United States Patent [19]

Harrison

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[45] **Sept. 11, 1973**

[54] **GOLF SWING TRAINING DEVICE**

[76] Inventor: **John G. Harrison,** 371 W. "J" **St., Benicia, Calif. 94510**

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[21] Appl. No.: **260,399**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 143,916, May 17, 1971, abandoned.

[52] **U.S. Cl.** ..... **273/194 B,** 273/186 A

[51] **Int. Cl.** **A63b 69/36**

[58] **Field of Search** 273/194, 163, 186, 273/183, 193, 26, 35

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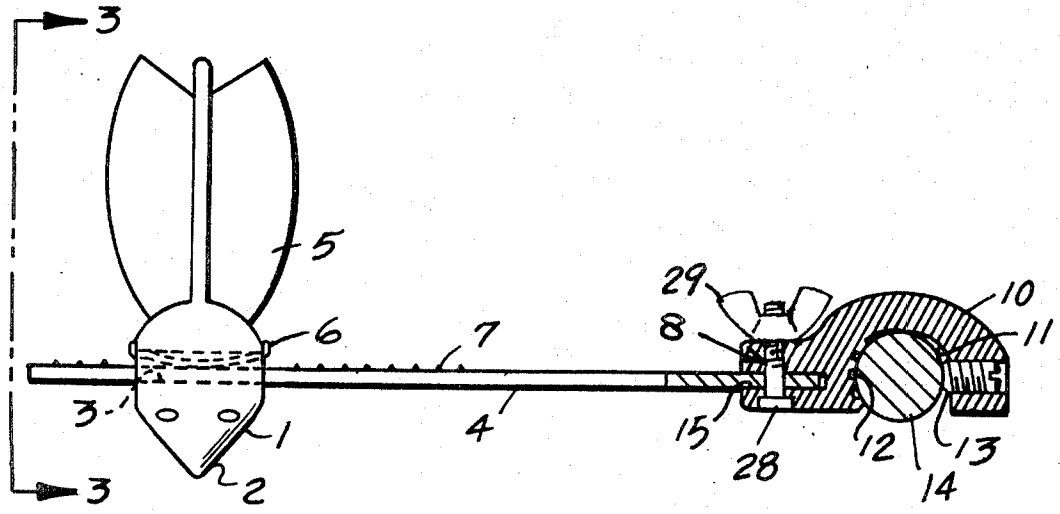
Primary Examiner—George J. Marlo

Attorney—George B. White

[57] **ABSTRACT**

The inertia attachment includes an arm on which is a weight adjustable longitudinally of the arm and a clamp adapted to attach the arm to the shaft of a golf club which requires follow-through when swung; the weight has tail fins and is shaped to be directional in the direction into which the shaft is swung and is registerable with the head of the golf club or the like; the arm is pivoted on the clamp so as to be adjustable from an out of the way position parallel with the shaft toward and above the club head. In one embodiment, the weight may include a rotatable propeller mounted in a recess between the tail fins. In another embodiment, the weight is shiftable along a shaft and compresses a spring as the weight moves rearwardly. The weight includes a passage through which the arm extends, and the weight may be secured in various positions along the length of the arm by the provision of a spring clip located in the passage. The spring clip is adapted to selectively engage grooves provided along the length of the arm.

8 Claims, 8 Drawing Figures



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SHEET 1 OF 2

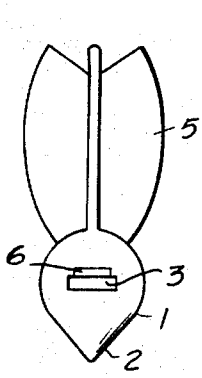


Fig. 3.

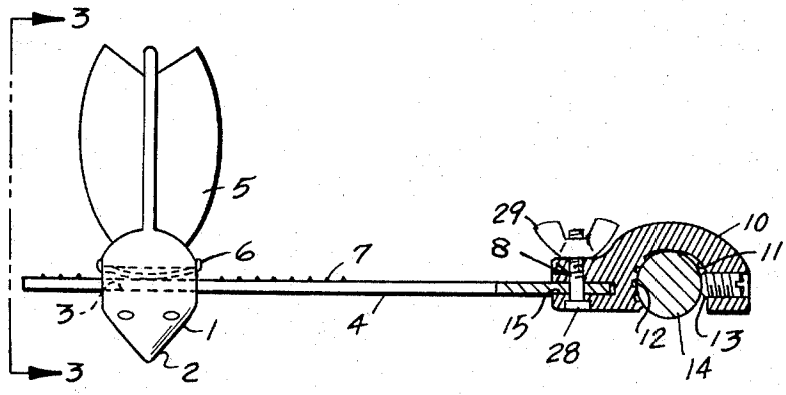


Fig. 2.

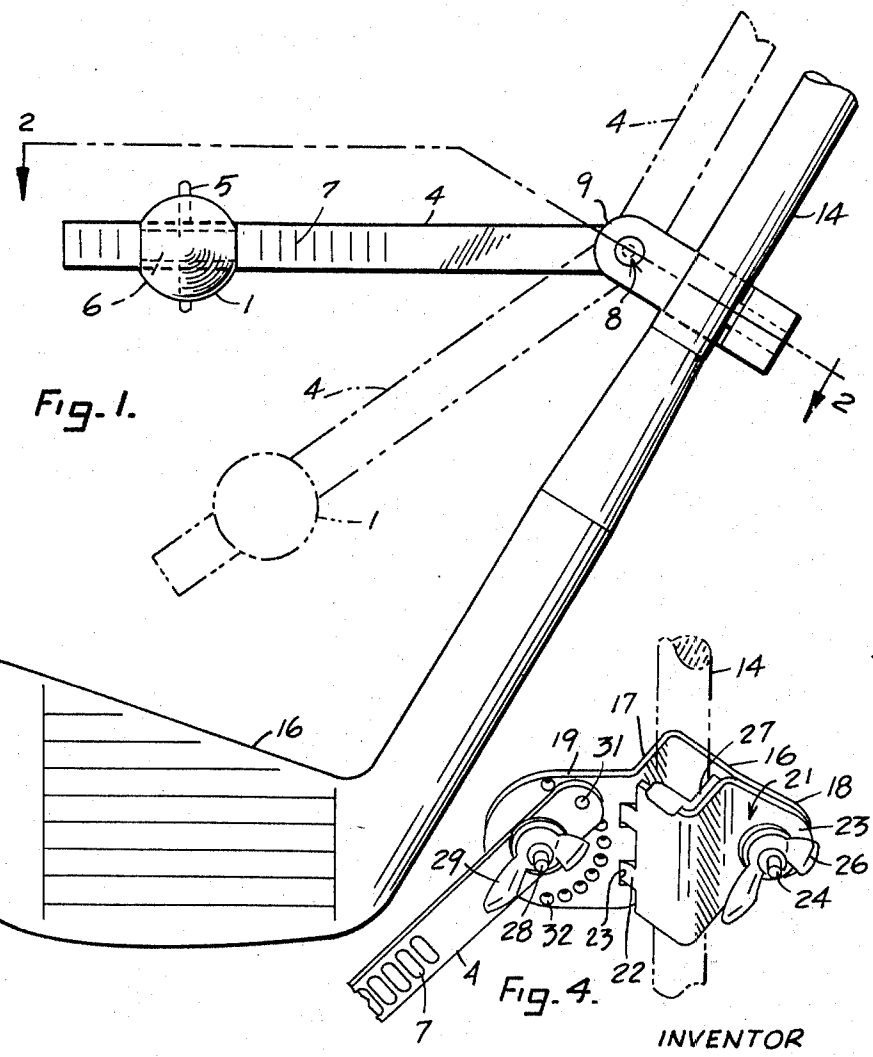


Fig. 1.

Fig. 4.

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FIG. 5.

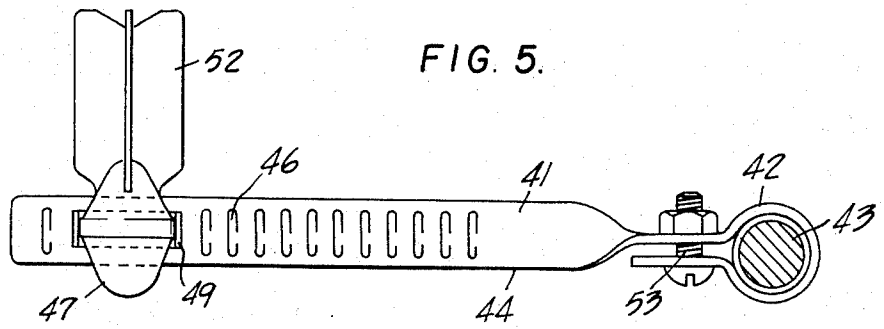


FIG. 6.

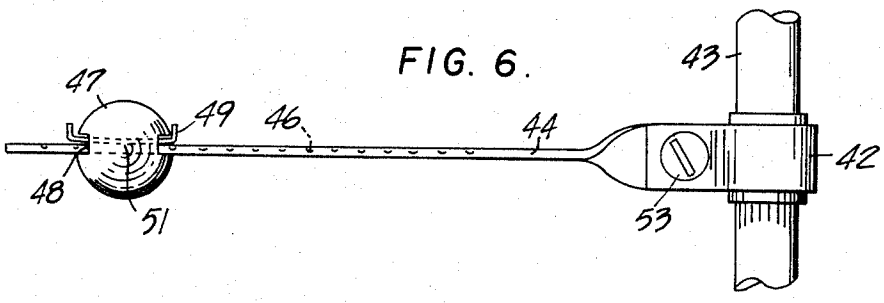


FIG. 7.

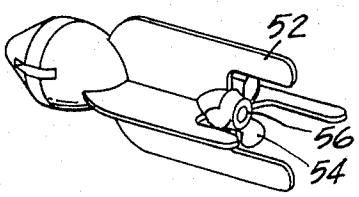
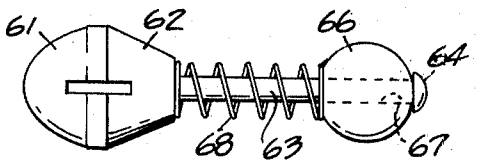


FIG. 8.



GOLF SWING TRAINING DEVICE

This application is a continuation-in-part of the co-pending application Ser. No. 143,916, filed May 17, 1971 on Inertia Follow-Through Attachment, now abandoned.

BACKGROUND OF THE INVENTION

One of the primary faults of golf players is the lack of follow-through after the golf ball is hit. In order to facilitate the player to acquire the habit of consistent follow-through, the herein invention provides a weight adjustable to such position that the inertia of the weight coincides with the movement of the club head and exerts a force to continue the swinging of the club after the ball is hit, thereby to train the player. This inertia follow-through attachment may be applied to the shafts or rods of other items used in sports where follow-through is essential for good performance.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a view of the inertia follow-through attachment on the shaft of a golf club.

FIG. 2 is a sectional view taken substantially on lines 2—2 of FIG. 1.

FIG. 3 is a top plan view of the weight.

FIG. 4 is a perspective view of a modified form of the clamp.

FIG. 5 is a plan view of a modified form of the invention.

FIG. 6 is a front view of said modified form.

FIG. 7 is a perspective view of the inertia member with a free rotating propeller on the back to rotate during the back stroke.

FIG. 8 is a side view of another modified form showing a spring and weight combination with the inertia member.

DETAILED DESCRIPTION

The weight of the inertia device includes an inertia element in the form of a substantially spherical body 1 which has a conical projection 2 on one side thereof, and which has a diametrical slot 3 slideable on an arm 4. Tail fins 5 extend from the body 1 in a direction opposite from the conical point 2 for directional movement of the inertia body 1. A detent spring 6 in one side of the slot 3 bears against the adjacent face of the arm 4. The arm is preferably flat and the face of the arm adjacent the detent spring 6 has suitable ribs 7 thereon for engagement by the detent spring 6 thereby to hold the inertia body 1 in adjusted position.

The arm 4 is pivoted on a suitable pivot 8 in a forked lug 9 of a bracket 10. The bracket has an open recess 11 on one face with a knurled or serrated portion 12 opposite which is provided a set screw 13 for tightly clamping the bracket 10 on the shaft 14 of the golf club. The arm 4 is tightly engaged in the slot 15 in the forked lug 9 to be held in an adjusted attitude. For instance, the arm may be pivoted upwardly into a position parallel with the shaft 14 or may be adjusted from there downwardly to a position substantially parallel with the club head 16 as shown in FIG. 1 in full lines. The inertia body 1 is so positioned on the arm 4 that its pointed end 2 points in the same direction as the face of the club head 16 so that the inertia body 1 swings substantially parallel with the club head 16 thereby to exert a force to pull the club head and thereby the hand of the player through the swing after hitting the ball.

It is critical that the conical point 2 of the inertia body 1 point in a direction generally at right angles to the plane of the face of the club head 16. The axis of the pivot 8 is also to be at right angles to said plane and parallel with the axis of the inertia body 1 through the point of conical point 2. The slot 3 is at right angles to the horizontal axis of the inertia body 1 through the point of the conical projection 2.

The form of the clamp shown in FIG. 4 includes preferably a plate 16 which has a dent 17 to form a seat for the shaft 14 so that a clamping flange 18 extends on one end and an arm support flange 19 extends on the other end. A clamp 21 fits over the opposite side of the shaft 14 and has a pair of prongs 22 inserted in holes 23 in the arm supporting flange 19. Another flange 23 overlies the securing flange 18 and is tightly held together by a suitable screw 24 and wing nut 26. A suitable removable liner 27 is provided within the clamp 21 to accommodate the clamp to shafts of different sizes.

The arm 7 is pivotally supported on a pivot screw 28 and is tightly held in position by a wing nut 29. On the end of the arm 7 beyond the pivot 28 is a pressed detent 31 which can engage selectively a series of sockets or holes 32 arranged on an arc centered on the pivot 28, whereby the arm 7 is positively in adjusted position.

In the form shown in FIG. 5 the arm 41 is twisted relatively to the clamp 42 on the shaft 43 so that its edge 44 faces in the direction of the swing thereby to reduce air resistance. On the flat portion of the arm 41 are a plurality of grooves 46. The inertia member has a substantially spherical head 47 with slightly elongated nose. A transverse hole 48 in the inertia member 47 slideably fits over the arm 41. A spring clip 49 in the hole 48 resiliently fits into the hole above the top face of the arm 41 so that its central rib 51 is resiliently urged into the selected grooves 46 to adjust the leverage of the inertia member. Elongated fins 52 extend rearward from the inertia member 47.

The clamp 42 is a continuous resilient extension of the arm 41 which latter is made of spring steel or other suitable material of sufficient resiliency to aid in the swing. A suitable bolt 53 extends through the free end of the clamp 42 and the root or base of the arm 41 to tighten the clamp as shown in FIG. 5.

In the form shown in FIG. 7 a freely rotating propeller 54 is held on a central hub shaft 56 recessed inwardly of the tips of the fins 52 so as to allow the propeller to be freely rotated on the back stroke.

In the form shown in FIG. 8 instead of fins the inertia member 61 has a frusto-conical tail 62 from which extends a shaft 63 which has a head 64 at its outer end spaced from the end of the tail 62. An inertia ball 66 has a hole 67 therethrough slideable on the shaft 63. A coil spring 68 between the tail 62 and the ball 66 resiliently holds the ball against the head 64, so that when the club is swung forward the ball 66 compresses the spring 68 and assists in the direction of the follow-through.

I claim:

1. In combination, a game club and an inertia device for follow-through practice of said game club, said device comprising,

an inertia body, and

means to attach said inertia body to said club so as to hold said inertia body to be moved on the same arc as said club is swung thereby to exert momentum for continued movement of said club,

said inertia body being approximately spherical,
a frusto-conical leading extension on said body,
tail fins extended from said body axially oppositely to said leading extension,
and means to adjustably connect said inertia body to said attaching means in a position wherein said leading extension is in the direction of movement of said club.

2. The combination specified in claim **1**, and
said club having a striking head, and
a shaft extended from the striking head for swinging said head.

3. The combination specified in claim **1**, and
said club having a shank and a head, and a striking face on said head for striking a ball,
said leading extension being at right angles to the plane of the striking face of the club.

4. The combination specified in claim **3**, and
said adjustable connecting means including an arm, and
means to adjustably support said inertia body on said arm.

5. The combination specified in claim **4**, and
said attaching means including,

a clamp adapted to be secured to the shaft of the golf club,
said arm being adjustable on said clamp into positions parallel with the shaft and into operative positions parallel with said club head.

6. The combination specified in claim **4**, and
said arm being flat, and being in a plane approximately at right angles to the plane of said striking face of said club.

7. The combination specified in claim **6**, and
said means to adjustably support said inertia body on said arm including,
a plurality of grooves on said flat arm,
said body having a passage therethrough slideable on said flat arm,
and a spring clip in said passage resiliently and selectively engageable with said grooves.

8. The combination specified in claim **4**, and
said tail fins providing an inward recess, and
a freely rotatable propeller mounted in said recess so as to be rotated by the airflow during the back stroke of said article.

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