E. L. PENFRASE
GOLFER'S INDOOR PRACTICE TEE
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To all whom it may concern:

Be it known that I, Edward L. Penfrase, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Golfers' Indoor Practice Tees, of which the following is a specification.

This invention relates to apparatus or devices for practicing golf strokes in rooms, yards or other confined or convenient places, and has for one object to improve generally the simplicity and efficiency of such devices and to provide a device or apparatus of this kind which will accurately record the effect of a stroke made upon a captive golf ball.

To this end I have provided, briefly stated, a slidable golf-ball-carrying rider adapted to strike a suitable impact member, and means for measuring or recording movement of said member when thus struck.

Another object of the invention is to provide an apparatus or device of this kind in which noise is reduced to a minimum and durability of the device increased.

Other objects of the invention will appear as the description proceeds; and while herein details of the invention are described, the invention is not limited to these, since many and various changes may be made without departing from the scope of the invention as claimed.

In the accompanying drawing, showing by way of example one of many possible embodiments of the invention:

Fig. 1 is a side elevation of the golfers' indoor practice tee;

Fig. 2 is a plan of the same;

Fig. 3 is a transverse vertical sectional view of the practice tee taken on the line 5-5 of Fig. 1 looking in the direction of the arrow;

Fig. 4 is a transverse vertical sectional view on the practice tee taken on the line 4-4 of Fig. 1 looking in the direction of the arrow of said line;

Fig. 5 is a similar view of the practice tee taken at the instant of a blow;

Fig. 6 is a longitudinal vertical sectional view, partly in elevation, of the practice tee, in normal position;

Fig. 7 is a transverse vertical sectional view of the rider taken on the line 7-7 of Fig. 6;

Fig. 8 is a side elevation of the rider;

Fig. 9 is a fragmental plan of the recording device in normal position; and

Fig. 10 is a plan of the recording device in recording or registering position.

The various parts of my practice tee are mounted on a frame or foundation consisting of an elongated base board or plate 10 carrying a pair of parallel bar members 11 and 12 mounted on opposite sides of said board thereby to form a parallel channel 13 between said members, a rear cross piece 14 mounted on the rear or tee end of said board and closing the rear end of said channel, and a forward plate 15 mounted on the forward ends of said board and bar members and partially closing the forward end of said channel and provided with a U-shaped guide-rod-receiving-opening 16 (Fig. 5).

A guide rod 20 disposed in said channel with its forward end adapted for reception in said U-shaped opening has its rear end provided with a pivot cap 21 fast thereon and disposed above a pivot lug 22 mounted on said board in the rear end of said channel. Said cap 21 is provided with a horizontal transverse bore receiving a pivot bolt 24 pivotally carrying links 25 pivoted to a lower bolt 26 carried in said lug 22. A spring 28 strained between said rear cross piece 14 and said pivot cap 21 yieldably draws the rod 20 rearwardly; and a compression spring 29 positioned by a lug 20 mounted on said board 10 just forward of said lug 22 normally yieldably holds said rod slightly raised upon said bolt 24 as a pivot, as shown in Fig. 6.

A sleeve-shaped rider or tee carrier 33 is slidably carried on said rod and provided with a downward projection 35 and an upsetting bracket 31 having a rearwardly opening concave ball-carrying recess 33 (Fig. 8) of a radius slightly greater than the radius of the golf ball 36. A screw receiving opening 38 disposed axially of said recess 35 substantially parallel to said rod carries a screw 39 passing through said screw opening into said ball to hold the latter in place. A limiting collar 40 fast on said rod forward of said compression spring 29 limits the rearward movement of the rider.

A pair of parallel guide carrying brackets 42 (Fig. 7) disposed in lower lateral recesses 43 of said bar members are provided with upstanding inner webs 44 parallel to the
axis of said board at the rear position of said rider and each loosely carrying a pair of inwardly pointing screws 45 secured in
and supporting a pair of positioning guides 46 spaced apart and yieldably disposed about midway between said webs and having divergent forward ends 48 (Fig. 2) for engaging said downward projection 33 on rearward movement of the rider, for positioning said rider with the upwardly extending bracket 34 standing vertical. Springs 49 compressed between said webs 44 and the adjacent guide 48 yieldably hold the guides in place.

A retaining collar 50 (Fig. 6) fast on the forward end of said rod 20 is engaged by a spiral impact spring 51 carried on the rod 20 and having its rear end engaged by a collar member 52 provided with a downward extension 53 adapted for engagement with said seat 10 to limit downward movement of the forward end of the rod. A cushion collar 55 of rubber or other suitable material disposed on said rod and engaging the rear face of said impact collar member receives the impact of said rider 59 when it is thrown forward under the influence of a blow by a golf club upon the rear face of the ball 36.

A metallic plate 60 (Fig. 2) is disposed over and covers a forward recess 61 (Fig. 4) in the bar member 12 and is provided with a narrow longitudinal slot 62 (Fig. 2) and a scale 63 along said slot calibrated to an arbitrary scale or, for instance, to indicate distances of trajectory of golf balls. A recording slide member 65 (Fig. 10) slidable flat on the bottom of said forward recess 61 is provided with a rearward longitudinal projection 66 for engagement by the collar member 52, and with a longitudinal slot 67 and a ratchettoothed edge 68 both extending substantially throughout the length of the slide member. An upwardly and inwardly turned indicator 70 on said slide member projects through said narrow slot 62 (Fig. 2) and is disposed over said scale 63.

A pair of screws 73 mounted in the bottom of said forward recess 61 (Fig. 10) are received in said longitudinal slot 67 of the recording slide member for guiding the latter in a forward longitudinal movement against the action of a tension spring 74 tensioned between the rear end of said slide member 65 and the rear part of said forward recess 61 for yieldably holding the slide member in rearward movement. A pawl 75 pivoted in a lateral extension 76 of the forward recess 61 is held yieldably engaged with said toothed edge 68 as by the spring 78, and is provided with a projecting handle 80 whereby the slide member may be released.

The operation of the apparatus is very simple. The apparatus is placed upon the floor, ground or the like, the rider moved to rearmost position, and the slide member 65 (Fig. 10) released by movement of the pawl 75. The ball 36 is then struck on its rear face with a golf club and the rider is thrown along the rod until it strikes the cushion collar 55 and moves the impact collar 53 against the action of the spring 51, until the reaction of the spring brings the rider to rest after the impact collar has moved a distance equal to the speed of the blow of the rider. As the impact moves this distance, it engages the projection 66 and moves the indicator 70 a corresponding distance along the scale 63, where it is held by the engagement of the pawl 75, until released.

If the ball is struck a properly positioned blow, the rider rides on even keel along the rod and will move the indicator a maximum amount in accordance with the force of the blow.

On the other hand, if the ball is struck to one side of the center, the rider will tend to lean to one side and the bracket 34 will engage one of the bar members 11 or 12 and retard travel of the ball and cause it to record little or nothing at the scale 63. The springs 28 and 29, the rod and links 25 are so constructed that the rod is normally positioned (Fig. 6) so that a properly positioned stroke is most effective; and in general, the indicator will record most when the ball is struck in such manner as would send to greatest distances a free ball in actual play on an open green. The scale 63 may, if desired, be so calibrated as to indicate such distances. In the drawing these units of distance are arbitrarily chosen.

While in the drawing, the device is shown very compact, and the forward recess extends as far rearward as the collar 40, there is no reason, except the desire for compactness, for making the rod 20 less than, for instance, 5 or 6 times the length of this recess.

I claim as my invention:
1. In combination, a yieldably mounted guide rod; a rider sliding thereon and having an upstanding bracket carrying a golf ball; a yieldably mounted impact member at the forward end of the rod adapted to be struck by said rider; means for recording the amount of impact movement of said member; and means for resetting the recording means.

2. In combination, a base board; side bar members mounted thereon forming a channel; a pivot lug mounted on said board in the rear end of said channel; a guide rod disposed in said channel with its rear end provided with a pivot cap fast thereon and disposed above said lug and provided with a horizontal transverse bore; a lower bolt carried in said lug a pivot bolt in said bore; links pivotally carried on said bolt and pivoted to said lower bolt; a spring
strained between the rear of said board and said pivot cap for yieldably drawing the rod rearwardly; a spring positioning lug mounted on said board just forward of said lug; a spring on the positioning lug and engaging said rod for yieldably holding said rod slightly raised upon said pivot cap; a limiting collar fast on said rod forward of said compression spring for limiting the rearward movement of the rider; a rider on said rod adapted to be struck by blows and moved; and means for indicating variations in the force of the blows.

3. In combination, a yieldably mounted guide rod; a sleeve shaped rider or carrier fidally carried on said rod and provided with an upstanding bracket having a rearwardly opening concave ball carrying recess of a radius slightly greater than the golf ball radius having a screw receiving opening disposed in said recess and substantially parallel to said rod; a golf ball held in said recess; a screw passing through said screw opening into said ball and holding the latter in place; a yieldably mounted impact member at the forward end of the rod adapted to be struck by said rider; and means for recording the amount of impact movement of said member.

4. In combination, an elongated base board or plate; a pair of parallel bar members mounted on opposite sides of said board thereby to form a parallel channel between said members; a yieldably mounted guide rod in said channel; a rider slidably thereon and having an upstanding bracket carrying a golf ball and provided with a downward projection; a pair of parallel guide carrying brackets disposed in said lower lateral recesses and provided with upstanding inner webs parallel to the axis of said board at the rear position of said rider; a pair of positioning guides held spaced apart and disposed midway between said webs and having divergent forward ends for engaging said downward projection, on rearward movement of the rider, for positioning said rider with the upstanding bracket standing vertical; a pair of inwardly pointing screws loosely carried by each web and secured to said guides; and springs compressed between said web and the adjacent guide for yieldably holding the guides in place.

5. In combination, a yieldably mounted guide rod; a rider slidably thereon and having an upstanding bracket carrying a golf ball; a retaining collar fast on the forward end of said rod; a spiral spring on said rod and engaging said collar; an impact collar member slidably on said rod and engaging the rear end of said impact spring and provided with a downward extension adapted to limit downward movement of the forward end of the rod; a cushion collar on said rod and engaging the rear face of said impact collar member for receiving the impact of said rider when it is thrown forward under the influence of a blow by a golf club upon the rear face of said ball; and means for recording the amount of impact movement of said impact member.

6. In combination, a slideable golf-ball carrying-rider; an impact member adapted to be struck by said rider; a plate provided with a scale calibrated to indicate distances of trajectory of golf balls; and a yieldable recording slide member provided with an inward projection engageable by said impact member; said slide member having an indicator disposed over and adjacent said scale whereby to directly indicate the distance of trajectory of the ball struck.

7. In combination, an elongated base board or plate; a pair of parallel bar members mounted on opposite sides of said board thereby to form a parallel channel between said members, one of said bars having a forward recess therein; a slideable golf-ball carrying rider in said channel; an impact member adapted to be struck by said rider; a metallic plate disposed over said forward recess and provided with a narrow longitudinal slot and a scale along said slot; a recording slide member longitudinally slidably guided flat on the bottom of said recess and provided with an inward projection adapted to be struck and moved by said impact member; said slide member being also provided with a toothed edge extending throughout its length, and with an upwardly and inwardly turned indicator projecting through said narrow slot and disposed over said scale; a tension spring tensioned between the rear end of said slide member and the rear part of said recess; and a pawl pivoted in said recess and yieldably held engaged with said teeth and provided with a projecting handle whereby the slide member may be released.

8. In combination, an elongated base board or plate; a pair of parallel bar members mounted on opposite sides of said board thereby to form a parallel channel between said members; a rear cross piece mounted on the rear or tee end of said board enclosing the rear end of said channel; a forward plate mounted on the forward ends of said board and bar members, and partially closing the forward or flight end of said board and provided with a U-shaped guide rod-receiving-opening; a yieldably mounted guide rod in said channel and having its forward end in said opening; a rider slidably thereon and having an upstanding bracket carrying a golf ball; a yieldably
mounted impact member at the forward end of the rod adapted to be struck by said rider; and means mounted in the forward end of one of said bar members for receiving the amount of impact movement of said member.

9. In combination, a rider having a concaved recess; a ball secured in said recess and having a radius less than the radius of concavity of the recess whereby to present the large part of the surface thereof to the player and adapted to be struck by blows and moved to indicate variations in the force of the blows.

10. In combination, a base; a guide rod yieldably mounted on the base longitudinally thereof; and a rider slidable on the rod and carrying a ball.

11. In combination, a base, a guide rod movably mounted on said base; a rider slidable on the guide and carrying a blow receiving part; and measuring means movable by said rider.

12. In combination, a base, a guide rod having one end yieldably mounted on said base and the other end loosely mounted; a rider slidable on the rod and carrying a blow receiving part; and measuring means movable by said rider.

13. In combination, a base, a slidable guide rod mounted on said base; a rider slidable on the rod; and a spring connected to said base and yieldably drawing the rod rearwardly.

14. In combination, a longitudinally yieldably mounted guide rod; links partly supporting the rod; and a rider slidable on the rod and measuring means actuated by the travel of said rider.

15. In combination, a base; a yieldably mounted guide rod slidably connected to the forward end of the base; links connecting the rear of the rod with the rear of the base; a rider slidable on the rod carrying a ball; and impact measuring means movable by said rider.

16. In combination, a guide rod; a rider slidable on the rod and carrying a ball; an impact member slidable mounted on the forward end of the rod adapted to be struck by said rider; a spring on the rod holding the member rearwardly; and a measuring member movable by said impact member.

17. In combination, a guide rod; a rider slidable on the rod; an impact member mounted on the rod adapted to be struck by said rider and measuring means engageable by said rider and actuated by the travel of said rider.

18. In combination, a guide rod; a rider slidable on the rod; a toothed ratchet member movable by said rider; yieldable means holding the ratchet member retracted; and a releasable pawl engaging the teeth of the ratchet member.

19. In combination, a guide; and a rider slidable on the guide carrying a blow receiving member having its entire rear face unobstructed for the blow.

20. In combination, a guide; and a rider slidable thereon carrying a ball having its entire rear hemisphere exposed.

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