United States Patent

[11] 3,575,419

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[21] Appl. No. **826,459**
[22] Filed **May 21, 1969**
[45] Patented **Apr. 20, 1971**

[54] **GOLF SWING PRACTICE CLUB**
7 Claims, 3 Drawing Figs.

[52] **U.S. Cl.** **273/186,** 273/193
[51] **Int. Cl.** A63b 69/36
[50] **Field of Search** 273/26, 183, 186, 193, 194; 46/191

[56] **References Cited**

UNITED STATES PATENTS

2,543,722	2/1951	Hetzel	273/194R
3,116,926	1/1964	Owen et al.	273/26BX
3,136,546	6/1964	Connolly	273/186AX

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ABSTRACT: A golf swing practice club which has a linear shaft with a handle at one end and a weighted body at the other end. The body has an axial bore with a spring-biased plunger slidably mounted therein, the plunger having an annular groove therein for removably receiving a spring-biased ball detent for yieldingly holding the plunger in its initial or starting position. An anvil screw closes the outer end of the axial bore and a swinging of the club at a certain speed in a golf swing, will cause the plunger to move along the bore by centrifugal force and to strike the anvil screw with a loud click. The follow through portion of the golf swing will slow the speed of the club and permit the plunger spring to reset the plunger with a less loud click and the ball detent will yieldingly hold the plunger in its reset position ready for the next golf swing.

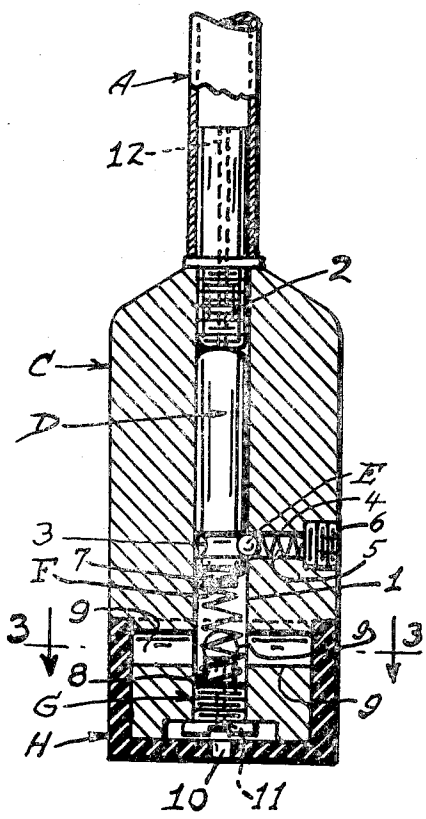


FIG. 1.

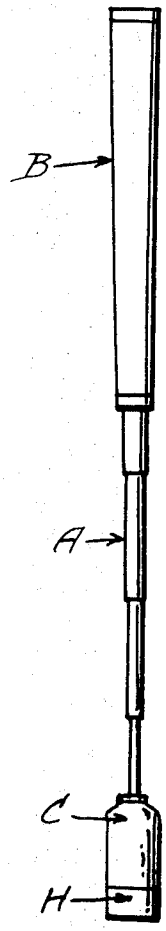
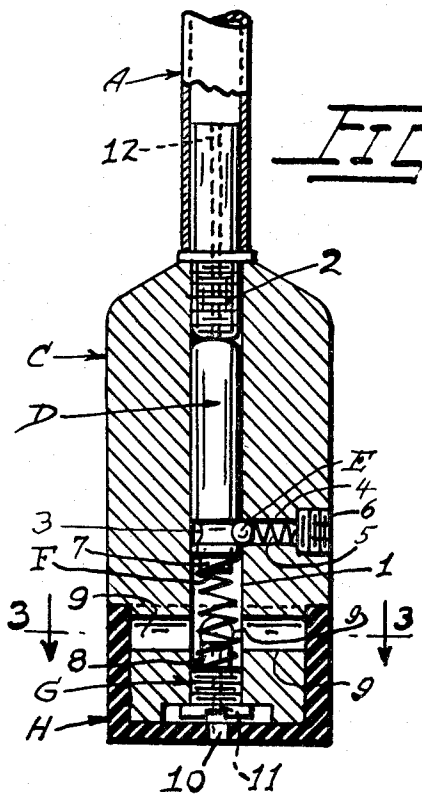


FIG. 2.



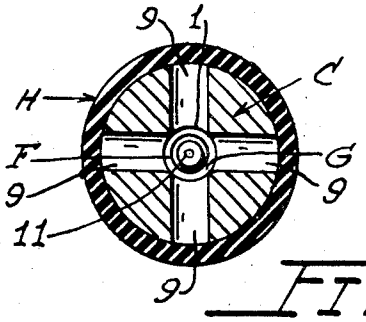


FIG. 3.

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GOLF SWING PRACTICE CLUB

BACKGROUND OF THE INVENTION

1. Field of the Invention

The most important thing for a golfer to learn is the correct swinging of the golf club. It is important that the swinging velocity of the golf club be at its greatest when the club head is at the bottom of the down swing. The players wrists must "uncock late" in the down swing of the club in order to deliver the maximum club head speed at the moment of striking the golf ball. A full follow through of the golf swing requires that the golfer's arms be fully extended at the end of the swing.

My golf swing practice club has a properly weighted body at the outer end of the linear shaft that is actually slightly heavier than the actual golf club head. The shaft of my practice club is shorter in length than the standard golf club shaft and this permits the device to be used indoors. The weighted body has an axial bore in which a spring-biased plunger is slidably mounted. During the movement of my device in a golf swing, when the "hitting velocity" of the practice club is reached, centrifugal force will move the plunger and cause it to strike an anvil and make a loud clicking sound. This sound should occur at the bottom of the swing. On the follow through of the golf swing, the slowing down of the club speed to a certain point will permit the plunger spring to reset the plunger automatically. A fainter clicking sound will take place when the plunger is reset and a spring-biased ball detent will engage with the plunger for holding it in its reset position. The golf swing practice club is now ready for the next golf swing.

2. Description of the Prior Art

The U.S. Pat. to Joseph J. Connolly, No. 3,136,546, issued June 9, 1964, is for a swingable practice game implement with slidable weight. A shaft has a head in which a sliding weight is mounted for limited axial movement. Spring pressed ball detents are carried by the weight and are received in short keeper grooves for spacing the weight a predetermined distance from a stop collar and another set of spring pressed ball detents are carried by the weight and a receivable in a second keeper groove for spacing the weight a less distance from the stop collar. The weight has a projection that extends through an opening in the stop collar and this projection is manually depressed after each swing of the device by the user to reset the sliding weight. In my golf swing practice club the slidable plunger automatically resets itself during the follow through of the golf swing and serves an additional purpose of sounding a less loud click at the moment of resetting. This less loud click should occur not before the golfer's arms reaches at least waist high in the follow through swing.

SUMMARY OF THE INVENTION

An object of my invention is to provide a golf swing practice club that will permit the golfer to practice his swing indoors and at any time. The device has novel means for producing a loud click when the "hitting velocity" of the club head, i.e. the weighted body, has been reached. It is important that the swinging velocity of the practice club be at its greatest velocity when the club is at the bottom of the down swing and the golfer can swing the device until the loud click occurs at this point in the swing.

A further object of my invention is to provide a device of the type described in which the mechanism for producing the loud click when the club head reaches its "hitting velocity," will automatically reset itself during the followthrough of the golf swing. In addition, the resetting of the clicking mechanism will produce a fainter or less loud click at the time of resetting and this occurs when the club head decelerates to a certain speed. The fainter click should occur when the golfer's arms are about waist high on his followthrough swing. The golfer can practice this portion of the swing until the fainter click occurs at the right moment. Therefore my device can aid the golfer in producing a proper golf swing and he can practice until the device produces a loud click when the club head is at the bottom of the golf swing and subsequently produces a fainter click when the golfer's arms reach the proper position on the followthrough portion of the golf swing.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is an elevational view of my device shown on a smaller than full-size scale.

FIG. 2 is a vertical section through the weighted body of the device and shows the clicking and resetting mechanism full size.

FIG. 3 is a horizontal section taken along the line 3–3 of FIG. 2 and illustrates the sound receiving chambers.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In carrying out my invention I provide a linear shaft A with a handle B at one end and a weighted body C at the other end. The total length of the device is about 25 inches although I do not wish to be confined to any particular measurement. The weighted body C is preferably cylindrical in shape and has a central axial extending bore 1 which is threaded at its upper end and receives the lower threaded end 2 of the shaft A. In the bore 1, I slidably mount a plunger D and this plunger has an annular groove 3 near its lower end. The weighted body C has a radially extending bore 4 that communicates with the axial bore 1. The bore 4 also registers with the annular groove 3 in the plunger D when the top of the plunger contacts with the lower end of the threaded portion 2 of the shaft A.

A spring-biased ball detent E is slidably received in the radial bore 4 and a coil spring 5 is mounted in the bore and yieldingly urges the check ball or detent E into the annular groove 3 when the plunger D is in its uppermost position and is in contact with the lower end of the threaded portion 2 of the shaft A. A screw plug 6 is received in an enlarged threaded portion of the radial bore 4 and the outer end of the spring 5 contacts with the inner end of the screw plug. When the golf practice club is swung through an arc by a golfer practicing his swing, centrifugal force will cause the plunger D to move downwardly in the axial bore 1 when the club head or weighted body C attains a certain speed and the ball check E will be forced out of the annual groove 3 to permit this movement.

I provide a plunger resetting coil spring F and mount this in the axial bore 1. The lower end of the plunger D has a cylindrical projection 7 that receives the upper end of the plunger resetting spring F. An anvil screw G is received in the lower threaded end of the axial bore 1 and it has a cylindrical projection 8 for receiving the lower end of the spring F. During the downward portion of the golfer's swing, the body C will reach a speed sufficient for centrifugal force to move the plunger downwardly in the axial bore 1 and strike the anvil screw G with a loud clicking noise which is readily heard by the golfer. On the followthrough portion of the same swing, the speed of the body C and plunger D will be reduced to such a point that the resetting spring F will overcome the reduced centrifugal force and will return the plunger back to its starting position where it will strike the lower end of the threaded portion 2 of the shaft A and make a fainter clicking sound which can also be heard by the golfer. The ball check E will enter the annular groove 3 in the plunger at this point and the device will be automatically reset, ready for the next swing by the golfer.

Referring to the horizontal section of FIG. 3 and the vertical transverse section of FIG. 2, it will be noted that I provide the weighted body C with four radially extending sound-conveying chambers or bores 9 that communicate with the axial bore 1 at positions adjacent to the top of the anvil screw G. These four bores extend at 90° angles with respect to each other and their axes all lie in a common plane that extends at right angles to the longitudinal axis of the bore 1. The top of the projection 8 on the anvil screw G substantially lies in the same horizontal plane and when the projection 7 on the lower end of the plunger D strikes the projection 8 when the downward movement of the plunger in the bore 1 is suddenly

terminated, the loud clicking sound produced will travel outwardly through the four sound-conveying bores **9** rather than through the relatively thick wall of the body C that surrounds the axial bore **1**. The loud click is thus transmitted out from the body C and can be readily heard by the golfer.

On the other hand, it will be noted that I do not provide any additional sound-conveying bores, similar to the bores **9**, which would communicate with the axial bore **1** adjacent to the lower end of the threaded portion **2** of the shaft A, where the fainter clicking sound is produced by the top of the plunger D striking this lower threaded portion on its return movement in the bore **1**. In this way there is a clear distinction in the loudness of the click produced by the plunger striking the anvil screw G on the downswing of the device and the fainter click produced on the followthrough portion of the swing when the plunger is reset by the return spring F.

I provide a resilient cap or cup-shaped cover H, that snugly fits on the lower end of the weighted body C for protecting the device and any article the golfer might accidentally contact. The lower end of the weighted body C has a reduced cylindrical portion for receiving the cylindrical wall of the cup-shaped cover. The outer surface of the cylindrical wall of the cover H lies flush with the outer cylindrical surface of the body C. In addition the cover or cap H has a central opening **10** in its lower wall and this provides an air passage that communicates with an axial bore **11** formed in the anvil screw G. Also the threaded lower end **2** of the shaft A has an axial bore **12** that communicates with the bore **1** in the body C and also communicates with the hollow interior portion of the shaft. The purpose of this is to prevent any trapping of air in the bore **1** during the reciprocation of the plunger D in the bore. The cap H covers the outer ends of the four radial bores **9**, but it will not prevent either click from being heard by the user.

OPERATION

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. I have already explained how a swinging of my practice club by the golfer will cause the plunger D to move when the club swing is travelling at a speed sufficient for centrifugal force to overcome the compressive force of the spring F and the detent E. The golfer practices in swinging the club so that its greatest swinging speed is made at the bottom of the downswing portion and the loud click made by the plunger striking the anvil screw G will occur at this point if the golf swing is correctly executed. The sound-conveying chambers **9** transmit the loud click so that it can be heard by the golfer and the rubber cover or tip H does not excessively muffle the clicking sound even though it covers the outer ends of the bores **9**. If the loud click occurs before the club head enters the hitting area, i.e. at the bottom of the swing, the golfer is "hitting from the top" and he will lose both power and accuracy. The player's wrists must "uncock late" in the downswing of the club in order to deliver a maximum club head speed to achieve maximum golf ball travel. A premature loud click of the device means that the wrists have uncocked too soon. At the bottom of the downswing portion of the correct swing, the golfer should feel definitely the club head pulling as he swings it "through the ball."

The followthrough portion of the club swing slows down the speed of the club and permits the spring F to reset the plunger D. The plunger will strike the threaded end **2** of the shaft A and cause a fainter or less loud click to sound. If this reset fainter click takes place too early after the loud click, the golfer knows that he is not executing a full followthrough of his swing with his arms being fully extended at the end of the swing. The fainter reset click should not take place before the golfer's arms reach at least waist high in the followthrough portion of the swing. The purpose of the device is to instruct the golfer to develop a correct golf swing. The loud click and fainter reset click take place automatically and it is not necessary to manually reset the plunger D. The weight of the device is such as to give to the golfer the feeling of a club slightly heavier than a standard golf club when swung.

I claim:

1. In combination:
a. a linear shaft having a handle at one end;
b. a weighted body having an axial bore extending therethrough, the other end of said shaft having a threaded portion received in a threaded end portion of the bore;
c. a plunger slidably mounted in the bore and the end of the shaft threaded portion acting as a reset stop for the plunger in sliding in one direction in the bore;
d. an anvil screw closing the other end of the bore and acting as another stop for the plunger when it slides in the other direction;
e. yielding means for holding said plunger in its reset position; and
f. a reset spring for returning the plunger to its reset position;
g. whereby a swinging of the shaft and body at a predetermined speed will cause centrifugal force to move the plunger in the bore to release the plunger holding means and permit the plunger to strike the anvil screw with a loud clicking sound, the slowing down of the swinging shaft reducing the centrifugal force to a point where the reset spring will return the plunger to its initial position where it will strike the reset stop and produce a fainter click, said yielding means holding the plunger in its reset position.

2. The combination as set forth in claim **1**: and in which said yielding means including an annular groove in the plunger and a spring-biased detent in said body yieldingly held in the plunger groove when the plunger is in reset position for normally holding the plunger in this reset position.

3. The combination as set forth in claim **1**: and in which
a. said weighted body having a plurality of radially extending sound-conveying bores leading from the axial bore to the outer surface of said body, the radial bores communicating with the axial bore at points adjacent to the inner end of the anvil screw;
b. whereby the loud clicking sound made by the plunger striking the anvil screw will be transmitted through the radial bores.

4. The combination as set forth in claim **3**: and in which a rubber cover encloses the free end of said weighted body.

5. In a device of the type described:
a. a body having an axial bore therein;
b. a plunger slidably mounted in the bore;
c. a first stop provided at one end of the bore and a second stop provided at the other end of the bore; and
d. a plunger resetting spring placed in the bore and having one end bearing against the adjacent end of the plunger and its other end bearing against said first stop; said plunger being moved by centrifugal force when said body is swung in a certain direction, the plunger moving toward said first stop and compressing said spring, the plunger stopping its movement when striking said first stop and making a clicking sound; said spring returning said plunger to its reset position and striking said second stop when the moving body is reduced in speed and the force of the spring overcomes the centrifugal force, the plunger making a fainter clicking sound when striking said second stop.

6. The combination as set forth in claim **5**: and in which yielding means is provided for holding said plunger in its reset position.

7. The combination as set forth in claim **5**: and in which
a. said body having a plurality of radially extending sound-conveying bores leading from said axial bore to the outer surface of said body, said radial bores communicating with said axial bores at points adjacent to said first stop;
b. whereby the clicking sound made by said plunger when striking said first stop will be transmitted through said sound-conveying bores.