Feb. 22, 1927. 1,618,638

H. L. COLES

GOLF CLUB

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Fig. 1.

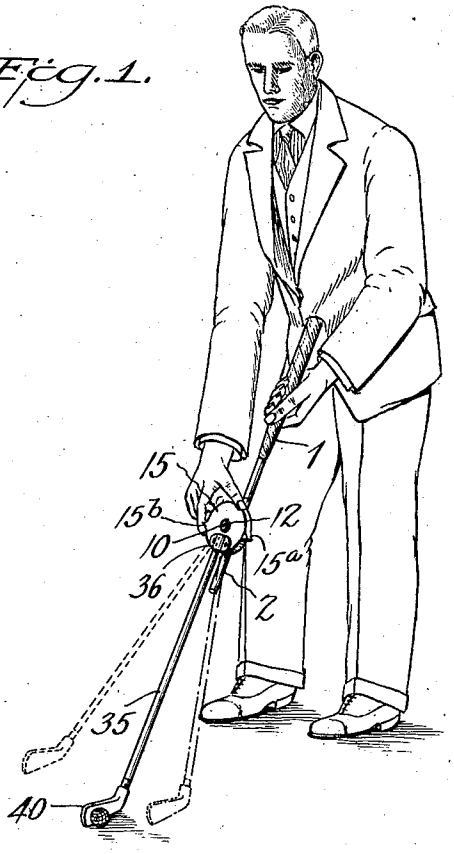


Fig. 2.

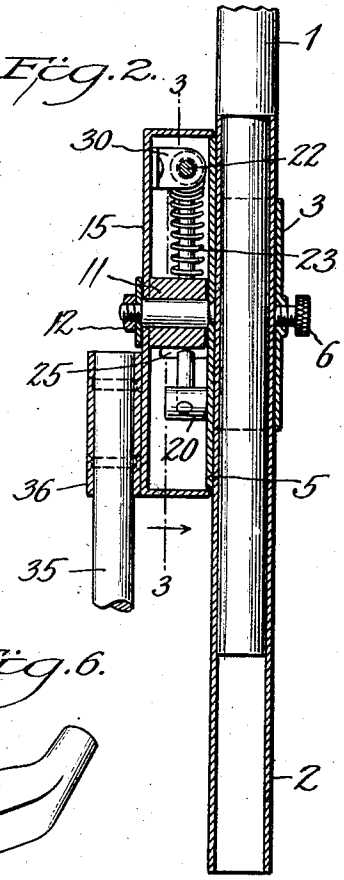


Fig. 6.

Fig. 3.

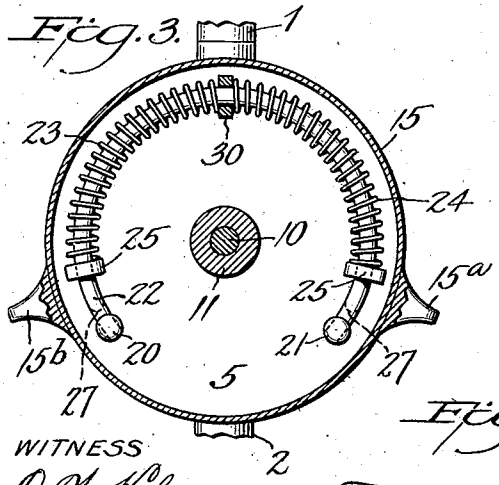


Fig. 4.

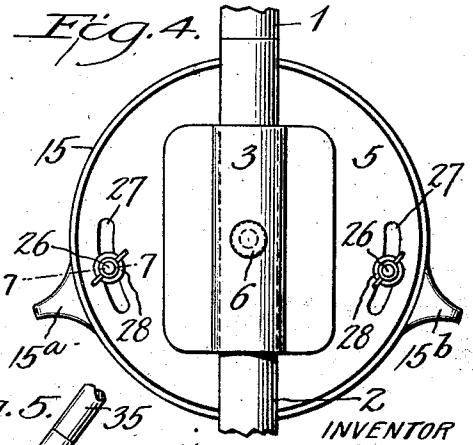
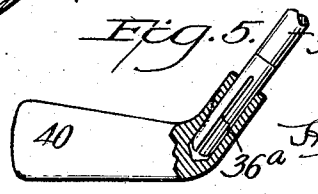


Fig. 5.



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Fig. 7.

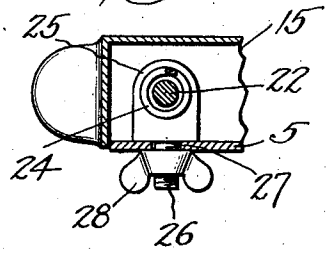


Fig. 10.

Fig. 8.

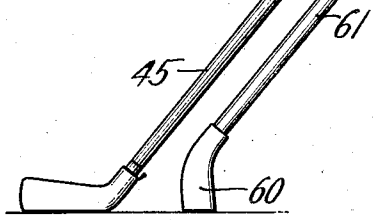


Fig. 9.

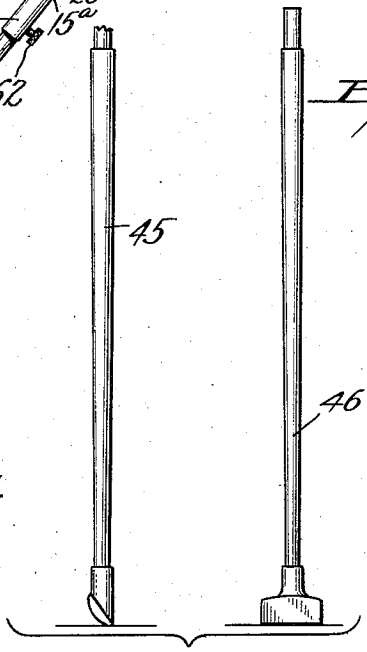
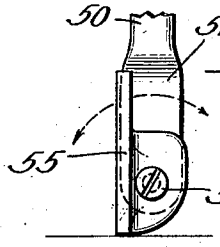


Fig. 11.



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UNITED STATES PATENT OFFICE.

HOWARD L. COLES, OF TARRYTOWN, NEW YORK.

GOLF CLUB.

Application filed April 1, 1926. Serial No. 99,025.

The object of the present invention is to provide an improved modified form of golf clubs especially adapted for playing the game or golf on a reduced scale either indoors or upon a prepared lawn and to this end the invention comprises a shaft or handle adapted to be held in one hand similar to the ordinary golf club and having mounted upon it a spring propelled and cushioned club carrying member so arranged that the ball can be addressed in a manner similar to the form adopted in the usual golf game and by proper manipulation cause the club to be propelled by its driving spring to strike the ball and project it in the desired direction.

In the preferred form of the improved club the shaft or handle has adjustably mounted upon it a suitable casing in which is mounted a two-part or double acting spring device acting through a movable part of the casing on which is mounted a club. The movable part of the casing is adapted to be drawn back by hand to place under tension the spring device, which when released imparts a striking movement to the club. Part of the spring device is arranged to act as a buffer to limit the follow-through of the club. The spring device is preferably arranged in the form of two springs which oppositely engage the club carrying casing member, and means are provided for independently adjusting the tension of the springs to regulate the striking force of the club and of the cushioning effect of the buffer. It is intended to provide the club with interchangeable heads to simulate the different kinds of clubs usually employed in playing the game of golf. This interchangeability may be effected by having a series of clubs which are detachably mounted upon the movable casing member or a single club shaft upon this movable casing member may be arranged to receive interchangeable club heads. This interchangeability is, however, preferably accomplished by providing an adjustable club head which in its different positions will present the different angular driving faces of the various clubs.

A further feature of the improved club is the provision for use by either right hand or left hand players, which result is accomplished by the provision of the adjustable club head which will present a driving face at the proper angle in either direction and the arrangement of the spring device so that the propelling and buffer springs can operate interchangeably depending upon the address of the ball and the manipulation of the movable club carrying casing member.

In order that the invention may be fully understood it will first be described with reference to the accompanying drawings and the novelty afterwards more particularly pointed out in the annexed claims.

In said drawings:—

Figure 1 is a perspective view of the preferred form of club illustrating the method of operating it;

Figure 2 is an enlarged longitudinal sectional view of the main parts of the club;

Figure 3 is a detail sectional view taken on the line 3—3 of Figure 2;

Figure 4 is a rear view of the device;

Figures 5 and 6 are detail views of different forms of club heads;

Figure 7 is a detail sectional view of part of the device showing the spring adjustment on line 7—7 of Figure 4;

Figure 8 is an elevation of a modified form of the improved club showing a removable ground support;

Figure 9 shows two detached clubs of two forms;

Figure 10 is a detail view of a club having an adjustable head;

Figure 11 is an end view of the form of club shown in Figure 10.

1 is a shaft or handle similar to the upper handle portion of an ordinary golf club. This shaft 1 is preferably formed with an inner tubular end 2 which snugly fits and is adjustably mounted in a cylindrical socket 3 rigidly attached to the rear face of a circular base plate 5. The shaft 1 is secured in the desired adjusted position in socket 3 by any suitable means such as a thumb screw 6 and by this means the club can be shortened or lengthened.

The casing base plate 5 carries a central pivot bolt 10 upon which is freely journalled a flat cylindrical casing member 15, a spacing collar 11 being mounted upon pivot 10 to assist in supporting the casing member 15, and a nut 12 being threaded upon the pivot post 10 for confining movable casing member 15 upon its pivot. The casing member 15 snugly fits upon the circular base plate 5 and constitutes a housing within which are mounted the propelling and buffer springs which will now be explained.

Projecting inwardly from the base plate 5 are two rigid studs 20, 21 in which are

mounted the opposite ends of the curved guide rod 22 which is supported concentrically within the circular flange of the movable casing 15. Freely mounted upon this curved guide rod 22 are the spiral springs 23, 24. The opposite ends of springs 23 and 24 are in engagement with small blocks or washers 25 which surround the guide rod 22 and have threaded stems 26 which extend through the curved slots 27 of base plate 5 and receive the wing nuts 28 which clamp the blocks or washers 25 in the desired adjusted position to determine the amount of compression or tension upon the springs 23, 24.

A lug or finger 30 is rigidly secured to the inner face of movable casing member 15 and surrounds the guide rod 22 between the adjacent inner ends of springs 23, 24 so that the movement of casing member 15 upon its pivot 10 will compress one of said springs depending upon the direction of movement of the casing member.

The casing member 15 carries the club with which the ball is struck. As shown in Figures 1 and 2, a club shaft 35 is securely mounted in a socket member 36 attached to the outer face of casing member 15. This shaft 35 carries at its lower end the club head 40 which may be of any of the usual forms of golf club head and may be detachably mounted by any suitable means such for instance as illustrated in Figure 5 in which the end of shaft 35 is split at 36^a and frictionally held in the socket of the club head. This detachable club head is shown in the form of a driver in Figure 6 of the drawings.

To afford interchangeability of clubs, it may be preferred to provide a number of clubs fixed upon individual shafts which are arranged to be detachably mounted in the socket 36 of casing member 15. This idea is illustrated in Figure 9 of the drawings in which two short shafts 45, 46 carrying club heads are formed with reduced upper ends to detachably fit in the socket 36 of the movable casing member 15 referred to. These club shafts may be secured by means of a thumb screw 47 as shown in Figure 8 of the drawings.

The preferred means for providing interchangeability of club heads is, however, illustrated in Figures 10 and 11 of the drawings, in which the shaft 50 has a properly shaped metal end 51 to which the club blade 55 is adjustably attached by means of a bolt 52 passing through base flanges of the head 55 and end 51 and secured in place by nut 53. This blade 55 is formed with its opposite faces in parallel relation so that by adjusting the blade 55 upon the bolt 52 the player can set the club blade to the desired angle to suit the particular shot to be made. Since both faces of the blade 55 are the same it will be observed that with the desired adjustment the club can be used by either a right hand or a left hand player.

In Figure 8 I have shown a slight addition or modification of the improved club. In this form the main features of the club as shown in Figures 1 and 2 are present, but to afford a more substantial support for the club in addressing the ball, a foot or ground support 60 mounted upon the shaft 61 is adjustably mounted in the tubular socket extension 2 of the shaft or handle 1. Any means such as the thumb screw 62 may be provided to secure shaft 61 in the desired position.

The improved club is designed for playing a modified short game of golf either indoors or on a prepared lawn. The usual tees, holes and hazards can be arranged in accordance with the notions of the players. In playing indoors it is preferable to use a small hollow celluloid ball because of its lightness so as not to injure the house furnishings. The player addresses the ball as illustrated in Figure 1 of the drawings, holding the club with one hand in the manner somewhat similar to the ordinary method of addressing the ball in the regular game of golf. After properly positioning the club head with respect to the ball and holding it firmly in this position, the player with the other hand rearwardly rotates the casing member 15 carrying the club, thereby compressing one of the springs 23 or 24. The casing member 15 may be formed with finger pieces such as shown at 15^a and 15^b by which the casing can be readily rotated. The casing is pulled back to the desired degree dependent upon the judgment of the player, when it is released to allow the compressed spring to forwardly rotate the casing causing the club to strike and propel the ball, the follow-through of the club being restrained by the opposite spring which also serves to return the casing and club to central position upon the handle member 1. By selecting the club with the proper angular striking face the ball can be lofted more or less to suit the requirement as in the ordinary game of golf. The change into different forms of clubs can most conveniently be effected with the form of club shown in Figures 10 and 11 in which the blade can be readily adjusted. The length of the club to suit the particular player can be arranged by adjusting the handle or grip member 1 in the socket of the casing. Likewise the tension of the springs can be adjusted by the means shown. In the form of club shown in Figure 8 the ball is addressed in the same way as above explained excepting a more secure support is provided by the foot 60 resting upon the ground or floor adjacent to the ball.

I believe I am the first to provide a club

of the type described in which the spring propelled striking member is mounted upon and supported by a hand gripped element which enables the player to address the ball in a manner very similar to that used in playing the ordinary game of golf.

The hand gripped supporting staff, the striking element, and the ground engaging element are all preferably detachably connected to facilitate packing them into a small parcel for convenient storing and transporting.

I claim:—

1. A golf club comprising a hand gripped staff, a spring propelled striking element mounted upon and supported by said hand gripped staff, and a ground engaging element adjustably mounted upon and projecting from said staff.

2. A golf club comprising a hand gripped supporting element, a ball striking element, a two-part casing, one part of said casing being connected to each of said elements, and a spring device arranged between the two parts of said casing.

3. A golf club comprising a hand gripped supporting element, a ball striking element, a two-part casing, one part of said casing being adjustably mounted upon said supporting element and the other part of said casing being connected to said striking element, and a spring device arranged between the two parts of said casing.

4. A golf club comprising a hand gripped supporting element, a ball striking element, a two-part casing, one part of said casing being connected to each of said elements and the two parts of said casing being rotatably connected, and a spring device arranged between the two parts of said casing.

5. A golf club comprising a hand gripping supporting element, a casing adjustably mounted upon said hand gripping element, a spring device mounted in said casing, and a ball striking element mounted upon said casing and actuated by said spring device.

6. A golf club comprising a hand gripping supporting element, a ground engaging element, a casing, a propelling spring mounted in said casing, and a striking element mounted upon said casing and operatively connected with said spring device.

7. A golf club comprising a hand gripping supporting element, a casing mounted upon said hand gripping element, a ground engaging element adjustably mounted upon said supporting element, a spring device mounted in said casing, and a ball striking element mounted upon and actuated by said spring device.

8. In a golf club, the combination of a supporting staff having a hand grip, a base plate mounted upon said staff, a spring mounted upon said base plate, a casing member movably mounted upon said base plate and engaging said spring, and a ball striking element mounted upon said casing.

9. In a golf club the combination of a supporting staff having a hand grip, a ground engaging staff projecting from said supporting staff, a base plate mounted upon said supporting staff, a spring mounted upon said base plate, a casing member movably mounted upon said base plate and engaging said spring, and a ball striking element mounted upon said casing.

10. In a golf club, the combination of a supporting staff having a hand grip, a base plate mounted upon said staff, a spring mounted upon said base plate, means for adjusting the tension of said spring, a casing member movably mounted upon said base plate and engaging said spring, and a ball striking element mounted upon said casing.

11. A golf club comprising a supporting staff having a hand grip, a base plate mounted upon said staff, a guide rod mounted upon said base plate, oppositely acting springs mounted upon said guide rod, a casing movably mounted upon said base plate and having a part projecting into engagement with said oppositely acting springs, and a ball striking element carried by said casing.

12. A golf club comprising a supporting staff having a hand grip, a base plate mounted upon said staff, a curved guide rod mounted upon said base plate, oppositely acting separated springs mounted upon said curved guide rod, a casing rotatably mounted upon said base plate and having a part projecting into engagement with and separating said springs, and a ball striking element carried by said casing.

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