

Feb. 2, 1937.

A. C. ENGH

2,069,650

GOLF PRACTICE INDICATOR

Filed Sept. 7, 1933

2 Sheets-Sheet 1

Fig. 1

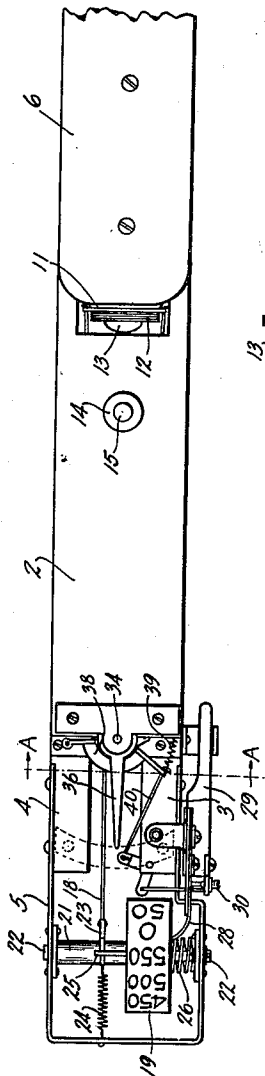


Fig. 2

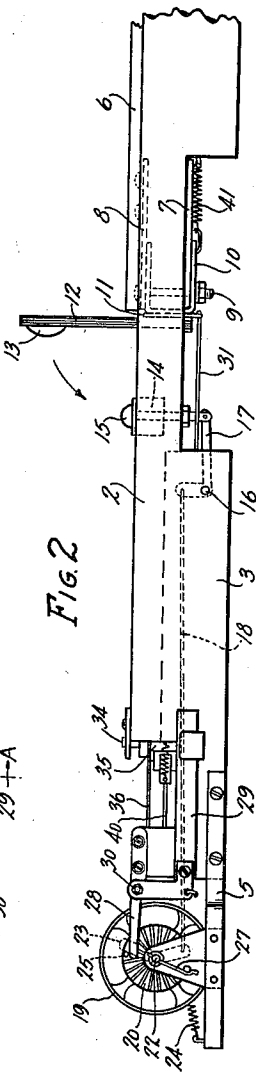
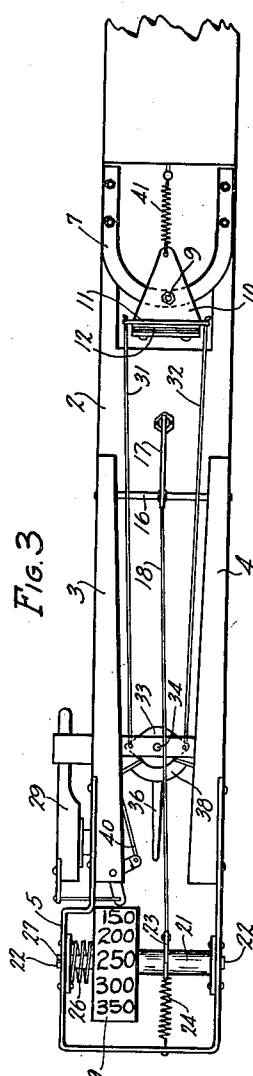


Fig. 3



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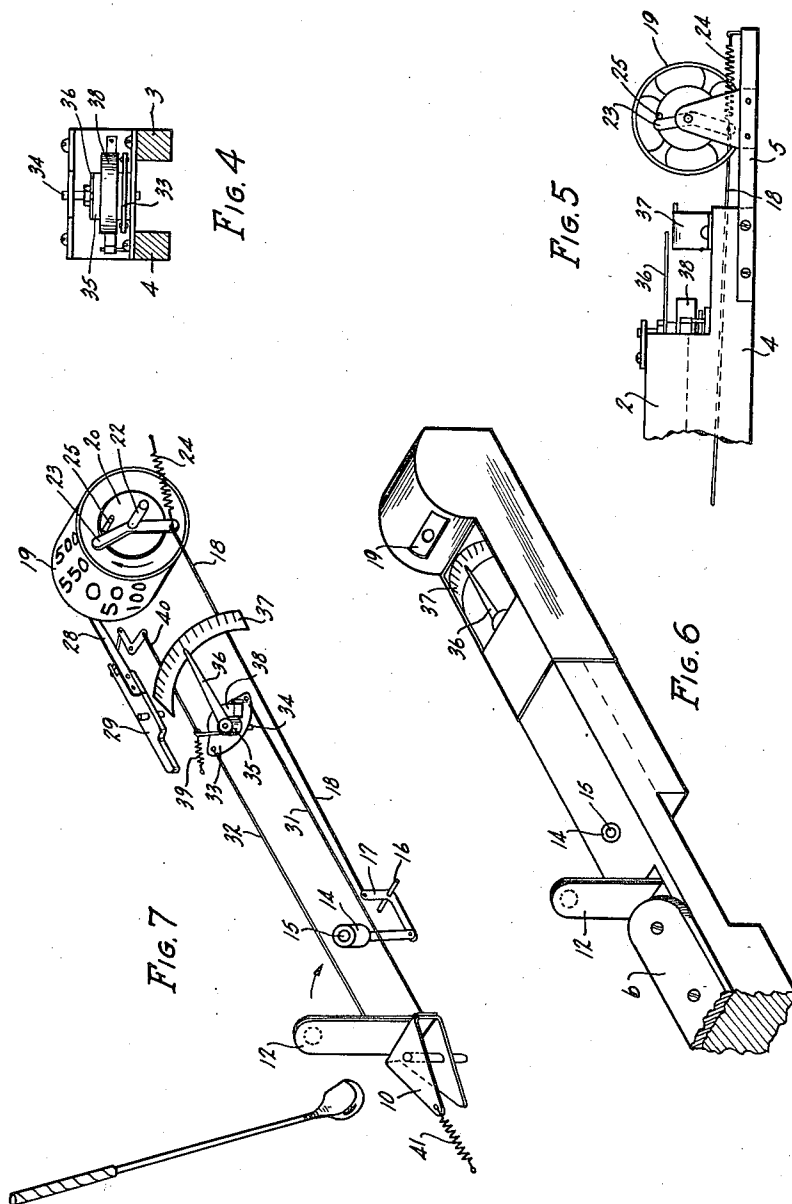
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UNITED STATES PATENT OFFICE

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GOLF PRACTICE INDICATOR

August C. Engh, Yorkville, Ill.

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1 Claim. (Cl. 273—35)

My invention relates in general to a golf practice indicator and more specifically to an arrangement for use in golf practice or as an indoor game (providing a target to be struck by a golf club and means controlled thereby) for giving an indication of the distance which a ball would have travelled if struck and the direction in which the golf club head was moving at the moment of impact with the ball.

There have been target practice courts and various other complicated indicating devices designed for golf practice but I have provided a very simple, efficient, and easily calibrated device and one which is the first, as far as I am aware, to indicate distance and the direction of travel of the club head in a golf swing, where an actual golf ball is not used.

In the accompanying drawings I have shown one embodiment of the invention, it being understood that various changes in construction and materials may be made without departing from the principles shown. The device in general consists of a low flat framework to be placed on the floor or ground carrying an upstanding target or flap of resilient material at which the operator swings a golf club. This flap represents the golf ball and should be placed the same distance from the ground or floor as a golf ball stands when placed on a tee in the actual game. In many instances it will be found desirable to sink the framework in the ground or floor or to provide a mat for the feet of the operator bringing the feet on a level with the top of the frame in which the target is mounted.

The target of this device is one of the main features of this invention, and its construction makes possible the various indications given. This target consists of a resilient member supported on a rotating device so as to indicate direction. It has been found that the target operates satisfactorily and has great efficiency when constructed of about four-ply fabric molded in rubber in the form shown.

Referring now to the drawings, Fig. 1 is a top view of the device.

Fig. 2 is a side view taken from the lower side of Fig. 1.

Fig. 3 is a bottom view of the device shown in Fig. 1.

Fig. 4 is a sectional view taken from the left of line A—A of Fig. 1.

Fig. 5 is a side view of the left-hand end of the device of Fig. 1 taken from the upper side of said figure.

Fig. 6 is a view of the device showing how it

could be covered and would appear in actual use with only the target and indicators showing.

Fig. 7 is a schematic diagram of the device with mountings and mechanical details omitted to illustrate the principles of operation.

Referring now to the drawings, the device consists of a frame 2 of wood or metal as desired, having a pair of strips 3 and 4 secured thereto by bolts or screws. At the end of strips 3 and 4 and secured thereto is a metal mounting bracket 5 bent in the form shown in Figs. 1-3. On the top of frame 2 is secured a relatively soft pad 6 which may be of wood, fibre, rubber, or any other somewhat soft material. Secured to the under side of part 2 is a horseshoe-shaped bracket 7 15 and another similar bracket 8 is mounted on the upper side of part 2 under pad 6. A bolt or pivot 9 passes through the center of the circular ends of brackets 7 and 8 and a rotatable bracket 10 is pivoted on this bolt 9. Attached to the bracket 10 by means of plate 11 is a molded rubber target 12 which has a small round knob on the front side thereof at 13, also of hard rubber or the like. If desired, a similar half sphere of rubber may be applied to or molded to the target opposite knob 13 to give a more accurate representation of a golf ball target. As indicated, the knob 13 of target 12 stands at the same height above pad 6 as a golf ball would stand above the ground on a tee. Immediately in front of target 12 is 30 a rubber bushing 14 set in frame 2 and having a bolt 15 inserted therein, the enlarged head of the bolt or pin resting flush against the bushing 14. Under frame 2 and passing through parts 3 and 4 is a pin 16 upon which a rocker arm 17 35 is mounted. One end of arm 17 is connected to the lower end of pin 15 and the upper end of the rocker arm is connected to a rod 18. At the right-hand end of the device is an indicator drum 19 carrying designations 0—50—100—150, 40 etc., up to 550, indicating yardage. The indicator drum is mounted on a spool or drum 20 having ratchet teeth in one end thereof and this drum 20 is rigidly secured to a sleeve 21 rotatably mounted on a shaft 22 which has bearings in 45 either side of bracket 5 as shown. Also rigid on sleeve 21 is a lever 23 of angular shape, the lower end of which is connected to rod 18 and also to a spring 24 while the upper end lies against a pin 25 in one side of drum 20. A coil spring 26 50 has one end fastened to shaft 22 and the other end to drum 20 and its tension is adjustable by rotating the shaft and locking it in place by a pin 27. The coil spring 26 normally tends to hold drums 20 and 19 so that pin 25 rests against 55

the upper end of arm 23. Referring back to target 12, when this target is struck by a golf club, it is driven forward in an arc as indicated by the arrows in Figs. 2 and 7 so that if squarely hit the knob 13 strikes the head of pin 15 in its resilient bushing 14. The force of the blow is communicated through the interlinked parts, arm 17, rod 18, and arm 23 to the pin 25 which is held against arm 23. Thus the force of the blow tends to rotate the drum 20 and indicator 19 as clearly shown in Fig. 2 and especially in Fig. 7 against the tension of spring 26. A dog or spring 28 engages the ratchet teeth in drum 20 to hold the indicator in the final position to which it is driven. The dog 28 is mounted on a release lever 29 which is pivoted to part 3 and rotatable on its pivot to remove dog 28 from the ratchet teeth to permit restoration of drum 20 and its indicator 19 after the distance indication has been observed. The dog 28 has a tension and rubs against the teeth on drum 20 to aid in calibration of the drum rotation with a given blow. The tension of dog 28 against the drum may be adjusted by a set screw 30.

The above-described interlinked mechanism is all that is required to indicate distance. It is well known that it is very important to a golf enthusiast to be able to determine the direction of travel of his club head when striking the ball. That is, if the club head is drawn sidewise across the face of the ball at the moment of impact therewith, a whirling motion is given to the ball which eventually affects the direction of travel of the ball and causes the ball to curve or, in the parlance of the game, to cause a "hook" or a "slice". Due to the flexible construction of the target 12 and its flat construction it is apparent that if a club head, when striking it, is "pulled" across the face or does not travel in a straight line, then the target will be turned or twisted and knob 13 will strike on either side of pin 15. Due to the manner in which the target is pivoted it will turn on its pivot. In order to cause this turning motion to give an indication to the player I have provided a separate or associated interlinked mechanism and indicator as follows: At the lower outer ends of the plate 11, to which target 12 is secured, I have linked a pair of rods 31 and 32. These rods 31 and 32 pass to the far end of the device where they are again linked in the outer ends of a rotatable plate 33 pivoted as shown at 34. Above plate 33 is a drum 35 secured to plate 33 and rotatable therewith and having a pointer 36 secured thereto. Now, as target 12 is rotated by any side pull of a club, it communicates such turning or rotation to plate 33 and through drum 35 to pointer 36 so that the pointer will be moved to one side or the other across a scale 37. If desired, the scale may carry the designations "hook" and "slice" or other designations. In order to hold the pointer 36 and

its drum 35 in the position to which it has been rotated, I provide a brake 38 of semi-circular form having a small spring 39 holding it against drum 35 also preventing undue overthrow of the pointer 36. The brake 38 may also be released from drum 35 by release arm 29 which has a link 40 for drawing the brake away against the tension of spring 39. In addition, a spring 41 is provided, one end secured to the rear or pointed end of bracket 10 to realign the pointer 39 and target 12 when the brake is released. This spring 41 is fastened at its other end to the frame and its operation is clearly illustrated in Fig. 7. Fig. 4 shows the details of mounting of pointer 36 and drum 35.

It will therefore be seen that a simple and yet very effective form of practice device is shown which will give a large amount of interesting information to the practicing golfer. The resilient form of the target lends itself to various other things which will be apparent in use. For instance, when a club swings too low on target 12 the knob 13 will not strike pin 15 squarely but, due to the stretch of target 12, will overthrow its normal arc. The only indication will be loss of distance. In the same manner, if the club swings too high, the same result will occur except that knob 13 will underthrow and strike just short of pin 15.

Having fully described and ascertained the features and aspects of my invention, what I consider to be new and desire to have protected by United States Letters Patent will be pointed out in the appended claim.

What is claimed is:

In a golf practice device, a target comprising a strip of rubberized fabric, said target projecting upwardly in position to be struck by a golf club, a vertically movable non-elastic operating element for controlling a distance indicator, an enlarged spherical segment shaped head on the upper end of said operating element, a yieldable bushing through which said operating element passes with its said head resting firmly against said bushing, a spherical segment shaped knob carried on the upper end of said target and positioned for striking the said head of said operating element when the target is struck by a golf club, said target being mounted on a bracket which is pivoted for movement about a vertical axis so that when said target is struck squarely by a golf club the said knob on the target will strike the said head of the operating element center to center and move same downward and when said target is struck at an angle by a golf club said target will move about the vertical pivot and consequently the said knob will strike the said head off center thereby causing a shorter downward movement of the said operating element.

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