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GOLF PRACTICE DEVICE

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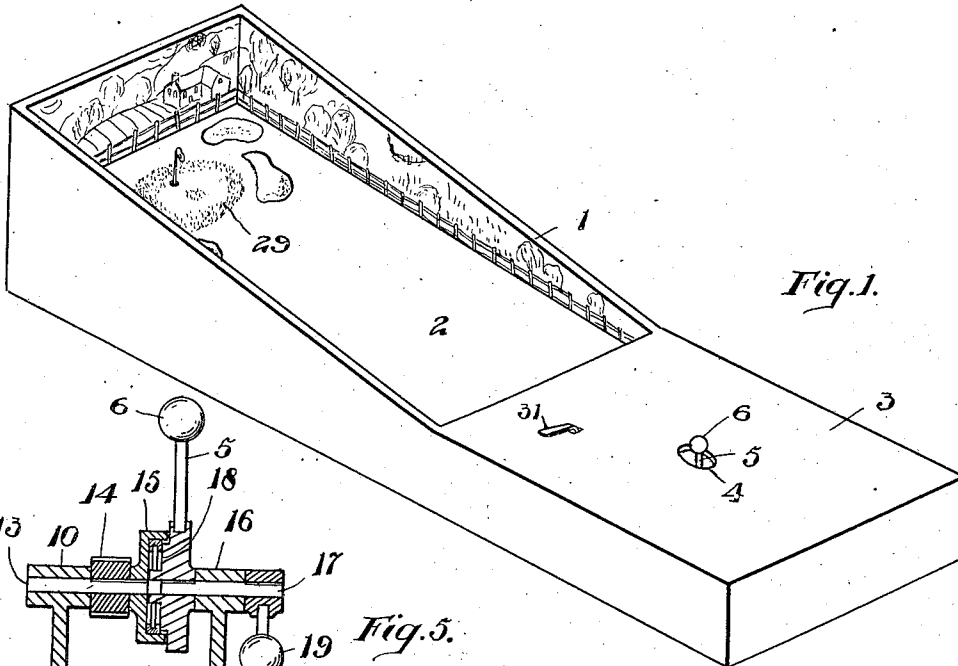


Fig. 1.

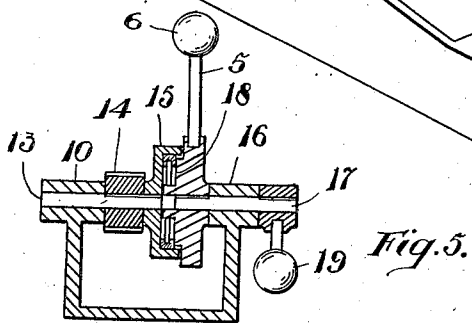


Fig. 2.

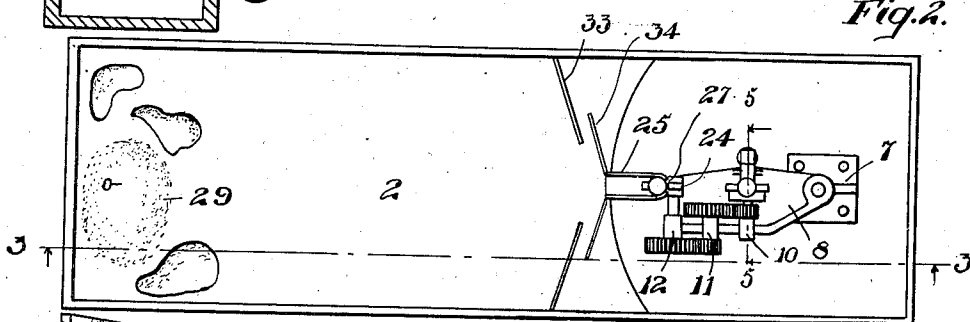


Fig. 3.

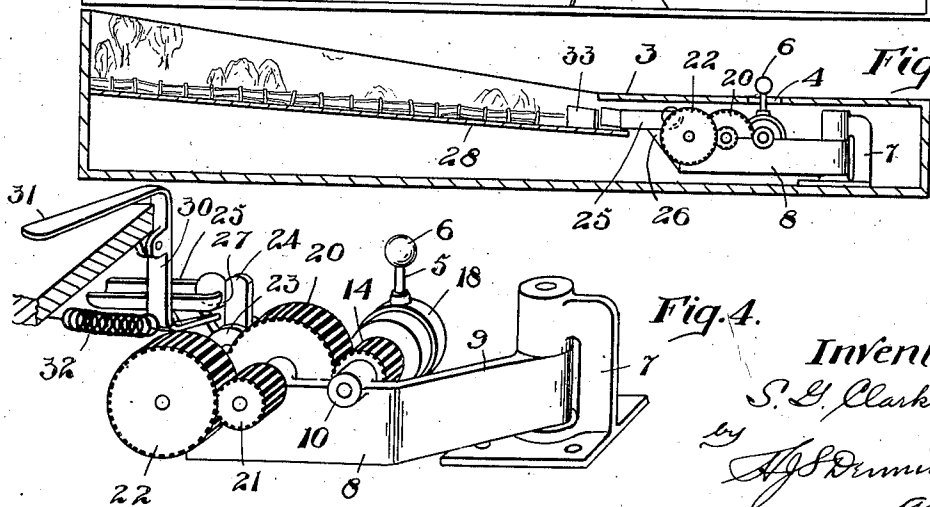


Fig. 4.

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GOLF PRACTICE DEVICE

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8 Claims. (Cl. 273—35)

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The principal objects of this invention are to provide a golf practice device on which an individual may practice the striking of a golf ball with perfection of movement within extremely small space limitations and to indicate to the player with reasonable accuracy the distance and direction of the "shot."

The principal features of the invention consist in the novel construction of a device whereby a means for projecting a ball over a miniature course is operatively connected through a gear train with a rotatable member adapted to be struck with a golf club, such mechanism being pivotally mounted so as to swing in response to the direction of the stroke of the club of the player, thereby effecting the delivery of the ball in a line corresponding with the line of the stroke of delivery of the player.

In the accompanying drawing:

Figure 1 is a perspective view of a device to which my improved form of practice apparatus is applied.

Figure 2 is a plan view of the device illustrated in Figure 1 with the platform cover removed.

Figure 3 is a longitudinal vertical sectional view taken through the line 3—3 of Figure 2.

Figure 4 is an enlarged perspective detail of the ball-propelling mechanism.

Figure 5 is an enlarged vertical sectional view through the line 5—5 of Figure 2.

In the practice of the game of golf it is necessary that the player should have perfect freedom in the swing of his club to drive a ball from a tee, and it is desirable that an apparatus be provided which will permit such freedom of action on the part of the player but which will give an accurate indication of the direction and range of the stroke without requiring the actual distance so that the apparatus may be arranged in a small space, such as within a room, and yet will have full scope in the making of practice shots.

The form of the device herein shown comprises an enclosure 1, the side and end walls of which form the boundaries of a miniature golf course 2 which may be suitably directed to indicate the landscape with a green and fairway with hazards.

At one end of the enclosure is arranged a platform 3 upon which the player stands. In substantially the middle of this platform is arranged an opening 4 and projecting upwardly from within the space beneath the platform is an arm 5 with a ball head 6 of the size and characteristics of a golf ball.

Arranged within the enclosure beneath the

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platform 3 and rigidly secured to the bottom of the enclosure, is a vertical standard 7, within which is pivotally mounted a bracket member 8 which is adapted to swing in a horizontal plane.

At one side of this bracket member is arranged an angular-shaped vertical web 9 which supports an arrangement of journal bearings 10, 11 and 12 which are arranged transverse to the web.

Within the journal 10 is mounted a shaft 13 to which is keyed a spur pinion 14 and also a hollow drum member 15 of a friction clutch device.

A journal 16 mounted on the bracket member 9, in alignment with the journal 10, supports a shaft 17 on one end of which is keyed a clutch member 18 which is provided with suitable clutching means to engage the interior of the drum member 15 mounted on the shaft 13.

The arm 5 carrying the ball 6 is mounted on the clutch member 18 and projects upwardly through the opening 4 in the platform to the height of a teed golf ball, so that it rests in the proper position for play, with the player standing on the platform at one side of the ball.

Attached to the shaft 17 is a counter-balance 19 which is adapted to return the clutch member 18 and the arm and ball 6 to a normal upright position after it has been struck.

It will be understood that any suitable form of automatic centrifugal clutch may be used between the two aligned shaft members 13 and 17 to transmit the rotative movement imparted to the clutch member 18 upon the striking of the ball to the clutch member 15.

The rotation thus transmitted to the shaft 13 rotates the pinion 14. The pinion 14 meshes with a spur gear 20 mounted on a shaft journaled in the bearing 11, which shaft carries a pinion 21, and the pinion 21 meshes with a spur gear 22 mounted on a shaft journaled in the bearing 12.

This arrangement of a gear train imparts rotative movement to the gear 22, and the shaft on which it is mounted, on a considerably reduced ratio from the movement imparted to the shaft 13 by the striking of the ball.

A hub member 23 is secured to the shaft on which the gear 22 is mounted and has a radial arm 24 extending vertically upward.

A trough-shaped member 25 is supported by an arm 26 extending upwardly from the pivotal bracket 8. This trough member is formed with a slot 27 in the end adjacent to the arm 24 carried by the gear train, which end of the trough

is curved inwardly to hold a golf ball in the slotted end.

When the player, who stands upon the platform 3, strikes the ball 6 with his club a sharp forward rotative movement is applied to the clutch member 18, which in turn transmits this movement to the drum 15 and the movement passes through the train of gears, which finally results in imparting a comparatively slow acting rotative movement to the radial arm 24 which strikes the golf ball carried in the trough-like member and propels it therefrom to cause it to roll outward over the slightly upwardly inclined surface 28 of the miniature golf course.

This surface may be covered with a suitable surface representing a fairway, and preferably one which will render a slight impedance to the rolling of the ball, and the ball projected from the trough member will roll in the direction of the green 29 arranged at the far end of the course.

It will be particularly noted that the entire ball-projecting device is mounted on a vertical pivot in the standard 7, and this pivot is preferably arranged in alignment with the longitudinal centre of the course and the ball 6. Consequently if the player swings his club with either a slicing or hooking stroke the stroke will be out of line from the longitudinal centre line and the impact of the blow against the ball 6 will be in an angular direction. Such a stroke will cause the entire bracket member to swing on its pivot, carrying the ball-projecting device to an angular position to either side of the longitudinal centre line of the golf course, and the ball mounted in the trough will be delivered in a line off centre directly in accordance with the off centre stroke of the golf club.

The train of gears set in motion by the impact of the player's stroke on the ball 6 will continue its rotation until the arm 24 comes back to a vertical position where it will be stopped by the member 30 which is in the form of a bell crank lever pivotally mounted on the underside of the platform 3 and having the extension end portion 31 arranged in a convenient position where the player may put his foot upon it after striking the ball. By pressing down on the member 31 the member 30 is tilted on its pivot to bring the lower end into the path of movement of the arm 26 so that the said arm will be arrested on completion of a revolution. The bell crank is held clear of the arm 24 by a spring 32.

As has been stated, the floor 28, which forms the "fairway," is arranged at a slight angle so that the golf ball which has been projected over the fairway will roll back to the starting point and will be guided into the holding trough 25 by inclined guides 33. The trough member is preferably provided with wing extensions 34 to guide the ball into the trough member ready for the next play.

It will be readily understood that many details of the structure described herein may be altered without departing from the principal feature of the invention.

What I claim as my invention is:

1. A golf practice device comprising a miniature inclined course, a member pivotally mounted at the low end of said course to swing in a horizontal plane, means mounted on said pivotal member for directing a golf ball to travel in a directed path on said inclined course, means for projecting the ball to leave said directing means and travel freely over said course in a direction determined by the angular position assumed by

the ball-directing means on the pivotal member, means adapted to be struck by a club rotatably mounted on said pivotal member, and reduction gear means for transmitting movement imparted to said rotatable member to said ball-projecting means.

2. A golf practice device comprising, a miniature course, a platform arranged above one end of said miniature course, a member pivotally mounted to swing in a horizontal plane below said platform, means on said pivotal member for holding and directing a golf ball, a train of gears mounted on said pivotal member, means mounted on said pivotal member forward of its pivot and extending above said platform adapted upon being struck to impart movement to said train of gears, and means operatively connected with said train of gears adapted to engage said ball to project same said directing means longitudinally of said course.

3. A golf practice device comprising, a miniature golf course, a platform arranged at one end of said course and spaced thereabove, a pivot standard rigidly mounted below said platform, a bracket member mounted in said pivot standard to swing in a horizontal plane between the pivot and said course, a train of reduction gears journaled on said bracket, a clutch member mounted at one end of said train of gears having a rigid arm extending therefrom above said platform and having a striker ball at the upper end, means arranged at the other end of said train of gears for holding and directing a golf ball, and means operated by said gear train for projecting a ball from said holding means longitudinally of said miniature course.

4. A golf practice device comprising, a miniature course, a platform arranged at one end of said course, a bracket member pivotally mounted to swing in a horizontal plane arranged below said platform, a reduction train of gears journaled on said bracket, a rotatable friction clutch device operatively arranged at one end of said train of gears and supported from said bracket, an arm extending radially from said clutch device upwardly through said platform and having a striker ball on the end thereof means for returning said clutch arm to its normal upright position, and means arranged at the other end of said gear train for projecting a ball longitudinally of the course.

5. A golf practice device comprising, a miniature golf course arranged with a slight longitudinal incline, a platform arranged above the lower end of said incline, a bracket member pivotally mounted to swing in a horizontal plane adjacent to the lower end of the incline, a trough-like member mounted on said bracket and arranged to direct a ball placed therein in a direction longitudinally of said incline, an arm rotatably mounted on said bracket adapted to strike a ball mounted in said trough member to project same longitudinally of the incline member, a train of gears connected with said rotatable striker member, and means mounted on said bracket and projecting above said platform adapted upon being struck to impart rotative movement to said gear train.

6. A golf practice device comprising, a miniature golf course as claimed in claim 5, in which said trough-like member is provided with laterally extending wing guides, and guides sloping inwardly toward said wing guides are arranged adjacent thereto on said longitudinally sloping member.

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7. A golf practice device comprising, a miniature golf course, a platform arranged at one end, a bracket member pivotally mounted to swing in a horizontal plane below said platform, a striker member extending through said platform rotatably mounted on said bracket, a train of gears mounted on said bracket adapted to be operated by the operation of said striker member, a rotatable member connected with said train of gears adapted to project a ball longitudinally of said golf course, and a brake member mounted on said platform and adapted to intercept the ball-striking member and arrest the same following its striking movement.

8. A golf practice device comprising, a miniature golf course a platform arranged at one end,

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a bracket member pivotally mounted to swing in a horizontal plane below said platform, a striker member extending through said platform rotatably mounted on said bracket, a train of gears mounted on said bracket adapted to be operated by the operation of said striker member, a rotatable member connected with said train of gears adapted to project a ball longitudinally of said golf course, and a brake member mounted on said platform and adapted to intercept the ball-striking member and arrest the same following its striking movement, said brake member comprising a bell crank pivotally mounted in the platform and having an arm extending above the platform to be operated by the foot of the player.

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