Jan. 29, 1963 A. E. BUELL 3,075,774

GOLF BALL TEEING DEVICE

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Fig. 1

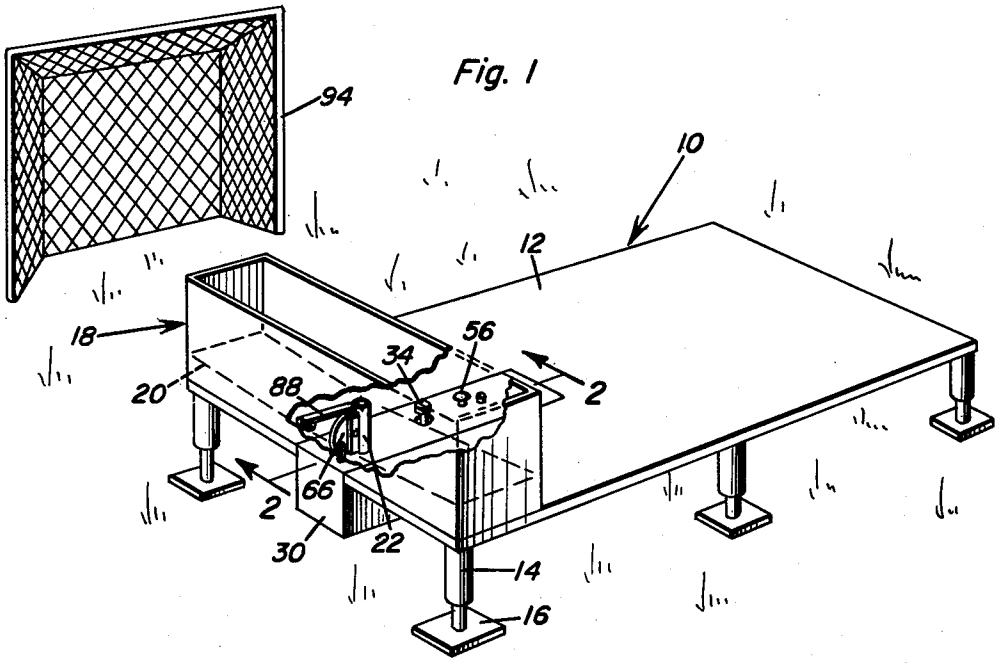
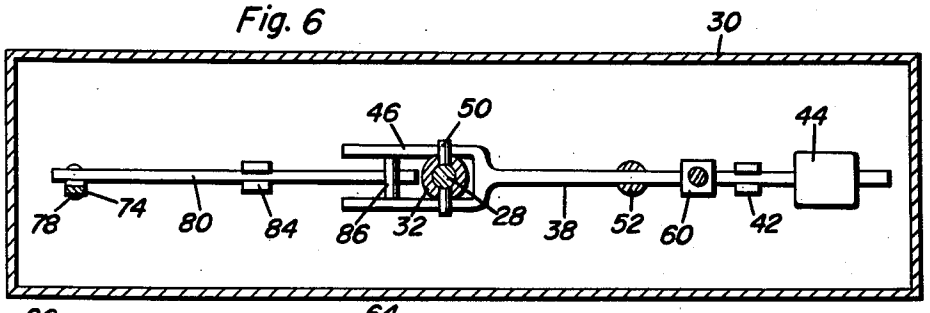


Fig. 6



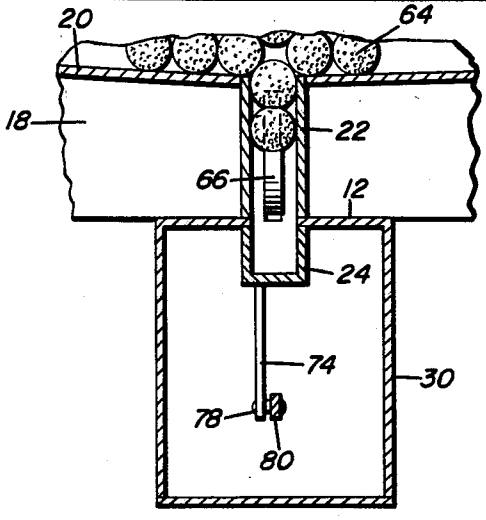


Fig. 5

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Fig. 2

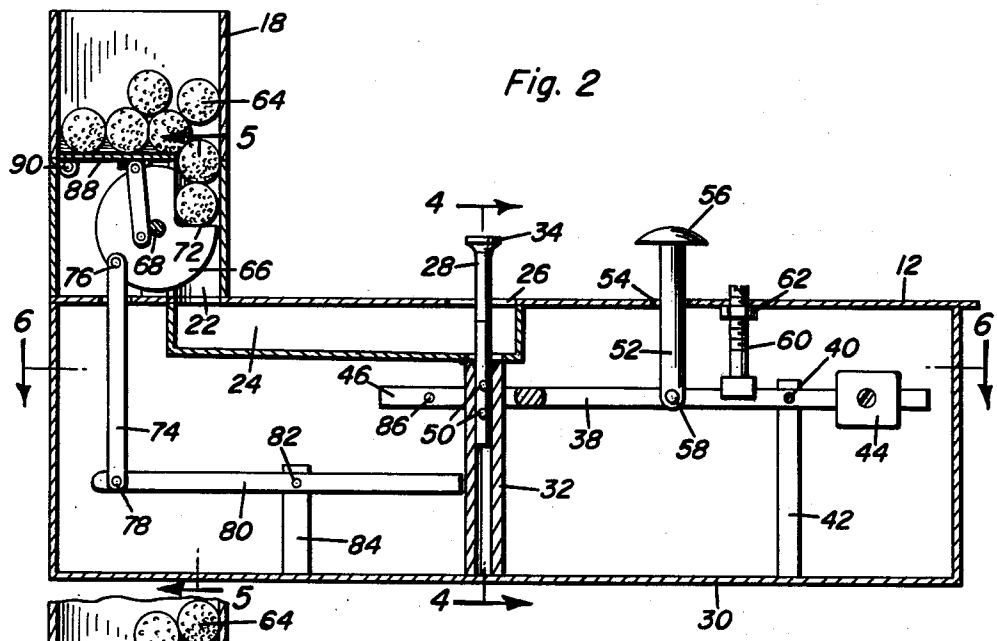


Fig. 3

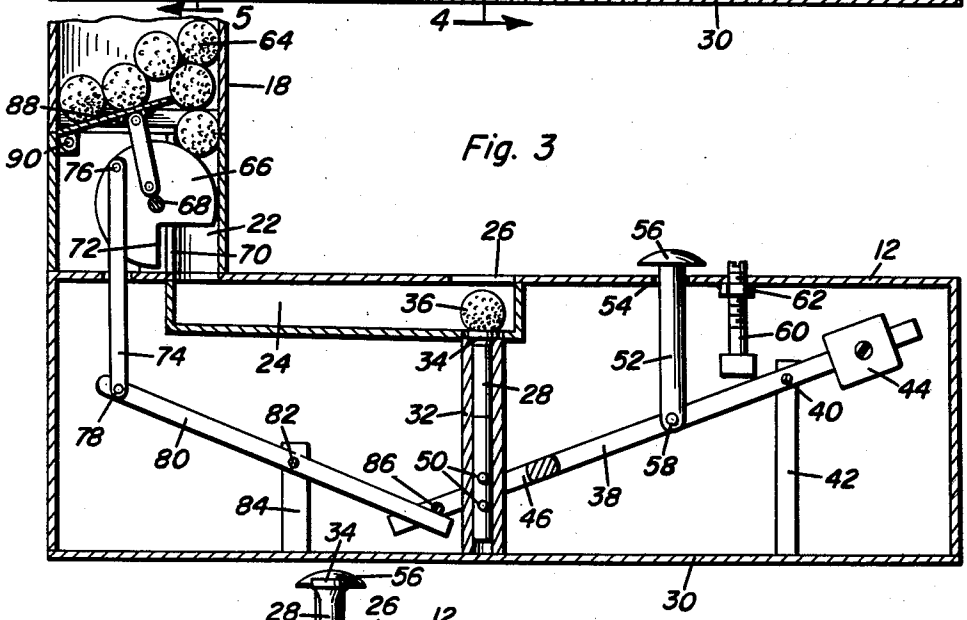
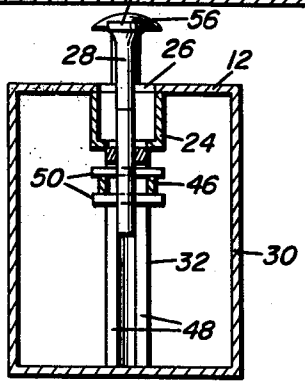


Fig. 4



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GOLF BALL TEEING DEVICE

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This invention relates to new and useful improvements in golf ball teeing devices, and the principal object of the invention is to provide a device of this type which is simple in construction, trouble-free in operation and which, unlike conventional devices of a similar type, avoids the use of complicated mechanisms involving springs, cables, and the like.

An important feature of the invention resides in the provision of a teeing device wherein a vertically reciprocable tee is employed for raising a golf ball to a playing position from a lowered position at the bottom of a raceway communicating with a ball hopper, the lowering of the tee being effected by a manually depressible foot pedal while the raising thereof is effected by a counterweight, so that the use of the aforementioned springs, cables, et cetera is avoided and dependable reciprocation of the tee is attained.

Another important feature of the invention resides in a novel arrangement of means, responsive to depression of the foot pedal, for individually and successively dispensing golf balls from the hopper into the raceway, while another important feature lies in the provision of means, responsive to actuation of the dispensing means, for agitating the balls in the hopper.

These together with other objects and advantages which will subsequently become 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 of the golf ball teeing device in accordance with the invention, also showing a target or ball stop such as may be used in connection therewith;

FIGURE 2 is a fragmentary vertical sectional view on an enlarged scale, taken substantially in the plane of the line 2—2 in FIGURE 1;

FIGURE 3 is a view, similar to that shown in FIGURE 2 but with the moving parts in a different position;

FIGURE 4 is a sectional view, taken substantially in the plane of the line 4—4 in FIGURE 2;

FIGURE 5 is a fragmentary sectional view, taken substantially in the plane of the line 5—5 in FIGURE 2; and

FIGURE 6 is a horizontal sectional view, taken substantially in the plane of the line 6—6 in FIGURE 2.

Referring now to the accompanying drawings in detail, the golf ball teeing device in accordance with the invention is designated generally by the numeral 10 and embodies in its construction a platform 12 which is preferably supported in an elevated position above ground by a plurality of legs or feet 14 with enlarged bases or pads 16, so that the weight of the device and that of a player standing on the platform causes negligible damage to a lawn, or the like, on which the device is positioned. A transversely elongated ball receiving hopper 18 is provided on the platform 12 along one side edge of the latter, the hopper having a bottom 20 which slopes from the ends toward the center of the hopper as is best shown in FIGURE 5. Provided at the center of the bottom 20 is a downwardly extending hopper outlet 22, the lower end of which communicates through an opening in the platform 12 with one end of an elongated ball raceway 24. The latter is disposed under the

platform and extends longitudinally thereunder to an opening 26 in the platform through which a vertically reciprocable golf ball tee 28 is projectable.

A mechanism housing 30 is provided under the platform 12 and contains a vertical, tubular guide 32 which has an open upper end in communication with the raceway 24 and slidably accommodates the tee 28. The tee is movable from a lowered position wherein its head 34 is flush with the bottom of the raceway 24 to a raised position wherein it projects through the opening 26 and its head is disposed above the platform, as will be apparent from a comparison of FIGURES 2 and 3, so that when a golf ball in the raceway assumes a position on the tee head 34 as indicated at 36 in FIGURE 3, it may be raised to a playing position above the platform.

A lever 38 is pivotally mounted intermediate its ends as at 40 on a bracket 42 provided in the housing 30, one end portion of the lever carrying a counterweight 44 while its other end is provided with a fork 46 which straddles the guide 32. The guide 32 is formed at opposite sides thereof with a pair of vertical slots 48 which slidably receive a pair of vertically spaced pins 50 carried by and projecting to both sides of the tee 28, as is best shown in FIGURES 4 and 6.

A depressible foot pedal 52, slidable in an aperture 54 in the platform 12, is provided at its upper end with an enlarged head 56 while its lower end is connected by a pivot 58 to the lever 38 at a point between the fork 46 and the pivot 40, so that when the device is in the position shown in FIGURE 2 and the pedal 52 is depressed, the lever 38 causes the tee 28 to be lowered to the position shown in FIGURE 3, in readiness to receive the ball 36 in the raceway 24. When foot pressure on the pedal 52 is removed, the counterweight 44 causes the lever 38 to return the tee 28 to its raised position, thus bringing the ball into position for playing. An adjustable stop screw 60, cooperating with a nut 62 at the underside of the platform 12, is engageable with the lever 38 to adjustably limit the raising movement of the lever and correspondingly adjust the height of the tee head 34 above the platform when the tee is raised.

Means are provided for individually and successively dispensing golf balls in the hopper 18 as indicated at 64 into the raceway 24, these means involving the provision of a vertically disposed disc 66 which is rotatably mounted on a shaft 68 below the hopper bottom 20 and has a substantial portion thereof projecting into the hopper outlet 22 through a slot 70. The disc 66 has a recess or cut out 72 which is large enough to accommodate only one golf ball when the disc is in the position shown in FIGURE 2 and, by a clockwise rotation of the disc through approximately 90° to the position shown in FIGURE 3, the golf ball accommodated in the recess 72 will be conveyed through the outlet 22 and permitted to drop into the raceway 24, as will be clearly apparent. During such rotation of the disc, the unrecessed marginal edge thereof will effectively block off the outlet 22 as shown in FIGURE 3 so as to prevent other balls in the hopper from being discharged.

The rotation of the disc is effected by a link 74 which is pivoted at one end thereof as at 76 to the disc and is pivoted at its other end as at 78 to one end of a rocker arm 80 which is pivoted intermediate its ends as at 82 on a bracket 84 in the housing 30. The other end portion of the arm 80 is operatively engageable with a cross pin 86 carried by the fork 46 of the lever 38, the arrangement being such that when the device is in the position shown in FIGURE 2, the pin 86 is disengaged from the lever 80, but when the lever 38 is lowered by

depression of the foot pedal **52**, the pin **86** is brought in engagement with the arm **80** and causes the same to rock to the position shown in FIGURE 3, thus imparting, through the medium of the link **74**, the required partial rotation to the disc **66** to dispense one ball from the hopper into the raceway **24**. When foot pressure is subsequently removed from the pedal **52** and the lever **38** is raised by the counterweight **44**, the combined weight of the link **74** and of the associated end portion of the arm **80** causes the disc **66** to return to its initial position shown in FIGURE 2, in readiness for dispensing the next ball.

Means are also provided for agitating the balls in the hopper so that they do not obstruct the hopper outlet, these means comprising a rockable agitating bottom plate **88** which is pivotally mounted as at **90** at the center of the hopper bottom **20** adjacent the outlet **22**. The plate **88** is operatively connected by a link **92** to the disc **66**, so that the aforementioned partial rotation of the disc in oppositie directions causes the plate **88** to be alternately raised and lowered, thus agitating the balls in the hopper, as will be apparent from FIGURES 2 and 3.

A suitable target or ball stop **94** may be used in conjunction with the device as illustrated in FIGURE 1, it being also noted that by varying the relative positions of the device and target, the device may be used with equal facility by either right-handed or left-handed persons.

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 all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is:

1. In a golf ball teeing device, the combination of a platform, a ball hopper having a sloping bottom mounted on said platform and having an outlet through said bottom, an elongated ball raceway connected to said platform and communicating at one end thereof with the outlet of said hopper, a vertically reciprocable tee provided at the other end portion of said raceway, said tee being movable from a lowered position flush with the bottom of the raceway to a raised position wherein it projects above the platform through an opening formed in the latter, a vertically swingable lever pivoted to the platform and operatively connected to said tee for reciprocating the same, a depressible foot pedal connected to said lever and projecting above the platform whereby said tee may be lowered when the foot pedal is depressed, a counterweight connected to said lever for moving said tee to its raised position when the foot pedal is not depressed, and dispensing means mounted below the hopper and adjacent said outlet for dispensing balls one at a time from said hopper to said raceway, said dispenser operatively connected to said lever and responsive to depression of said foot pedal for individually and successively dispensing one ball at a time from said hopper into said one end of the raceway, said bottom including a substantially horizontal plate pivotally connected to said hopper on a generally horizontal axis, said outlet being adjacent one edge of the plate, means operatively connecting said dispensing means to said plate whereby the plate is elevated above adjacent portions of said bottom each time said dispensing means dispenses a ball so as to churn the balls in said hopper adjacent said outlet.

2. A device as defined in claim 1 wherein said dispensing means comprises a rotatably mounted disc below said plate and outlet and formed with a recess adapted to receive one ball, first linkage means operatively connecting said disc and plate, second linkage means operatively connecting said disc and lever whereby depression of said foot pedal will rotate said disc and elevate said plate.

3. A device as defined in claim 2 wherein said first linkage means comprises a single link pivotally connected at its ends to said disc and plate, said second linkage means comprises another lever pivotally connected at its central portion to said platform, another link pivotally connecting one end of said other lever to said disc, and means operatively and directly connecting the other end of said other lever to one end of said first mentioned lever.

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