGS. 16 to 18 has the advantage of the user being able to select a desired club 61 and removably attach to it the reservoir member 62.

[0054] In the above embodiments, the various reservoir members are moulded from plastics material.

1. A golf swing training device to have a constant desired weight during a golf swing, said device including: an elongated handle to be gripped at an upper portion by a user to swing the device to strike a ball; a golf club head to strike the ball; a hollow reservoir member attached to the handle to receive a flowable material having a volume to be maintained during a swing, which volume can be varied to

adjust said weight; and wherein said golf club head is removably attached to said reservoir member.

2. The training device of claim 1, wherein said reservoir member has an upper end to which said handle is removably attached, and a lower end to which said club head is removably attached.

3. The training device of claim 2, wherein said upper end has a threaded passage that is threadably engaged by said handle and said lower end includes a threaded passage within which a portion of said head is threadably secured.

4. The training device of claim 1, wherein said handle includes a shaft that extends through said reservoir member and that is removably attached to said club head, so that said club head is removably attached to said reservoir member.

5. The training device of claim 4, wherein said reservoir member is formed of plastics material, and has fixed to it at an upper portion thereof a metal sleeve through which said shaft extends so as to aid in mounting the reservoir member on the shaft.

6. The training device of claim 5, wherein said reservoir member includes a metal sleeve secured to a lower portion thereof and through which said shaft extends to aid in mounting the reservoir member on the shaft.

7. The training device of claim 5, wherein said device includes an insert mounted in a lower portion of said reservoir member so as to be fixed thereto, and said shaft includes a threaded portion threadably engaged in said insert and said club head includes a threaded portion threadably engaged with said insert so as to be removably attached thereto.

8. The training device of claim 1, including a golf club providing said handle and club head, with said reservoir member being removably attached to said handle so that said club head is removably attached to said reservoir member.

9. The training device of claim 1, wherein said reservoir member includes a first and a second reservoir portion, which reservoir portions co-operate to be secured to said handle.

10. The training device of claim 9, wherein each reservoir portion includes friction members to engage the handle to inhibit relative movement between the reservoir member and the handle.

11. The training device of claim 9, wherein said device includes straps that are tensioned to secure the reservoir member to the shaft.

12. The training device of claim 8, wherein said reservoir member includes a first and a second reservoir portion, which reservoir portions co-operate to be secured to said handle.

13. The training device of claim 10, wherein said device includes straps that are tensioned to secure the reservoir member to the shaft.

14. The training device of claim 12, wherein said device includes straps that are tensioned to secure the reservoir member to the shaft.

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