March 10, 1942. A. SMITH 2,275,568

GOLF PRACTICE APPARATUS

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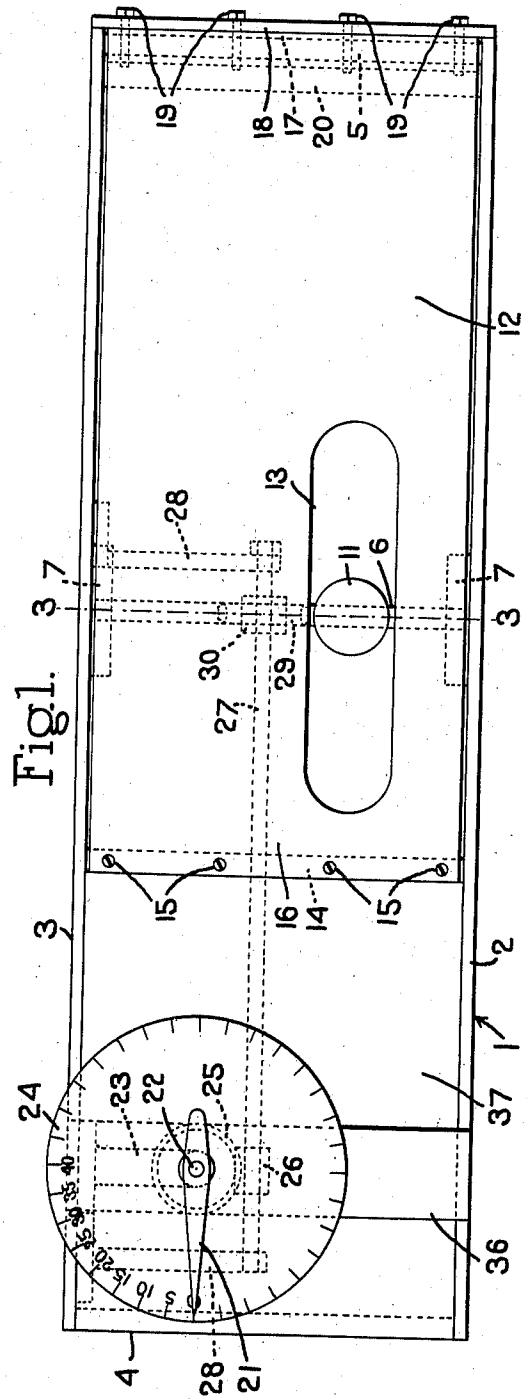


Fig. 1.

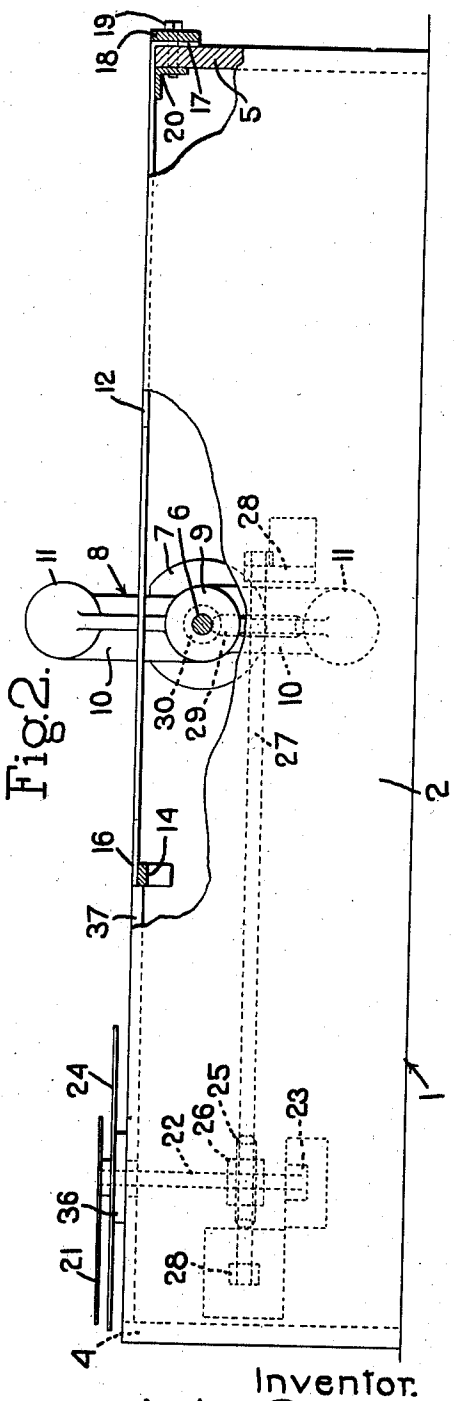


Fig. 2.

Inventor.
Arthur Smith
by Heard Smith & Tennant.
Attys.

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GOLF PRACTICE APPARATUS

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Fig. 3.

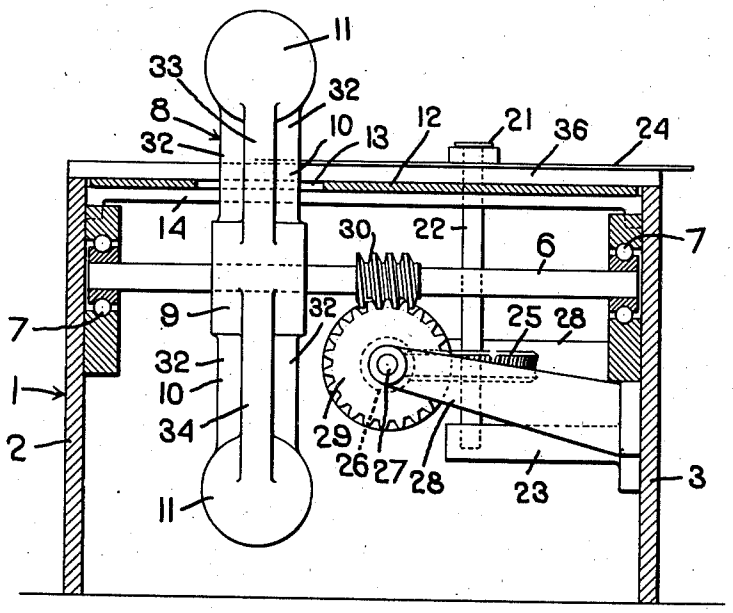


Fig. 4.

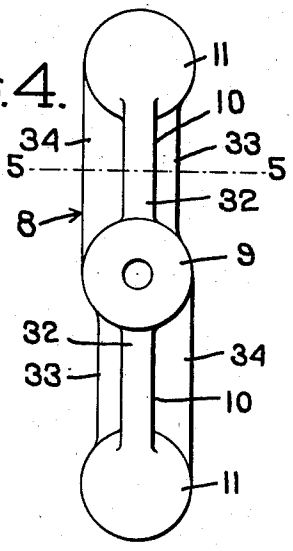
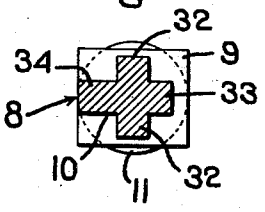


Fig. 5.



Inventor
Arthur Smith
by Heard Smith & Kennant
Attys.

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UNITED STATES PATENT OFFICE

2,275,568

GOLF PRACTICE APPARATUS

Arthur Smith, Dedham, Mass.

Application May 21, 1940, Serial No. 336,389

1 Claim. (Cl. 265—20)

This invention relates to a golf practice apparatus of that known type which comprises a horizontal rotatable shaft carrying one or more radially extending arms, each having a ball shaped end that simulates a golf ball and is adapted to be struck with the golf club of the golfer in a manner similar to that in which a regular golf ball is struck when playing golf.

The shaft is carried in a suitable supporting frame, and one object of the invention is to provide said frame with an upper surface which will yield somewhat if the golfer accidently strikes it, thus simulating very closely the reaction a golfer experiences if he strikes the turf on a golf course when swinging at the ball.

A further object of the invention is to provide a golf practice device of this type with a novel ball element which is made in one piece of light tough rubber and is constructed to provide a ball element which will have substantially the same feel when struck as a golf ball on the golf course. The apparatus herein shown is also provided with suitable registering means to register the force with which the ball element is struck, thereby giving an indication to the golfer as to how well-delivered each stroke is.

In order to give an understanding of the invention, I have illustrated in the drawings a selected embodiment thereof which will now be described after which the novel features will be pointed out in the appended claim.

In the drawings:

Fig. 1 is a top plan view of a golf practice device embodying my invention.

Fig. 2 is a side view with a portion broken out.

Fig. 3 is a section on the line 3—3, Fig. 1.

Fig. 4 is a view of the ball element.

Fig. 5 is a section on the line 5—5, Fig. 4.

My apparatus comprises a supporting frame in the form of an elongated box-like member 1 which is constructed with the two sides 2 and 3 and the two ends 4 and 5 and which is open at the top from the end 5 well toward the other end.

Extending transversely across the box-like supporting frame is a transverse shaft 6 that is journaled in bearings 7 carried by the side walls 2 and 3.

Mounted on the shaft 6 is a ball element indicated generally at 8. This ball element is a unitary one-piece element comprising a hub portion 9 that is fast on the shaft 6 and two oppositely disposed radially extending arms 10, each terminating in a ball portion 11. The ball element 8 is preferably made of light, tough rubber and may be molded as a single unitary element in which the hub 9, arms 10 and balls 11 all form integral parts of the complete structure.

Extending longitudinally of the box-like supporting frame 1 at the upper side thereof is a piece of leather 12 which has a width slightly less than the transverse dimension of the opening in the top of said frame and which is supported at its ends only and is provided with a slot 13 through which the arms 10 project as the shaft 6 rotates. One end 16 of this leather member 12 is made fast to a bar 14 which extends across the box-like member at one end of the opening in the top thereof and is supported by the sides 2 and 3, said end 16 of the leather member being attached to the bar in any suitable way, as by means of screws 15.

The other end 17 of the leather member 12 extends over the upper edge of the end 5 of the box and is secured to said end in some suitable way. As herein shown, said edge 17 is clamped against the outside of the box end 5 by means of a clamping bar 18, the latter being held in its clamping relation by means of clamping screws 19 which extend through the bar 18 and screw into an angle iron anchoring member 20 located on the inside of the box end 5.

The leather 12 is thus suspended at its ends only and is unsupported at any point between its ends. The top of the box-like frame between the cross bar 14 and the left-hand end of the frame (Figs. 1 and 2) is closed by a cover member indicated at 37.

The ball element 8 is so made that when the arms are in their vertical position, shown in Fig. 2, the ball 11 at the upper end of the arm will be situated above the leather member 12 the conventional distance corresponding to that provided by an ordinary T.

In using the device, the golfer stands alongside of the box member 1 and swings at the ball 11 in the same way that he would at a golf ball on the golf course. When the ball is struck, the ball element and the shaft will be given a rapid rotative movement, the speed of rotation depending somewhat upon the effectiveness of the blow.

The complete apparatus comprises a registering or indicating device connected to the shaft 6 and which operates to register the number of times which the shaft is rotated when the ball 11 is struck.

This registering device comprises an indicating pointer 21 fast on the upper end of a vertical shaft 22 that is journaled at its lower end in suitable bearings 23 situated within the frame and the upper end of which projects through

and slightly above the cover member 37. Extending across the top of the frame is a bar 36 through which the upper end of the shaft 22 extends and which provides a bearing for such upper end. Stationarily mounted on the bar 36 is a graduated dial 24 and the pointer 21 is situated close to the dial and moves over the face thereof as the shaft 22 is turned.

The vertical shaft 22 has a worm gear 25 thereon which meshes with a worm 26 on a shaft 27 extending longitudinally of the box-like element and journaled in suitable bearings 28. The shaft 27 has a worm gear 29 thereon which meshes with and is driven by a worm 30 fast on the shaft 6.

The rotation of the shaft 6 will, therefore, be transmitted to the vertical shaft 22 and thus to the indicating pointer 21.

When the ball element 11 is struck by a golf club, the force of the blow will set the ball member 8 and the shaft 6 in rapid rotation and the shaft will continue in rotation until the momentum of the spinning element 8 has been expended. If the blow of the golf club is well delivered and the ball 11 is squarely struck, the spinning element 8 will acquire a greater momentum than if the ball is "topped" or "sliced." Consequently the pointer 21 will be moved a greater distance over the dial 24 when the ball is squarely struck than when the ball is topped or sliced. By noting the extent to which the pointer 21 is moved as a result of any stroke, the golfer can determine whether the stroke was properly made or was a faulty stroke.

If desired, the dial 24 may be graduated in terms which will represent a theoretical distance which the golf ball would be driven by any stroke.

The use of the leather element 12 to simulate the surface of a golf course is of considerable advantage because if in practicing his strokes, the golfer accidently strikes the leather member 12, the latter will yield somewhat and will produce a reaction quite similar to that which the golfer receives when he strikes the turf in making a swing.

I have above referred to the fact that the ball element 8 is an integral one-piece element made of tough, light rubber molded to shape. Each arm 10 has a cruciform shape in cross section, each arm 10 presenting the two side ribs 32, the front rib 33 and the rear rib 34. The ball end 11 of each arm has approximately the same diameter as the hub 9, as clearly seen in Fig. 4, and the rear rib 34 of each arm, which is on the side of the arm and the ball opposite to that on which the ball is struck, extends from the ball to the hub, and the outer face of the rib is tangential to both the ball and the hub, as also clearly shown in Fig. 4. The rib 33 on the front of each arm is shown as of lesser width. The purpose of providing a wider or thicker rib 34 on the rear side of each arm is to re-inforce the arm so that it will withstand better the blow of the golf club without too great a yielding movement.

A spinning element 8 having this construction is well adapted to take any punishment to which it may be subjected by the blows of the golf club, and at the same time, it provides a ball element which, when struck, produces in the golfer much the same reaction as the receives when he strikes a golf ball on the golf course.

I claim:

A golf practice device comprising an elongated box-like supporting frame open at the top from one end well toward the other end, said other end of the frame being closed at the top beyond said opening, a strip of leather of slightly less width than the transverse dimension of the opening in the top of said frame extending from one end to the other of said opening, means securing the ends of the strip of leather to the frame at the ends of the opening only, said strip having a slot and being unsupported along its sides between its ends and thus being suspended from its ends only, a rotary shaft extending across the frame beneath the slot and journaled in the frame side walls, a unitary ball element of rubber mounted on said shaft and having two oppositely disposed radial arms each having a ball-shaped end, a vertical shaft situated at the closed end of the frame and extending slightly through the top thereof, a graduated dial stationarily carried by said frame closely adjacent the top thereof, said shaft extending through said dial, a pointer secured to said vertical shaft and adapted to operate over said dial, and a driving connection between said vertical shaft and said first-named shaft.

ARTHUR SMITH.