

Oct. 29, 1968

R. J. COLTON

3,408,075

GOLF CLUB INCLUDING POWER-HAND GRIP FORCES SENSING MEANS

Filed March 2, 1966

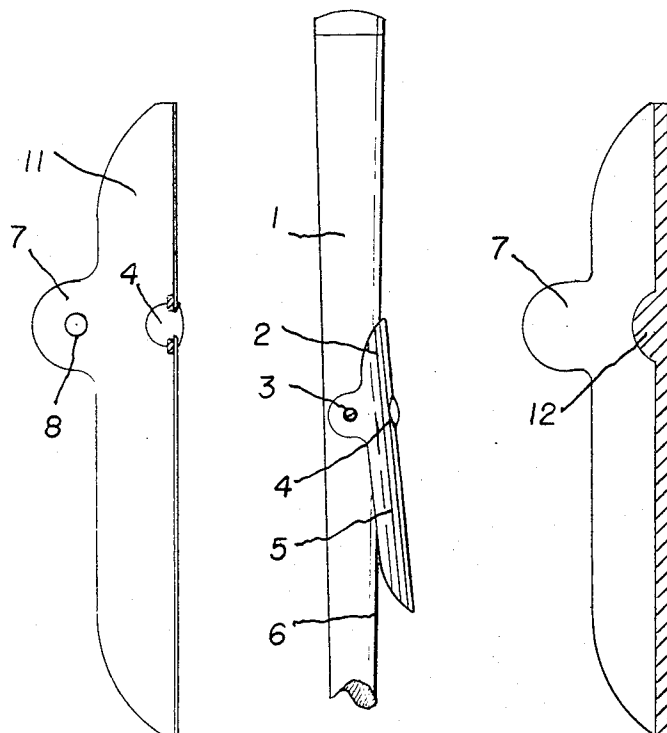


Fig.3.

Fig.1.

Fig.4.

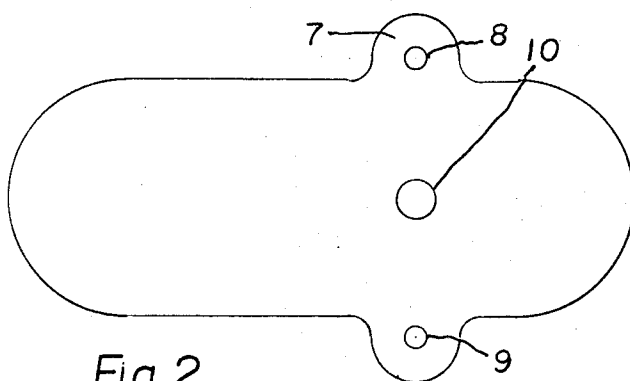


Fig.2.

INVENTOR.

Roland J. Colton

1

3,408,075

GOLF CLUB INCLUDING POWER-HAND GRIP FORCES SENSING MEANS

Roland J. Colton, 41 Vista Way,
Port Washington, N.Y. 11050
Filed Mar. 2, 1966, Ser. No. 534,961
5 Claims. (Cl. 273—183)

ABSTRACT OF THE DISCLOSURE

The upper and lower end portions of a pivotable oscillator element on a golf club handle are engaged by the respective upper and lower gripping hands of the golfer. The lower portion of the oscillator element is longer than the upper end portion so that gripping forces by the golfer's lower power hand will be magnified and sensed by the golfer's upper gripping hand.

My invention pertains to the game of golf, and more particularly to the golfers' problem of precisely estimating and generating the proper amount of force required when using the short irons for short range golf shots, and while primarily related to putting, it also concerns other short iron play.

The primary objective of my invention is to provide a means for golfers to be enabled to readily acquire a specific golf stroke habit which will present the said golfers with a very much enlarged sensory perception of the necessary amount of force required for a given golf ball movement, with this enlargement of the necessary force being strictly an illusion in the golfers' mind and caused by the said golf stroke habit formed due to use of this device, rather than by impeding weights or spring actions attached to the clubs.

Heretofore golfers of average ability have encountered several difficulties after their golf ball has arrived within twenty or thirty yards of the flag, with the next stroke causing the ball to be moved either too far or not far enough to be desirable. Furthermore when the ball is on the green and any of the conventional style of strokes are used, it has been observed that there appears to be very little perceptible difference in the amount of total force necessary to move the ball either five feet or ten feet, while there is definitely one hundred percent of difference in the total forces.

The apparent enlargement of the forces is advantageous to the golfer in that a more substantial apparent force is presented for division or fractionizing in estimation of the amount of force required for a given distance of golf ball movement, while the said golfer is more capable of estimating and generating two or three pounds of force than he would be able to correctly estimate and generate two or three ounces of force.

With the specific golf stroke habit acquired due to use of my invention, the amount of force necessary for a given golf ball movement appears to the average golfer to be at least two times as great as that force previously required with employment of a conventional golf stroke where the upper hand and the lower hand each impart a certain amount of forward force to the club handle to cause the golf club to swing with the end result being a very substantial error in judgment of the required total force generated by the combination of forces of two hands executing similar movements. In this golf stroke habit, what is known as the baseball grip is employed, and each hand is assigned a separate task.

The upper hand firmly holds the handle of the golf club in the swing position for proper alignment while the arm joining the upper hand is held very rigid and straight at the elbow while easily swingable from the shoulder joint.

2

The lower hand lightly encompasses the golf club handle while the palm of the said lower hand rests on the side of the said handle which is farthest from the target. The illusion of excessive power requirement is caused by certain leverage proportions and the fact that the upper hand does not assist in the forward movement of the golf club, in addition to the fact that the golfer while in the act of maintaining one rigid arm is also prone to unconsciously impede the free movement of the said rigid arm at the shoulder joint due to the lack of one hundred percent ambidexterity.

The acquired habit includes a necessary long backswing and an upper straight arm follow through which action improves the alignment of the path of the golf ball.

A profile of this acquired and habitual golf stroke in putting includes a slow beginning of the stroke from the terminus of the backswing with the putter contacting the ball while the velocity of the head of the said putter is constantly increasing while the ball is pushed forward until the said putter loses contact with the ball at the top of the said ball due to the arc described by the face of the putter during the follow through action.

The putter does not lose contact with the ball after slow initial contact until the said contact is severed due to the arc of the path described when the said putter is moving faster than at the time of initial contact, with this action providing a nearly true rotation of the golf ball with the axis of rotation at right angles to the desired path of the said ball.

Exercise with this device excels verbal instruction in the execution of this stroke in that it provides the golfer with a memory of a sensation of slowly applied pressure on the lower hand while the upper hand is sensitive to the variations of pressure of the said lower hand while providing a resilient and yielding force for the said lower hand to act against through this device.

Later exercise with a club from which this device is missing enables the golfer to apply the desired amount of pressure of the lower hand while the upper hand is not at this time sensitive to the action of the said lower hand whose action alone determines the total amount of forward force which is applied to the handle of the golf club with the illusion of an excessive force remaining perceptible through the senses of the lower hand while the said upper hand performs the single task of maintaining the desired course and angle of the club face.

Persons versed in the arts to which my invention pertains may be enabled to make and use this device by reference to the specification and drawings in which: FIG. 1 shows a handle of a golf club at 1 while having attached thereto an oscillating saddle element indicated at 2 and pivotally attached to the said handle by two self threading screws, one of which is shown at 3 and in an offset position from the vertical center line of the said element 2. One half of this device is shown while partially encircling the said handle with a continuous and identical portion being present on the unseen side of the said handle where a self threading screw similar to that shown at 3 is screwed into the said club handle to retain the said element 2 and provide an offset pivot axis perpendicular to the line of flight of the ball being driven by whichever short iron golf club may be associated with the golf club handle shown at 1.

A rivet is indicated at 4 which is later described more fully, while the lower and longer end of the oscillator is indicated at 5 and is capable of oscillating from the position shown to the side of the said handle at the point indicated at 6, with the said lower end capable of moving more than the upper end due to its greater length.

FIG. 2 shows a flat piece of metal or plastic having two appendages as at 7 which piece may be bent approximately half round and slightly tapered or straight along

the long axis to form the saddle element 2 which is shown in FIG. 1. The numerals 8 and 9 indicate two holes in the said appendages which provide means for attaching the completed element to the golf club handle by insertion of two screws into the handle of the said club as shown at 3 in FIG. 1. A hole is indicated at 10 which accommodates a rivet shown at 4 in FIG. 1.

FIG. 3 is a vertical half section of the saddle element 2 which is shown in FIG. 1 with the inside curved surface shown at 11, flat surface of appendage shown at 7, screw hole at 8 and a rivet at 4. The rivet acts to assist in permitting the oscillator to rock about the axis of screws 3. It provides a positive stop in both directions (upper end against club handle or lower end against club handle). It is not essential in this embodiment and may be omitted if desired.

FIG. 4 is a half section of this device as it may be made of plastic or metal and designed for use where it is used on more than one club handle while being manually held in contact with the club handles only when being used, with the surface indicated at 7 being one of two appendages used to centralize the oscillator while the element indicated at 12 is manually held in contact with the handle of the golf club in a position similar to that of element 2 in FIG. 1. The element 12 is a boss used to provide a slightly offset pivot point where the oscillator rocks on the club handle.

As previously stated, the secondary objective of this device is to provide an illusion of excessive power requirements for golf ball movements of varying magnitude with this illusion becoming apparent to the novice with the first practice stroke where the ball only moves approximately one half of the expected distance when the oscillator is used as prescribed in combination with a short iron golf club.

In other words, the use of the oscillator makes the golfer feel as though he is applying much more force than he actually is. Once he becomes accustomed to the device (and the type of swing it engenders), the apparent "increase" in necessary force enables him to sense the differences in amount of force applied much more readily. He thus is able to control the distance on each shot accurately.

The prescribed method of using this device which is shown in FIG. 1 is to grasp the club handle while using what is commonly known as the baseball grip with the screw indicated at 3 astride the dividing line between the upper and lower hands while the upper hand firmly grips the handle with the thumb of the said upper hand firmly holding the upper and shortest end of the oscillator in contact with the club handle while the palm of the lower hand rests on the lower and longest end of the oscillator while the fingers encircle the said handle.

The wrist and elbow of the arm above the upper hand are held straight and rigid as possible while the shoulder joint is relaxed and the arm is easily swingable with no effort being made to use any power of this arm in swinging the said club as the said hand merely holds and guides the club.

The target is then "lined up" at address with the customary backswing which for every range is exaggerated and from the terminus of the said backswing the palm of the lower hand slowly applies pressure to the lower and longer end of the oscillator while the thumb of the upper hand yields due to the advantage provided to the lower hand by the unequal leverage where the lower end of the oscillator is longer than the upper end of the said oscillator with the preferred ratio being approximately two to one when the thumb of the upper hand is pressing at the point indicated at 2 in FIG. 1 while the palm of the lower hand is pressing at the lower end of the said oscillator and overcoming the pressure of the said thumb. It is at this point that the illusion of excessive power is caused.

The golfer momentarily imagines that the excessive counter pressure reacting through the oscillator and

against the thumb of the upper hand is the actual pressure applied to the lower end of the oscillator and accordingly reduces the pressure of the lower hand until the reduction in pressure is perceptible through the palm of the said lower hand with the result being that the golf ball does not receive an impact of the magnitude expected by the golfer and the golf ball is only moved approximately one half of the intended distance.

Further practice with this device enables the golfer to become familiar with the increased amount and rate of applied pressure of the lower hand that is necessary for the various amounts of golf ball movement, thus the golfer generates a golf stroke habit wherein the upper hand is only employed to guide the golf club while the lower hand is only used to force the golf club head through the swing movement of the golf stroke.

Discarding this device after adequate practice leaves the golfer with ability to use any short iron club while maintaining the technique acquired during use of this device while there is gained a more acute pressure sensing ability in the palm of the lower hand acquired due to the previous exercises while using this device.

This device may be made for permanent attachment to club handles while easily demountable as shown in FIG. 1 and FIG. 3 or it may be designed for use on several clubs as shown in FIG. 4 where a boss shown at 12 functions as a slightly offset pivot point in lieu of the screws used for this purpose as at 3 in FIG. 1.

Referring to the boss shown at 12 in FIG. 4, a similar element is shown at 4 in FIG. 1 and FIG. 3 which may be a round headed rivet burred on the outside of the hole 10 indicated in FIG. 2 or any element of similar size and shape may be attached to the inside of the oscillator at this location to provide a pivot point for the said oscillator if it is desired to omit the pivot screws such as indicated at 3 in FIG. 1. It may be noted that pivot screw holes are omitted in FIG. 4.

Obviously there must be clearance between the element 4 and the handle of the golf club when the oscillator is attached to the handle by two screws to allow free pivotal action.

Without departing from the essence of my invention pivotal means may be provided for the oscillator wherein a through and through pivot pin may be employed, an annular clamp having pivot elements attached to the club handle, or two headless screws may be attached to the club handle and a snap-on technique may be employed where the pivot holes 8 and 9 as shown in FIG. 2 would be sprung apart to attach and detach the oscillator, or pivotal means may be provided nearer to the external rounded surface of the oscillator.

Terms familiar to golfers are used in specification, and the term "short irons" may include short clubs made of wood or other materials.

The materials used for fabrication of this device may be of any substance found suitable.

Having described my invention, I claim:

1. Training apparatus for driving a golf ball comprising a golf club including a gripping handle and an elongated oscillator element, said oscillator element pivotally engaging the central portion of said gripping handle so that the upper end portion of said oscillator element may be engaged by a golfer's upper gripping hand and the lower end portion of said oscillator element may be engaged by a golfer's lower gripping hand, said oscillator element comprising an elongated generally semi-cylindrical member, means pivotally engaging said semi-cylindrical member with said central portion of said gripping handle so that said semi-cylindrical member may pivot about an axis extending substantially perpendicular to the longitudinal axis of said gripping handle, said upper and lower portions of said oscillator element meeting adjacent said engaging means, said lower portion being longer than said upper portion, the pivotal movement of said oscillator element on said handle being limited to one extreme by

5

contact of said upper portion with said handle, and to the other extreme by contact of said lower portion with said handle.

2. Apparatus according to claim 1 wherein said lower portion is approximately twice as long as said upper portion.

3. Apparatus according to claim 1 wherein said engaging means comprises a boss on said semi-cylindrical member bearing against said handle.

4. Apparatus according to claim 1 wherein said semi-cylindrical member partially encircles said handle.

5. Apparatus according to claim 1 wherein said semi-

6

cylindrical member is attached to said handle by engaging means comprising screw means, and said screw means provides said pivot axis.

References Cited

UNITED STATES PATENTS

1,676,270 7/1928 Mattison ----- 273—162

ANTON O. OECHSLE, *Primary Examiner*.

10 G. J. MARLO, *Examiner*.