

Nov. 14, 1933.

W. H. GARDNER ET AL

1,935,291

GOLF PRACTICE DEVICE

Filed April 18, 1930

2 Sheets-Sheet 1

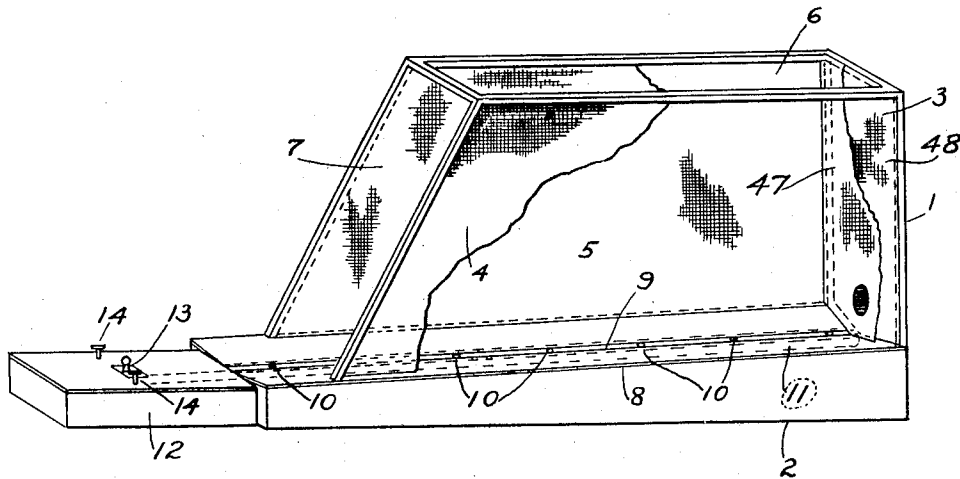


Fig. 1.

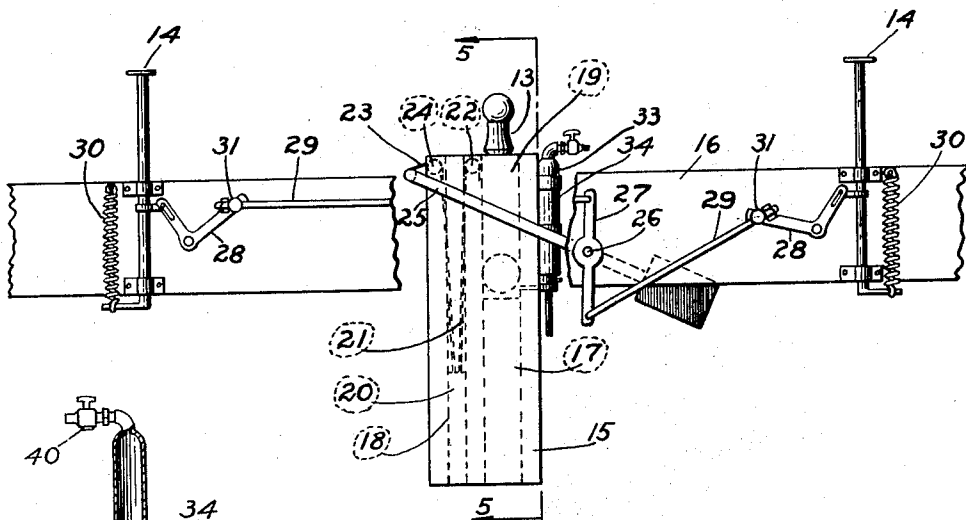


Fig. 2.

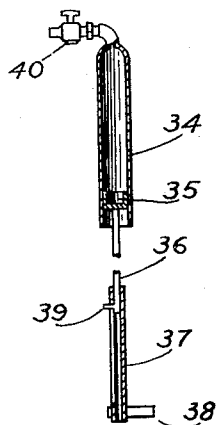


Fig. 3.

INVENTORS
W. H. GARDNER
C. M. RELTON
BY Munn & Co.
ATTORNEYS.

Nov. 14, 1933.

W. H. GARDNER ET AL

1,935,291

GOLF PRACTICE DEVICE

Filed April 18, 1930

2 Sheets-Sheet 2

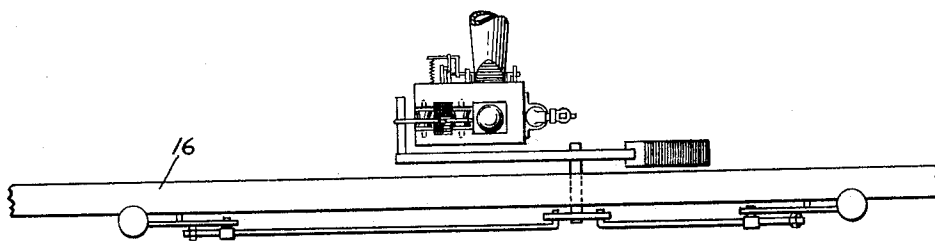


Fig. 3.

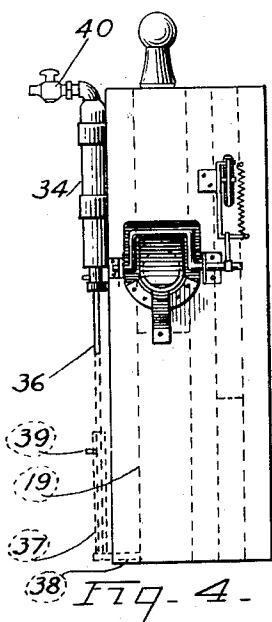


Fig. 4.

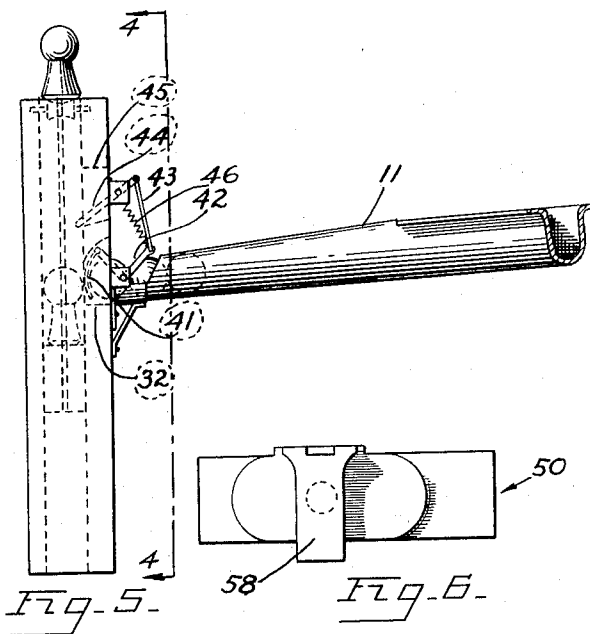


Fig. 5.

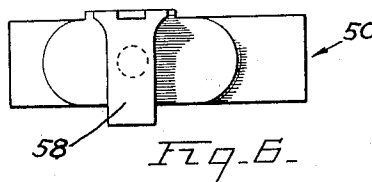


Fig. 6.

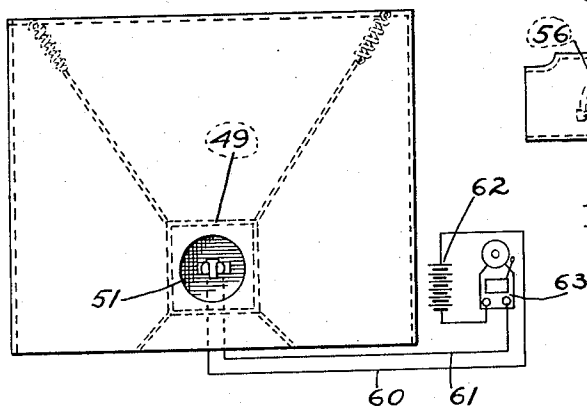


Fig. 7.

INVENTORS
W. H. GARDNER
BY C. M. RELTON
Munn & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE

1,935,291

GOLF PRACTICE DEVICE

William H. Gardner and Cyril M. Relton,
Seaside, Oreg.

Application April 18, 1930. Serial No. 445,433

2 Claims. (Cl. 273—33)

The present invention relates to improvements in a golf practice device and its principal object is to provide a device for practicing golf where only a limited space is available. A further object of the invention is to provide in connection with a golf practice device of the character described means whereby the ball is automatically returned to the player. A further object of the invention is to provide means allowing the player to position the ball on the conventional tee by a mere movement of his foot.

A further object of the invention is to provide certain structural arrangements and features allowing the above mentioned objects to be carried out.

A further object of the invention is to provide a target in combination with the means hereinabove set forth, and to provide means for visibly indicating when the target has been hit.

Further objects and advantages of our invention will appear as the specification proceeds.

The preferred form of our invention is illustrated in the accompanying drawings, in which

Figure 1 shows a perspective view of our golf practice device,

Figure 2 an enlarged detail view showing the operating mechanism for positioning the ball in side elevation;

Figure 3 a plan view of the same mechanism;

Figure 4 a vertical section taken along line 4—4 of Figure 5;

Figure 5 a side view of the ball positioning means as seen from line 5—5 of Figure 2;

Figure 6 a front view of a target;

Figure 7 a bottom plan view of the same;

Figure 8 an inside view of the rear wall of an enclosure forming part of our device; and

Figure 9 a vertical section through a pneumatic brake used in our invention.

While we have shown only the preferred form of the invention, we wish to have it understood that various changes or modifications may be made within the scope of the claims hereto attached without departing from the spirit of the invention.

In its preferred form our golf practice device comprises an enclosure 1 resting on a base 2. The enclosure may be made of canvas or other suitable material, and includes a back wall 3, side walls 4 and 5, and a top 6, the front end 7 of the enclosure being left open. The dimensions of the enclosure are optional, and we preferably make the enclosure of rectangular form, with an inclined front section, the bottom of the enclosure being preferably about twenty feet long,

and the top about fourteen feet, while the enclosure is about eight feet high and eight feet ten inches long. These dimensions, of course, may be changed to suit the desires of the user.

The base 2 of the enclosure descends from the rear to the front as shown at 8 and also descends from both side edges to the center, in which latter we form a groove 9 and a number of perforations 10 adapted to allow a ball to drop there-through into a trough 11 arranged underneath the floor of the base.

The base terminates at its front end in a platform 12 which is sufficiently wide to accommodate the player and to allow him to carry out conveniently the movements required. The center of the platform is occupied by the tee indicated at 13 and on opposite sides of the tee are provided foot operated pedals 14 which are used by the player for positioning a ball on the tee.

This operating mechanism includes a sub-structure shown in Figures 2 to 5 and comprising a vertical beam 15 and a horizontal beam 16 arranged transversely relative to the vertical beam. The vertical beam is formed with two parallel guide-ways 17 and 18, the former serving to slidably receive a block 19 on which the tee is supported, while the latter guideway serves to slidably receive a counter-weight 20 which is connected to the block 19 by means of a cord 21 passing over the sheave 22 revolvably mounted between the two guide-ways near the top of the vertical beam. The counter-weight 20 is also connected through a cord 23 passing over a sheave 24 with the extreme end of a lever 25 pivoted in the horizontal beam 16 as shown at 26 and adapted to be actuated by means of a second lever 27 fixed relative thereto. This latter lever may be operated by either one of the foot pedals 14 through a bell crank lever 28 and a link 29, a spring 30 serving in either case to return the foot pedal to normal position.

The lever 28 in each case is made slidable on the link 29 as shown at 31 so that operation of one foot pedal will not affect the other.

The trough 11 is positioned in such a manner that when the block 19 and the tee are lowered in the guideway 17 a ball lying in the lower end of the trough will roll through a passage 32 upon the tee in the manner shown in Figure 5. It will thus be seen that when a player depresses either one of the foot pedals 14 he causes the free end of the lever 25 to be depressed whereby the counter-weight 20 is lifted and the block 19 made to drop into its lowermost position so as to bring the tee opposite the trough 11 and to

allow the ball to roll from the trough on the tee. The player then releases the foot pedal 14 which causes the latter to return to normal position while the counter-weight 20, upon release of the pedal, drops and returns the block 19 to normal position.

For retarding the return movement of the block particularly toward the end, we provide an airbrake shown at 33 comprising a cylinder 34, a piston 35, reciprocable therein, a connecting rod 36 for the piston and tubular member 37 slidable on the connecting rod and fastened with its lower end to the lower end of the block 19 as shown at 38. At the beginning of the rising movement of the block the tubular member 37 rises with the same without offering much resistance, but at a later stage of the rising movement the tube 37 strikes a stop 39 on the connecting rod 36 and now forces the latter to ascend with the block 19, whereby the piston 35 is made to rise in the cylinder 34 so as to compress the air therein and to force the same through a vent in the upper end controlled by a valve 40.

For preventing more than one ball from entering the guideway 17 particularly at the time when the tee passes the open end of the trough 11, we provide a shutter 41 operated by a bell crank lever 42, which latter is connected by a link 43 to a second lever 44, which operates in a slot 45 in the vertical beam and the extreme end of which extends into the path of the counter-weight 20. In this manner, when the counterweight 20 is raised and is about to reach the upper end of its upward travel it strikes the end of the lever 44 whereby the shutter 41 is raised. At this time the block 19 and the tee 13 have reached their lowermost position so that a ball may roll on the tee. Since the size of the ball corresponds substantially to the cross section of the guideway 17, a second ball is prevented from entering the guideway as long as the first ball occupies the position shown in Figure 5. But as soon as the block 19 with the tee begins to rise again a second ball might enter, since the tee is of smaller dimensions than the ball but such entry is prevented by the shutter 41, which returns to the position shown in Figure 5 under the influence of a spring 46 as soon as the counter-weight 20 begins to descend.

The rear wall preferably consists of two sheets 47 and 48, and between the sheets is suspended a plate 49 supporting the target 50 illustrated in Figures 6 and 7. The front sheet 47 is formed with a perforation 51 in front of the target. The latter may be made in different ways and its principal object is to indicate by the closing of an electrical circuit containing a lamp or any other suitable alarm device whether or not the target has been hit. The target as shown includes a casing 52 in which is supported a bell shaped member 53 having a diaphragm 54 stretched across the same, and having a contact 55 supported in the diaphragm. A second contact 56 is supported in the valve and may be urged into engagement with the first contact 55 by a plunger 57 extending radially through the bell shaped member and being affixed to a swinging bar 58 hinged to a plate 59 projecting from the top of the casing. When the ball strikes the swinging plate 58, the latter forces the plunger 57 inward whereby contact 56 is urged upon contact 55. This closes a circuit shown in Figure 8 and comprising the wires 60 and 61, the source of energy 62 and the alarm device 63.

The operation of the device should be readily understood from the foregoing description. The player stands behind either the right one or the left one of the foot pedals with a ball disposed on the tee. He propels the ball attempting to hit the target and if he does hit the target, the alarm device 63 will thus indicate. The propelled ball, whether it hit the target or not, will drop on the floor of the base and roll toward the center, and eventually fall through one of the holes 10 into the groove 11, which guides the same to the vertical beam opposite the aperture 32. The player preferably plays a number of balls before paying any attention to the ball retrieving device. After a number of balls have been used, the same will be found lined up against the vertical beam in the manner illustrated in Figure 5. The player now depresses one of the pedals 14, which causes the block 19 to descend into the guideway 17 until the top of the tee is substantially flush with the first ball in the trough 11. At this time the rising counter-weight 20 raises the shutter 41 so that the first ball may roll on the tee while the second ball moves into the place of the first one. As the player releases the pedal, the latter is returned to normal position and the counter-weight 20 travels downward thereby raising the block 19 and the tee. During the first stretch of its downward travel the counter-weight releases the shutter which is automatically closed by the spring 46. In traveling upward the block 19 first proceeds with considerable speed until the tube 37 engages with the stop 39 on the connecting rod 36, whereupon the block is retarded, due to the fact that the piston 35 has to be forced upward in the cylinder 34 against the pressure of air which is released only slowly. The upward movement of the block toward the end therefore is very slow so that there is no danger of the ball being shaken off the tee. The latter now is in proper position for a new stroke.

We claim:

1. In a golf teeing device, a pair of vertical guides, a tee mounted in one of the guides and a counterweight arranged in the other, connecting means between the counterweight and the tee for moving the two in opposite directions when one is moved, a ball conduit communicating with the tee guide, and a shutter disposed over the end of the conduit and having a portion projecting into the path of the counterweight and actuated by the latter so as to open the shutter when the tee is moved into a position for receiving a ball, said shutter being automatically closed when the ball is raised to striking position for preventing more than one ball from entering into the tee during each operation.

2. A golf ball feeding device comprising a gravity chute for golf balls, a tee movable from playing position into one for receiving a ball from the chute, means for moving the tee and including a counterweight operatively connected to the tee, a shutter closing the end of the chute and having a portion projecting into the path of the counterweight and actuated by the latter so as to open the shutter when the tee is moved into a position for receiving a ball, said shutter being automatically closed when the ball is raised to striking position for preventing more than one ball from rolling onto the tee during each operation.

WILLIAM H. GARDNER.
CYRIL M. RELTON.