Oct. 3, 1967 J. D. HOFFMAN 3,345,073

GOLF PRACTICE DEVICE

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Fig. 2

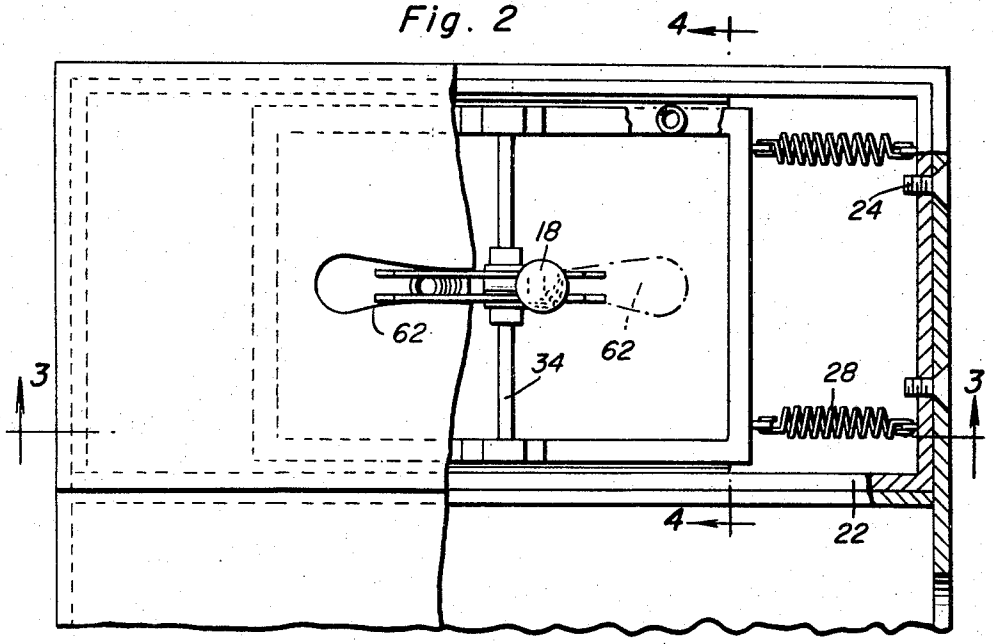


Fig. 1

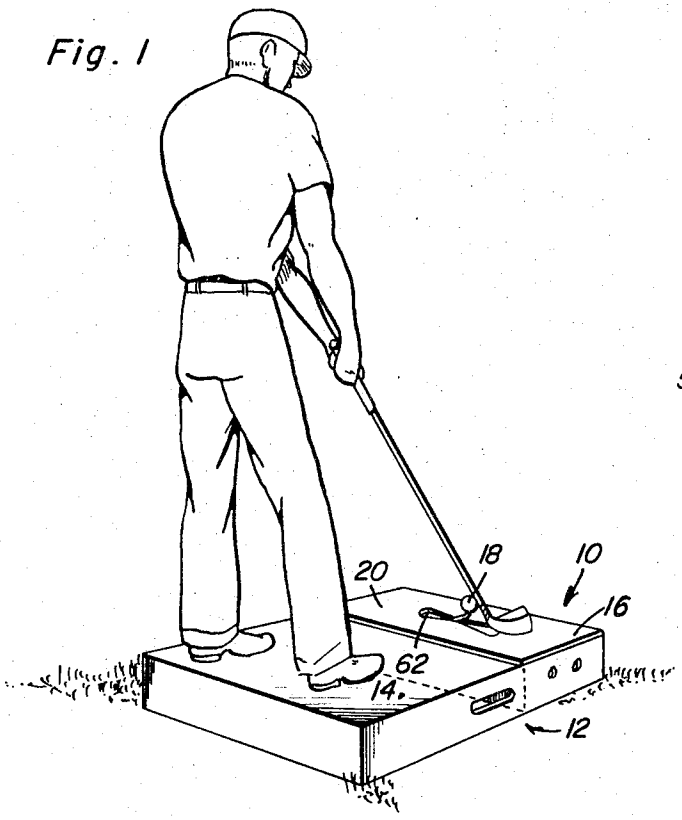
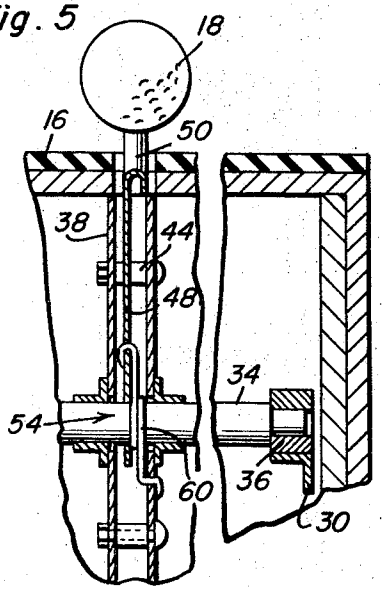


Fig. 5



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Fig. 3

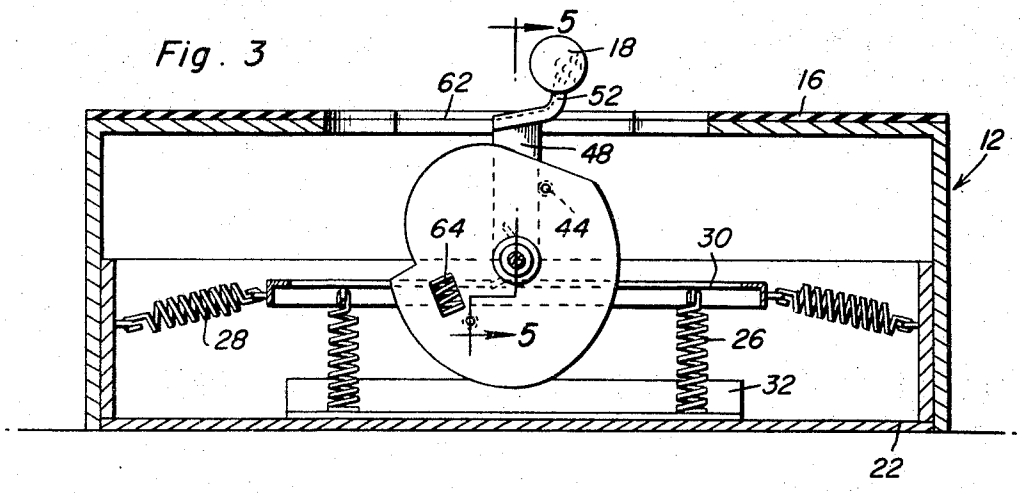


Fig. 4

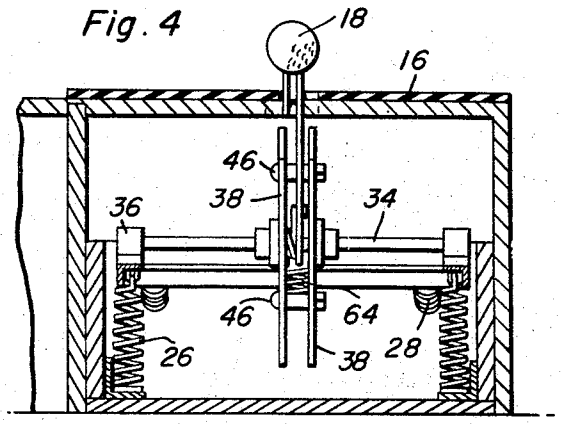
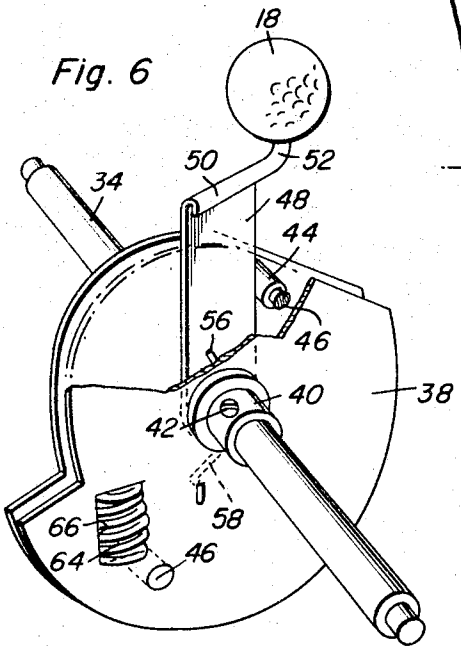


Fig. 6



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GOLF PRACTICE DEVICE

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ABSTRACT OF THE DISCLOSURE

A practice golf ball is rigidly affixed to an elongated arm which is in turn pivotally mounted, through a shaft, on a frame which freely floats on eight expanded coiled springs for movement in any direction so as to tend to make the captive ball respond in the manner of a conventional golf ball. A pair of guide plates are provided to the opposite sides of the ball arm to guide the ball arm while at the same time not interfering with the movement of the floating frame.

The present invention is generally concerned with the game of golf, and is more particularly directed to a practice golf tee including a pivotally mounted practice ball capable of being repeatedly driven and automatically returning to its teed up position.

It is a primary object of the instant invention to provide a practice device which provides a convenient means for enabling a golfer to perfect his driving, swing and stance in his home, outdoors, or any other suitable place, requiring only sufficient room to properly swing the club.

In conjunction with the above object, it is a significant object of the instant invention to provide a golf practice device wherein a practice ball is provided for engagement by a golf club with this ball, upon being struck, pivoting out of the way of the club follow-through and immediately returning to its initial on-tee position.

Also, it is an object of the instant invention to provide a device wherein the practice ball will immediately return to its tee position regardless of whether the ball is sliced, hooked, topped or squarely hit.

In conjunction with the above object, it is also an object of the instant invention to provide for a spring mounted support frame or base for the driven practice ball thus allowing the ball, as well as the support therefor to properly give or move upon being hit, regardless of whether or not the ball is squarely hit, and still properly returned to its initial driving position.

Furthermore, it is an object of the instant invention to provide a device which can be used repeatedly and which will perform in a troublefree manner, requiring no maintenance other than possibly an occasional replacement of the practice ball itself depending upon the amount of use to which it is subjected.

Basically, in achieving the above objects, the practice device of the instant invention includes, in addition to a standing platform, a spring mounted frame or base which transversely mounts an elongated shaft which in turn has a laterally projecting ball supporting arm pivoted thereon. Fixed to the shaft on either side of the arm are a pair of guide plates which include a fixed abutment for properly orientating the ball in its driving position, and a spring shock absorber for limiting the rotational driving movement of the ball supporting arm. In addition, a biasing spring is so fixed between one of the plates and the arm as to resist the driving rotational movement thereof and properly return the arm to and maintain the arm against the fixed abutment.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view illustrating the device of the instant invention in use;

FIGURE 2 is an enlarged partial top plan view with portions broken away for purposes of illustration;

FIGURE 3 is a cross sectional view taken substantially upon the plane passing along the line 3—3 of FIGURE 2;

FIGURE 4 is a transverse sectional view taken substantially on the plane passing along line 4—4 in FIGURE 2;

FIGURE 5 is an enlarged partial cross sectional view taken substantially on the plane passing along the line 5—5 of FIGURE 3; and

FIGURE 6 is a perspective view, with portions broken away, of the portion of the device which is mounted on the spring supported carriage.

Referring now more specifically to the drawings, reference numeral **10** is used to generally designate the device comprising the instant invention. This device **10** includes an enlarged hollow rectangular stand **12** having a platform portion **14** on one end thereof and a tee portion **16** on the other end thereof, FIGURE 1 illustrating the manner in which a golfer assumes his stance on the platform portion **14** in order to drive the practice ball **18** projecting above the tee portion **16** in the manner of a conventionally teed-up ball. The tee portion **16** is provided with a suitable rubber cushioning mat thereon so as to prevent damage to the club being used, the mat being indicated at **20**.

The actual ball return unit is mounted within a flat bottom box **22** removably inserted in the lower end of the stand **12** and bolted therein by bolts **24**. Mounted within the box **22**, on four expanded compression springs **26** and four expanded tension springs **28**, is a free floating rectangular carriage or frame **30**. The four springs **26** act in the manner of legs and are fixed vertically between a pair of base bars **32** fixed to the bottom of the box **22** and the undersurface of the frame **30**. The four springs **28** are engaged, under tension, between each of the four corners of the frame **30** and the ends of the box **22** at points slightly below their plane of engagement with the frame **30**. In this manner, the frame **30** is free to resiliently move in any direction.

Extending laterally across the center of the frame is an elongated cylindrical shaft **34** having the opposite ends thereof fixed within mounting blocks **36** which in turn are fixed to the opposite longitudinal members of the frame **30**. A pair of enlarged flat generally circular guide plates **38** are mounted centrally on the shaft **34**, each plate **38** having a cylindrical hub **40** projecting laterally therefrom and in turn being fixed to the shaft **34** by suitable screw means **42**. The space between the plates **38** is maintained constant by at least two tubular spacers **44** orientated therebetween adjacent the outer edges thereof at diametrically opposite points and receiving, in each instance, an elongated tie bolt **46** therethrough.

Rotatably mounted on the shaft **34** between the disk-like members **38** is an elongated flat mounting arm **48** projecting beyond the periphery of the members **38** and having the outer end thereof reversely curled, as at **50**, and laterally and upwardly curved, as at **52**, the practice ball **18** being fixed to the outer upper end of the portion **52** in any suitable manner, such as by being frictionally fit or threaded thereon.

As will be appreciated from the drawings, one of the tubular spacers **44**, in conjunction with the bolt **46** therethrough, acts in the manner of a stop or abutment for vertically positioning the mount arm **48** and the practice ball **18** thereon. The arm **48** is resiliently urged into this position by an elongated resilient spring-like member **54** having one end **56** thereof engaged with the mounting

arm 48 above the point of pivotal engagement with the shaft 34, and the other end 58 thereof fixed to one of the disks 38 with the intermediate portion 60 thereof coiled about the shaft 34 between the disks 38 in a manner so as to resiliently bias the arm 48 into an upright position against the stop or limiting spacer 44.

In this manner the practice ball 18 is properly orientated in a position simulating the actual position of a conventionally teed-up ball relative to the rubber mat 20. As will be appreciated both the rubber mat 20 and the tee portion of the stand therebeneath are provided with an elongated slot 62 which, from a central point corresponding to the at rest or vertical position of the arm 48 and ball 18, increases in width outwardly to enlarged or bulbous outer ends capable of allowing passage of the practice ball 18 therethrough. Thus, as the practice ball 18 is driven, the mounting arm 48 pivots on the shaft 34 against the resilient biasing of the spring member 54 and the ball passes through the bulbous end of the slot. In order to limit the forward pivotal movement of the arm 48 and ball 18, an enlarged expanded compression coil spring 64 is fixed between the disks 38 within enlarged rectangular openings 66 in both disks 38 in a manner so as to span the space therebetween in the path of rotational movement of the arm 48 below the upper surface of the tee portion 16 of the stand 12. This spring 64 acts in the manner of a shock absorber and slows and stops the forward movement of the arm 48 and exerts a force thereon so as to rapidly return the arm 48 and ball 18 to the driving position, this return movement of course being assisted by the spring member 54 which also acts so as to hold the arm 48 against the limit or stop spacer 44 for a subsequent driving thereof. Incidentally, it will be noted that the spring member 54 also acts so as to generally laterally position the mounting arm 48 between the disks 38 which act so as to guide the arm 48 during the rotation thereof.

From the foregoing, it will be appreciated that a highly novel practice device has been defined which enables a golfer to conveniently practice his drive, swing, or stance by the provision of a continuously teed-up ball which, upon being driven, immediately returns to position. In addition, the particular device has been so constructed so as to allow this return of the ball whether or not it has been squarely hit, a unique spring supported carriage or frame absorbing all of the shock introduced into the device by the club, and consequently ensuring troublefree operation regardless of the use to which the device is subjected.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A golf practice device comprising a rigid base unit, said base unit including a flat bottom, a horizontal support frame orientated in spaced relation to said base unit above said flat bottom, an elongated arm pivotally mounted at one end on said frame, a practice ball mounted on the other end of the arm, return spring means resiliently biasing said arm to a generally vertical position with the ball orientated above said frame in a tee position for engagement by a golf club, and resilient mounting spring means extending between said frame and said base unit and supporting said frame above said flat bottom for floating movement relative thereto, said mounting spring means including a plurality of expanded compression coil springs oriented vertically between and fixed to the flat bottom and the frame spaced thereabove, said base unit including front and rear walls fixed to the flat bottom and projecting vertically thereabove and spaced from the opposed ends of the frame, said mounting spring means further including tensioned springs engaged between said walls and the opposed ends of said frame, said compression springs and tensioned springs constituting the sole support means for said frame whereby a free floating movement of the frame in all directions relative to the base unit is achieved, a platform overlying said frame in spaced relation thereabove, an elongated slot in said platform, the upper portion of said arm projecting through said slot with the ball oriented above said platform, the width of said slot being sufficient to permit rotational movement of the arm and ball therethrough.

2. The device of claim 1 including a resilient abutment limiting forward rotational movement of said arm, said abutment comprising an expanded coiled compression spring forward of the arm along the rotational path of movement of the arm.

3. The device of claim 2 including a stop defining the generally vertical position of the arm, said return spring means resiliently biasing said arm against said stop.

4. The device of claim 3 including a transverse shaft on said frame for free-floating movement therewith, said shaft pivotally mounting said arm, a pair of guide plates fixed to said shaft for movement with the frame, one on each side of said arm, said ball being oriented radially outward of said plates, said arm being rotatably movable between said plates.

5. The device of claim 4 wherein said return spring means has one end thereof fixed to said arm, the other end fixed to one of said plates, and the intermediate portion coiled about said shaft between said one plate and the arm.

6. The device of claim 4 wherein the compression spring abutment is mounted by and spans the space between the plates.

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