Oct. 20, 1936. A. LE R. HARVEY 2,057,894

GOLF TEE

Filed Dec. 18, 1930 2 Sheets-Sheet 1

Fig. 1.

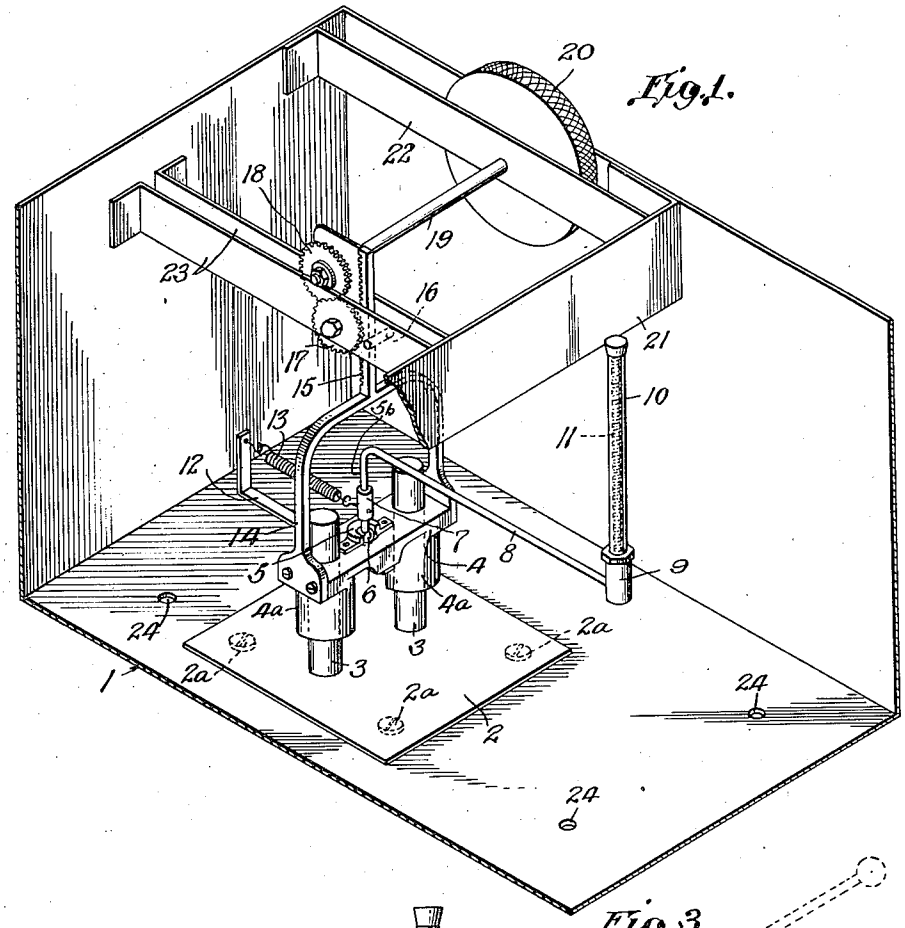


Fig. 3.

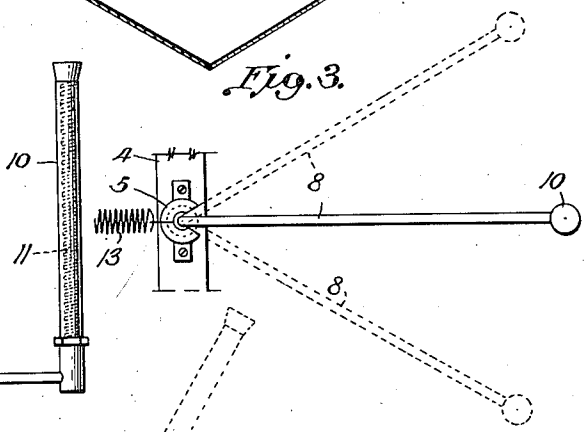
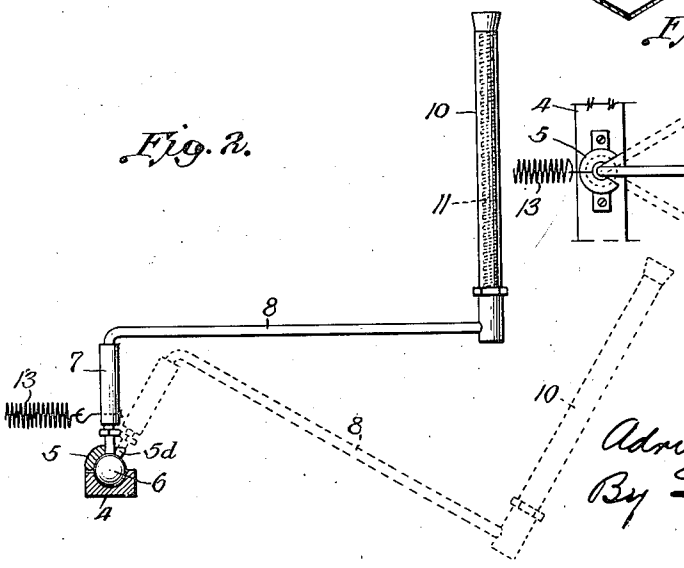


Fig. 2.



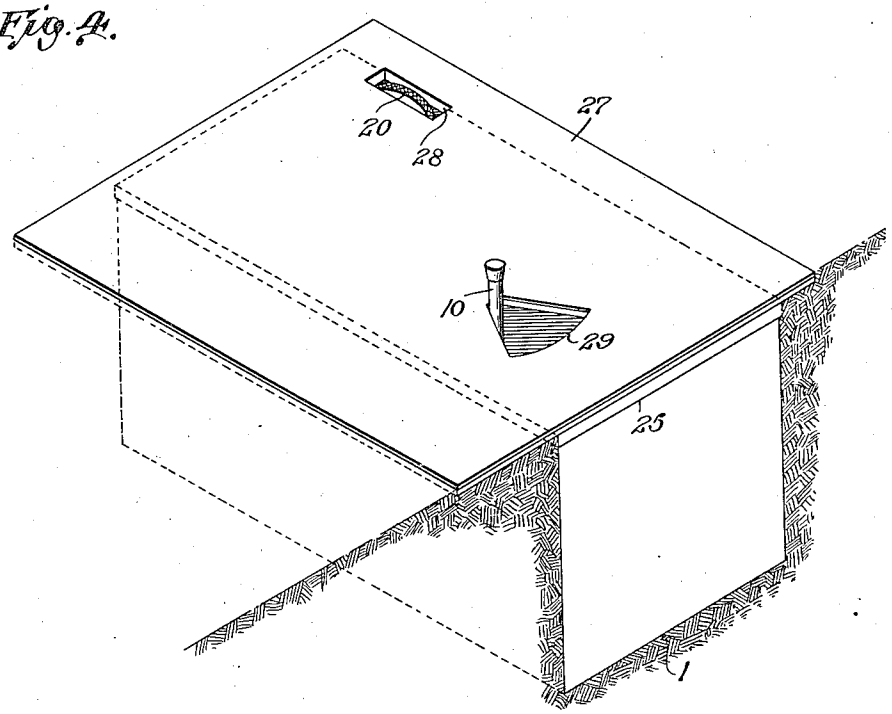
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GOLF TEE

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Fig. 4.



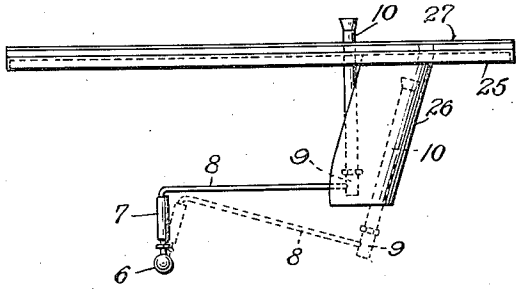
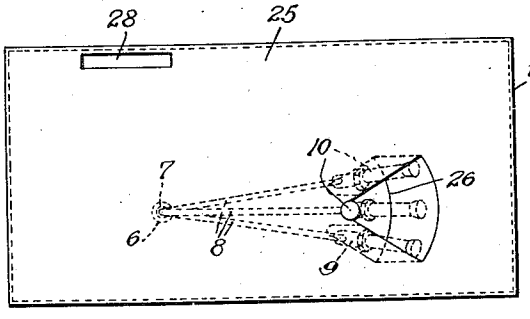


Fig. 5.

Fig. 6.



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GOLF TEE

Adrian Le Roy Harvey, Ponca City, Okla.

Application December 18, 1930, Serial No. 503,211

11 Claims. (Cl. 273—33)

The invention is an improvement over the small golf tee, made of wood or other material, which is placed into the ground or elevation of dirt called the ground tee, or upon the surface thereof, to support the golf ball and which is either broken or knocked away with the impact of the golf club. The invention is a device designed to be used as a permanent and stationary golf tee and as such, I believe it is a pioneer invention and is entitled to a generic claim including every species included within the genus.

It is enclosed and attached to the bottom of a box made of metal, which is to be buried or placed in the elevation of the earth called the "ground tee" or in the earth where play is commenced, or in a concrete or wooden receptacle and so buried, at sufficient depth that when the lid of the box is on, and the cushion mat is placed over the lid, the surface of the mat will be level or flush with the surface of the "ground tee" or ground. Through an opening in the lid and cushion mat, a rubber hose tube extends to support the golf ball, this tube containing a small, closely coiled spring to stiffen it, and also aid in the recoil when it absorbs part of the shock of the golf club impact or blow. This tube, herein referred to as the "tee proper" is attached at a right angle to a long tee arm which, with an open face ball and socket arrangement to which it is attached in the lower part of the device, the spring attached thereto and the V-shape opening in the lid and cushion mat, allow the tee proper, upon impact of the golf club, to move forward either in a straight line or at any angle a golf club will be apt to take, and as it moves forward it is also pulled down into the opening by the tee arm, thus quickly escaping the club head and after the latter passes, is returned to its normal position by the tension of the spring attached to the stem of the ball and socket.

As most golf players, in swinging the golf club, either strike the ground with the club head or follow through at some angle to the right or left, it is essential, in a golf tee designed to be used repeatedly, that the projection or part that supports the golf ball shall be so constructed that it can take either the vertical or lateral movement, or both, that the club head takes. Stress is therefore laid upon the ball and socket joint and the "tee proper" as it is constructed to permit these movements and upon the long "tee arm" to aid and accentuate the same; also upon the form of the openings in the box lid and cushion mat to permit such movements.

The tee proper can be raised or lowered, giving the golf ball any elevation desired by the player, by moving, with a finger, the adjustment wheel which extends through the lid and part way through the cushion mat, the top part of the wheel being a little lower than the surface of the mat, so it will not divert the attention of the player or interfere with his stance or in his swinging the golf club.

The cushion mat is a necessary part of this invention, as when a player swings his club too low, its injury is prevented by the mat absorbing the shock. It is made of cushion or spongy rubber of sufficient thickness to accomplish this purpose, with a thin surface or cover similar to rubber belting to resist the impact of the golf club and permit its slipping on through, thus getting greater distance with the ball than is the case when the blow is "killed" by the club digging into the ground.

The invention is further described and illustrated in the accompanying drawings, in which Figure 1 is an isometric drawing of a portion of of the box or housing in which all working parts are shown; Figure 2 is a side elevational view of the tee arm and tee proper and a portion of its support, the dotted lines showing a different position of vertical movement; Figure 3 is a plan view of the tee arm and tee proper together with a portion of its support, showing in dotted lines different positions of lateral movement; Figure 4 is an isometric view of the box or housing shown setting with its wearing surface of the cushion mat flush with the top of the "ground tee"; Figure 5 is a side elevation of the lid, the tee guide, the tee arm and the tee proper, showing in dotted lines different positions of the tee arm relative to the other parts; and, Figure 6 is a plan view of the lid showing in dotted lines the extent of the lateral movement of the tee proper within the tee guide.

Like characters of reference designate like parts in all the figures.

It is understood that various changes in the form, proportion, size, shape, weight and other details of construction, within the scope of my invention may be resorted to without departing from the spirit or broad principle of my invention and without sacrificing any of the advantages thereof; and it is also understood that the drawings are to be interpreted as being illustrative and not restrictive.

One practical embodiment of the invention as illustrated in the two sheet drawings, follows:

The reference numeral 1 indicates in general the box or housing. The bottom of the box 1

has seep or drainage outlets 24. A plate 2 is rigidly attached to the bottom of the box 1 by, and rests on, short legs 2a. A pair of spaced upright posts 3, are attached to the plate 2, and form a guide for a cross-bar 4 having a pair of rigidly embraced, closed topped, perpendicular sleeves 4a which fit slidably over the upper ends of the posts 3. In the upper surface of said cross-bar 4 there is provided a hemi-spherical recess, which is covered by a removable cap 5. The recess and the cap 5 act as a socket for pivotally embracing a ball 6 which is provided with an upright stem 5b around which is a sleeve 7. A portion of the cap 5 is cut away as shown at 5d to permit movement forward or at an angle toward the front of said ball 6. The stem 5b is attached or integrally connected to a tee arm 8, the free end of which is attached to a coupling 9, in which there is screwed the tee proper 10. The tee 10 is preferably constructed of rubber hose in which is a spring coil 11, the latter two being easily removable from the coupling 9 for replacement. A spring arm 12, is attached to the cross-bar 4, and to the spring arm is attached one end of a retrieving spring 13, the other end of which is attached to coupling 7, and in addition to holding the tee proper 10, in its normal position vertically before the impact of the club, also acts as a means for returning it to such position after the club head passes.

A rack yoke 14 is attached to the cross-bar 4, and to the rack yoke is attached a rack 15, which has a rear guide 16 to prevent the cross bar sleeves 4 from binding on the elevation posts 3. The rack 15 meshes with a spur gear 17, which meshes with a second spur gear 18, rigidly mounted on a shaft 19. The shaft 19 is rigidly provided with an adjustment wheel 20 which extends partially above the top of the box 1.

A main cross member 21, together with other supporting members 22 and 23, support and guide the spur gears 17 and 18 and support the adjustment wheel 20. They also strengthen the box 1, and support the box lid 25 (Figure 4.)

In Figure 4 the box lid 25 and the cushion mat 27, have an opening 28 for the adjustment wheel 20, the top of which is a little below the surface of the mat to prevent interference with the back swing of the golf club and to prevent mental hazard of the player. It is too far in the rear and at the side of the tee proper 10, on account of the size of the box, to be hit on the downward stroke of the club. The box lid 25 and the cushion mat 27 also have an opening 29 for the tee proper 10 in which to operate. This opening is V-shaped with rounded end to permit the tee proper 10 to move straight forward or at any angle the golf club might take, and escape from the latter by falling below the surface of the cushion mat 27. This movement is also illustrated in Figures 5 and 6.

In Figure 5 there is shown the tee guide 26, attached to the under side of the box lid 25, at an angle vertically which the tee proper 10 takes when it is hit by the golf club and in its forward movement falls below the surface of the mat. This tee guide prevents the tee proper 10 from catching under the box lid 25, when it falls below. It is also illustrated in Figure 6, showing both lateral and vertical movements of the tee 10 in the tee guide 26.

Obviously, the invention is susceptible of embodiment in forms other than that which is illustrated in the accompanying drawings and described herein, and applicable, for uses and purposes other than as detailed, and I therefore consider as my own all such modifications and adaptations and other uses of the form of the device herein described as fairly fall within the scope of my invention.

Having thus described my invention, what is claimed and desired to be secured by Letters Patent, is:

1. In a mechanical golf tee, a housing adapted to be imbedded in the earth, a ball socket within the housing, means operatable exteriorly of the housing for raising and lowering the socket, a movable arm pivotally supported by the socket and free to move in various directions upon a plurality of axes, and a semi-pliable ball supporting member carried by the arm and normally protruding slightly above the housing.

2. In a mechanical golf tee, a housing adapted to be imbedded in the earth, a ball socket within the housing, means operatable exteriorly of the housing for raising and lowering the socket, a movable arm pivotally supported by the socket and free to move in various directions upon a plurality of axes, a semi-pliable ball supporting member carried by said arm and normally protruding slightly above the housing, and means for normally holding said arm in a desired vertical position.

3. Organization as described in claim 1, in which said raising and lowering means consists of a rack attached to the socket bearing member, gears for moving the rack, and an adjustment wheel exposed exteriorly of the housing for operating the gears.

4. In a golf tee, a housing adapted to be imbedded in the earth, a ball and socket joint, a ball supporting member mounted on the joint to move in various directions upon a plurality of axes, said member normally projecting upwardly through the housing, and means including a rack and pinions for raising and lowering the member from the exterior of the housing.

5. Organization as described in claim 4 in which the raising and lowering means comprises, a socket supporting member, a rack connected to the member, a gear train having one of its gears engaging the rack, and a friction wheel for driving the gear train, said wheel being partially exposed through the housing in such a manner that it may be manually rotated from the exterior of the housing.

6. In a mechanical golf tee, a housing adapted to be disposed with its upper surface substantially even with a playing surface, a socket supporting member within the housing, a ball socket carried by the member, an arm pivotally mounted in the socket, a semi-pliable ball supporting element carried by the arm and normally protruding above the housing, and means for raising and lowering the socket supporting member, said means including a rack and gears for causing its movement, and an adjustment wheel exposed exteriorly of the housing for operating the gears.

7. In a golf tee, a housing adapted to be imbedded in the earth, a ball and socket joint, a ball supporting member mounted on the joint to move in various directions upon a plurality of axes, said member normally projecting upwardly through the housing, and means for raising and lowering the member from the exterior of the housing, said means including, a socket supporting member, a rack connected to the member, a gear train having one of its gears engaging the

rack, and a friction wheel for driving the gear train, said wheel partially exposed through the housing in such a manner that it may be manually rotated from the exterior of the housing.

8. In a mechanical golf tee, the combination with a ball supporting member, of a ball and socket mechanism supporting the member in a manner permitting its pivotal movement upon a plurality of axes in a plurality of directions, and mechanical means for raising and lowering the socket mechanism bodily.

9. Organization as described in claim 8 in which said means includes a rack, gears, and an actuating wheel.

10. In a mechanical golf tee, the combination with a ball supporting member, of a substantial spherical element rigidly attached to the member, a bar having a substantially hemi-spherical cavity formed therein for receiving said element, and a cap for preventing the displacement of the element, said cap having a portion cut away so that the member may be moved both downwardly and laterally with relation to the bar, and also acting as a stop against the movement of said member in some directions but permitting such movement in other directions.

11. In a mechanical golf tee, a housing adapted to be imbedded in the earth, a pair of upright posts rigidly disposed within the housing, a cross-bar slidably carried for vertical movement by the posts, a rack connected to the bar, gears for vertically moving the rack, an adjustment wheel partially exposed exteriorly of the housing for operating the gears, a substantially hemi-spherical cavity in the bar, a ball supporting member, a substantially spherical element rigidly attached to one end of the member and adapted to pivotally seat within the cavity, a cap for preventing displacement of the element, said cap having a cut-away portion permitting the member to pivot upon a plurality of axes in various directions, retrieving means for normally holding the member in a desired position and for returning it to said position after it has been moved, said member when in normal position adapted to protrude slightly above the top of the housing, and means carried by the housing for guiding the member to substantially its normal position.

ADRIAN LE ROY HARVEY.