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Jackle et al.

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[45] **Sept. 9, 1975**

[54] **GOLF BALL AND TEE POSITIONING DEVICE**

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[52] **U.S. Cl.** **273/33**

[51] **Int. Cl.²** **A63B 57/00**

[58] **Field of Search**..... 273/32 R, 32 B, 32 D, 32 F, 273/33; 294/19 A

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[57] **ABSTRACT**

A golf aid for positioning a golf ball and supporting tee therefor, at an adjusted level above the ground surface, without bending or stooping. The ball and tee are yieldingly cradled at the bottom end of a clamping mechanism and handle therefor, from which also extend positioning spikes and adjustable limit stops, which are set into the ground together with the pointed end of the golf tee. A subsequent push on the upper free end of the handle releases the clamping engagement of the ball and tee without disturbing their initial positioning, permitting the golf aid to be withdrawn from the ball and tee and to be set up or laid down nearby, while the player proceeds with the driving of the ball.

13 Claims, 12 Drawing Figures

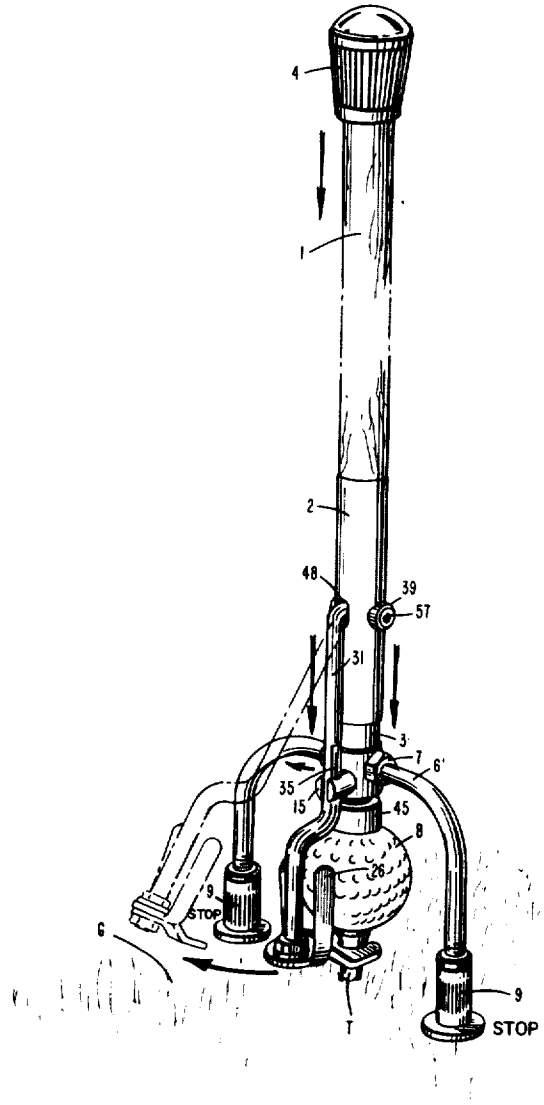
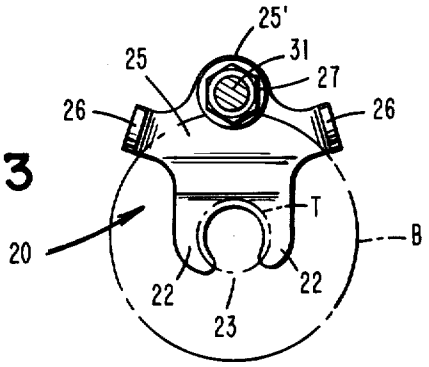


FIG. 3



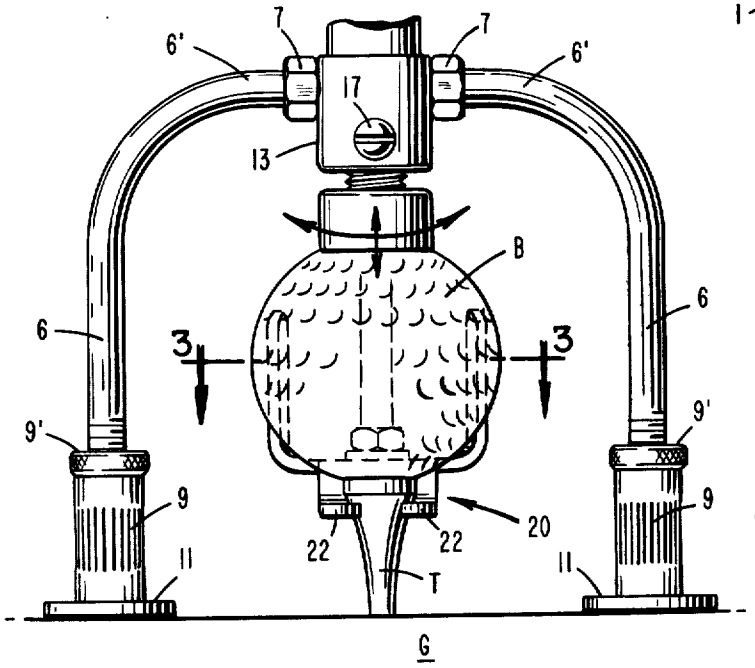


FIG. 2

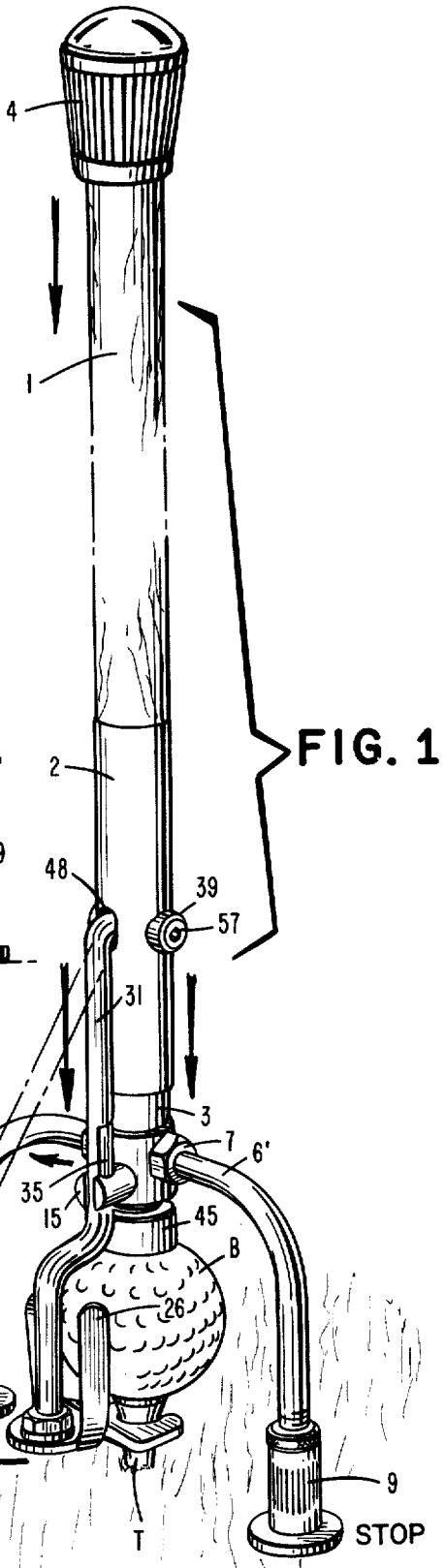
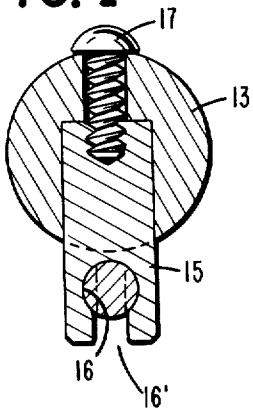


FIG. 1

FIG. 7



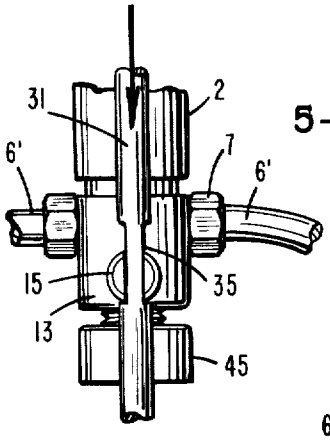


FIG. 8

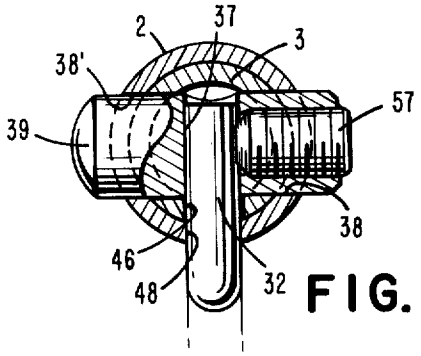


FIG. 5

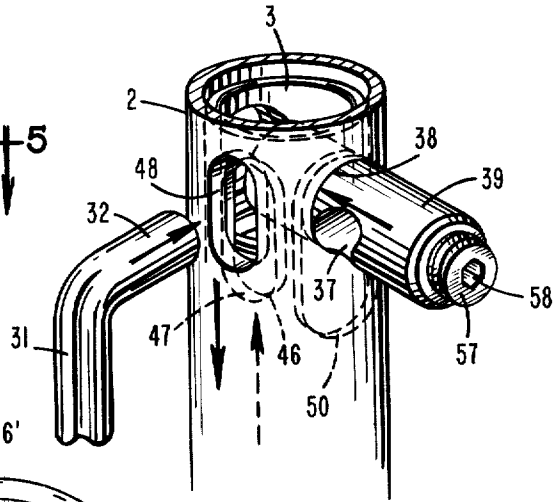


FIG. 6

FIG. 4

FIG. 12

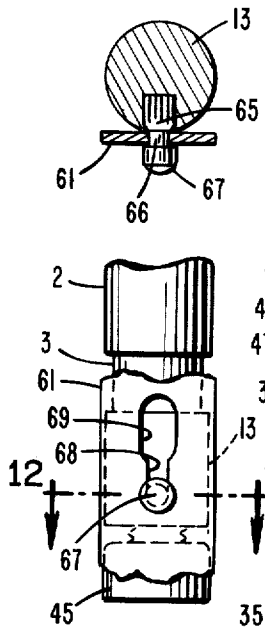


FIG. 11

FIG. 9

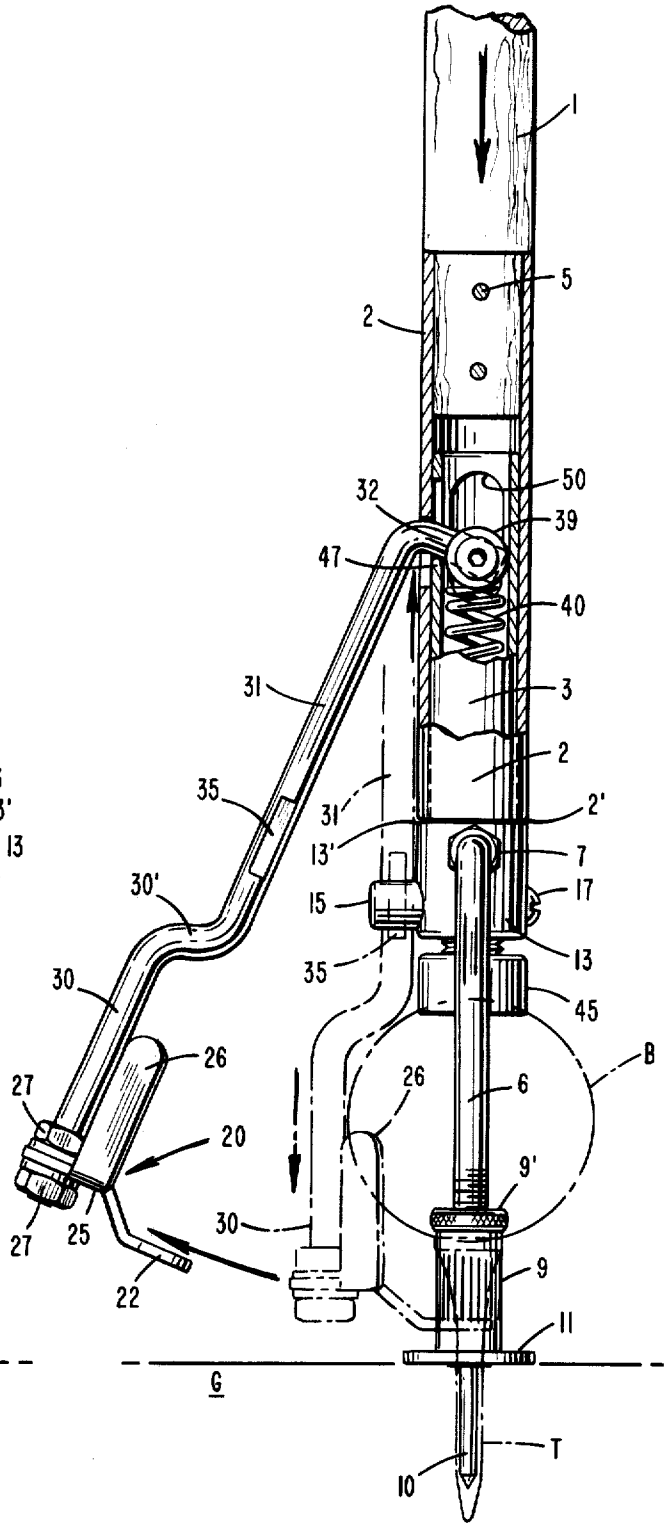


FIG. 10

GOLF BALL AND TEE POSITIONING DEVICE

This invention relates to a golf aid, and more particularly to a device for reliably positioning a golf ball with a supporting tee therefor, in the ground at a desirable adjustable level, without need for stooping or bending.

It is the object of the present invention to provide a rugged and reliable instrument for facilitating the insertion of a golf tee into the ground, with a golf ball supported thereon, at any desired level, without need of the player stooping or bending in the course of such operation.

It is a further object of the invention to provide a device of relatively few moving parts, which is capable of easy adjustment, and which permits the loading of a golf ball and tee therefor, at the operative end of a handle device. Thereafter, the ball and tee are inserted into the ground by the manipulation of the opposite free end of the handle, which, when followed by a simple rectilinear movement, results in the penetration of the pointed end of the tee into the ground with the golf ball supported on the top thereof, to a predetermined depth, and the subsequent automatic release of the device from the tee. The entire operation is executed quickly and with uniformly good results.

It is another object of the present invention to provide an improvement on the golf ball and tee handling devices as have been used heretofore, and as exemplified in U.S. Pat. No. 2,943,856, July 5, 1960.

Other objects and purposes will appear from the detailed description of the invention following hereinafter, taken in conjunction with the accompanying drawings, wherein

FIG. 1 is a perspective view of the device in accordance with the invention, illustrating the insertion of a golf tee and ball thereon into the ground for a predetermined depth, upon the conclusion of which, the instrument is released from the golf tee, as indicated in dotted lines;

FIG. 2 is a rear elevation of the lower end of the device as viewed in FIG. 1;

FIG. 3 is a horizontal sectional view along line 3—3 of FIG. 2, with the golf tee and ball indicated in dotted lines, for the purpose of clarity;

FIG. 4 is a front elevation of the lower portion of the device as viewed in FIG. 1;

FIG. 5 is a horizontal sectional view along line 5—5 of FIG. 4;

FIG. 6 is an exploded perspective view of the pivotal mounting assembly for the golf tee and ball retainer;

FIG. 7 is a horizontal sectional view along line 7—7 of FIG. 4;

FIG. 8 is a front elevation of FIG. 1 similar to FIG. 4, illustrating a different positioning of the parts shown in the latter incidental to the release of the retainer;

FIG. 9 is a vertical sectional view along line 9—9 of FIG. 4;

FIG. 10 is a vertical sectional view similar to FIG. 9 with the retainer illustrated in released position;

FIG. 11 is a front elevation of a locking mechanism for a different embodiment of the pivoted golf tee and ball retainer; and

FIG. 12 is a horizontal sectional view along line 12—12 of FIG. 11.

In the drawings is illustrated a golf aid in the form of a handle 1 of any desirable length, for example, 2 to 3 feet, which is provided with a grip 4 at the upper end thereof, and with a mechanism at the opposite operative end thereof for receiving a golf ball and tee assembly for yielding retention thereby. The assembly is inserted into the ground without bending or stooping, at the conclusion of which insertion the device is released from the ball and tee and positioned or case aside temporarily while the player proceeds with the drive of the ball.

The mechanism, which is described in detail below, is comprised generally of a pivoted cradle for the golf ball B and tee T, which is retained under spring pressure between the cradle and the lower end of the handle, and following the insertion of the tee into the ground G to a predetermined extent, as controlled by limiting stops for this penetration, the continued manipulation of the handle in a downward direction effects the release of the pivoted retainer 20 from the neck of the golf tee, so that the instrument may be removed from the golf ball and tee assembly.

The mechanism at the lower end of the handle is comprised of a cylindrical sleeve 2 which may be affixed to the lower end of the handle 1 by means of rivets or bolt fasteners 5. A hollow cylindrical member 3, formed with a closed cylindrical plug 13 at its lower end, is reciprocably mounted in sleeve 2 and extends beyond the bottom edge 2' of the latter by spring pressure. A pair of bifurcated legs 6 extend from diametrally opposed threaded openings in plug 13 through the intermediary of horizontal portions 6' which are locked to the plug by means of nuts 7. The lower ends of the legs 6 are threaded and receive correspondingly threaded bushings 9 provided with circular stop flanges 11 from which extend downwardly pointed spikes 10. Lock nuts 9' above the bushings serve to lock the bushings in an adjusted position to determine the degree of penetration of the golf tee T into the ground.

The locking device for the retainer for the golf tee is also mounted on the cylindrical plug 13 and extends mid-way between the locking bolts 7 for the penetrating legs 6 (FIGS. 1 and 4). The locking device consists of a cylindrical element 15 which is fastened by screw 17 at the interior of the plug 13 and the free end of which extends beyond the periphery of the plug 13 (FIG. 9). As shown in FIG. 7, the cylindrical element 15 is provided with a narrowed slot 16' which merges into the cylindrical passage 16 for the purpose of accommodating the vertical movement of the cylindrical supporting rod 30,31 for the cradle 20 which retains the tee and ball (FIGS. 9 and 10). The cylindrical supporting rod, as clearly shown in FIGS. 1, 9 and 10, is formed with offset parts 30 and 31, which are bridged by the intermediate part 30'.

The cradle 20 for the ball and tee is clamped to the supporting rod by the pair of fastening nuts and washers 27 mounted on the lower end of bar 30 which is threaded, to clamp the apertured end of the cradle between the pairs of nuts and washers. The cradle is composed of a bifurcated base portion 22 providing a slot 23 which is sufficiently narrow to permit the support of the enlarged upper end of the golf tee at its neck, but which does not permit the lateral withdrawal of the golf tee until the base portion 22 is in alignment with a thinner portion or stem of the tee T. In addition, the cradle support for the golf ball includes a pair of vertical guides 26 extending upwardly from opposite sides of the cradle base 25 adjacent to apertured end 25'. The consequent centering of the upper end of the tee in the

opening between arms 22 and the lateral support for the ball afforded by vertical guide wings 26 effects the retention of the ball and tee between the cradle and the lowermost movable end of the cylindrical plug 13. The latter is spring-biased in an outward direction, as explained in greater detail below, and in order to adjust the force of the retention of the golf tee and golf ball between the cradle and the lower end of the mechanism, a threaded projection 44 extends downwardly from the plug 13 and a threaded cap-nut 45 is adjustably mounted thereon. The bottom end of the nut 45 is undercut or hollowed out sufficiently at 45' to receive a limited portion of the spherical surface of the golf ball (FIG. 9), and the extent of protrusion of the cap-nut determines the degree of compression of the spring within the device which clamps the tee-head and ball between the cradle 20 and the cap-nut 45.

The cylindrical supporting rod for the golf ball and golf tee retainer, as stated above, is offset between the lower end 30 and the upper end 31 (FIGS. 9 and 10), and the same is mounted for pivotal movement at the upper end of the latter by the horizontal extension 32 mounted within pivoted pin 39 which extends between diametrally opposed circular openings 38 and 38' in cylindrical sleeve 2 fastened to the lower end of the handle 1 (FIGS. 4, 5 and 6). A diametrally disposed cylindrical opening 37 in pivot pin 39 receives the free end of rod 32 and the pivotal joint is rigidified by the provision of the threaded bolt 57 having an hexagonal opening 58 for accommodating an Allen wrench which fastens the horizontal upper terminal 32 of the pivotal supporting rod for the cradle within pin 39.

The rod 31 is provided with a pair of flats 35, in planes normal to the pivotal axis of pin 39, at opposite sides of the rod adjacent to the lower end of offset portion 31 remote from the terminal end 32, and the cylindrical contour 36 below these flats is designed to be accommodated within the cylindrical opening 16 in the projecting portion of lock 15. In this case, the narrowed slot 16' is incapable of permitting the passage of the cylindrical portion 36. However, when the cradle supporting rod is moved downwardly, by advancing the lower edge 2' of sleeve 2 towards the annular shoulder at the top of plug 13, the cylindrical portion 36 passes below the locking pin 15 and when the flattened portions 35 come into alignment with the narrowed slot 16', the cradle retainer is capable of swinging laterally from its supporting position for the golf tee, namely, from the position shown in FIG. 9 to that shown in FIG. 10. At this time, the supporting arms 22 for the tee are moved from the thickened neck to the narrowed stem thereof, in which position the slot 23 is capable of clearing the stem of the tee to swing into the position shown in FIG. 10.

The unitary support afforded by plug 13 for the leg mounts 6, at an initially fixed displacement from the pivotal axis of the cradle support, provides for an adjustment of the degree of penetration of the spiked bushings 9 into the ground by the stop flanges 11 relative to the tee supported therebetween within cradle 20. The outward protrusion of the bushings from the free threaded ends of the legs will result in a lesser penetration of the tee into the ground and a shortening of the legs, as indicated by the arrows, serves to position the top of the tee closer to the ground. The desired setting of the bushing is locked by lock-nuts 9', and the supporting cradle is released from the tee at all degrees of penetration since this release is controlled by the releasing slot 16' in locking pin 15 which is also mounted fixedly in plug 13, and which becomes operative when the handle 1 is forced downwardly, following the positioning of the tee and ball, against the force of the spring 40 seated in the hollow portion of cylindrical member 3 between the base 43 and pivot pin 39 (FIG. 9).

An elongated slot 48 is provided in cylindrical sleeve 2 for the entry of the terminal end 32 of the pivotal rod, and thereafter through elongated slot 46 in alignment therewith, for passage into the cylindrical opening 37 in pivot pin 39. In addition, cylindrical member 3 is provided with elongated slots 50 at the diametral portions coincident with circular openings 38 and 38' for the purpose of permitting relative movement of the cylindrical sleeve 2, across which is spanned the pivot pin 39, as the sleeve 2 moves downwardly around member 3 in the course of the advance of the bottom edge 2' towards the annular shoulder 13' of plug 13. Thus, as clearly shown in FIGS. 9 and 10, the downward movement of the handle 1 from the position shown in FIG. 9 to that shown in FIG. 10, as indicated by the arrow in the latter, effects the downward movement of the pivot bolt 39 which presses downwardly against the top of spiral spring 40, the lower end of which rests on seat 43 at the bottom of cylindrical member 3. This movement is permitted relative to member 3 by the provision of the elongated slots 50 in the latter. This movement also carries downwardly the rod 31 relative to the slotted opening 16' in the locking element 15 so that when the cylindrical portion 36 clears the cylindrical passage 16 in the element 15, and the flats 35 come into the field of operation of the elongated slot 16', the retainer rod is free to be thrown laterally to the position shown in FIG. 10. This movement arises by the striking of the lower surface of the horizontal terminal edge 32 by the lower edge 47 of elongated slot 46 which actuates the supporting rod in a clockwise direction around the axis of pivot pin 39, as indicated in FIG. 10.

The pivotal support for the cradle 20 may assume different forms, and in FIGS. 11 and 12 is illustrated an embodiment which utilizes a flat metal band in lieu of a cylindrical supporting rod as illustrated and described above. This variant embodiment is illustrated in FIGS. 11 and 12 and shows a support for the cradle in the form of a flat metal band 61 which is provided with a bayonet slot having a narrowed passage 68 at the lower end thereof and a widened passage 69 thereabove.

The locking device may assume the form of a pin 65 affixed in the plug 13 in any suitable way, having a restricted neck 66 and an enlarged head 67. When the golf ball and tee are clamped in position for insertion into the ground, as shown in FIG. 9, the supporting bar 61 is disposed close to the handle by virtue of the engagement of the locking pin within the narrowed portion 68. When the handle is pressed downwardly, carrying with it the supporting rod 61, the narrowed portion 68 passes beyond the confining head 67, and when the widened portion 69 arrives opposite the enlarged head 67, the rod 61 is free to be thrown outwardly to the position shown in FIG. 10.

Other structural changes may be made without sacrificing the advantages and spirit of the invention.

As is evident from the construction described above, the ball and tee may be positioned at a lower end of the mechanism by sliding the neck of the tee into the open-

ing 23 between the supporting wings 22 therefor, and engaging the upper portion of the ball with the yieldable cap-nut 45 which may be moved against the force of spring 40 by setting the grip 4 of the handle on the ground. The force of this clamping action may be modified by varying the position of the nut 45 on the threaded plug 44. When the nut is extended, the clamping force is increased, and when the nut is threaded closer to the plug 13, this clamping force is diminished. The cradle support is locked in position along the longitudinal axis of the device by locking the supporting rod 31 within the cylindrical opening 16 behind slot 16' in locking pin 15. The level of the ball supported by the tee is adjusted by rotating the bushings 9 at the ends of the legs 6. A seating of the ball close to the surface of the ground is obtained by threading the bushings upwardly, and a higher seating for the ball is obtained by threading the bushings outwardly. The desired positions are fixed by bringing lock nuts 9' into engagement with the upper ends of the bushings. The golf ball and tee are inserted into the ground at any desired point and the extent of penetration is controlled by the stop discs 11 against the ground surface. Thereafter, a pressure of the handle in a downward direction, which carries the end of sleeve 2' towards the shoulder 13' of the plug 13 effects a release of the supporting cradle and a pivotal rocking thereof from the ball and tee. Thereafter, the device can be positioned nearby by setting into the ground with the aid of the spaced spikes 10 in standing position, or it may be laid down until the completion of the drive of the ball by the player, when the instrument is in readiness for re-loading of the ball and tee therein.

We claim:

1. A golf ball and tee positioning device comprising
   a. a handle for setting a tee and a golf ball resting thereon, into the ground, while the player is in standing position,
   b. a yieldable rest for the top portion of the golf ball at the bottom of the handle,
   c. a retainer for the tee adapted to clamp the tee and golf ball in assembled position at said end,
   d. means for mounting said retainer for pivotal movement between a position in alignment with said yieldable rest at the bottom end of said handle and a position laterally thereof, and
   e. means responsive to a longitudinal movement of said handle in the direction of its longitudinal axis following the insertion of the tee into the ground and the conclusion of the penetration thereof to a predetermined depth, for moving said retainer to its lateral position to permit the withdrawal of the handle from the tee and golf ball resting thereon.

2. A device as set forth in claim 1, including means connected to the lower end of said handle branched therefrom symmetrically with respect to said retainer and terminating in legs with spiked ends for guided penetration into the ground, and an adjustable limit stop on each of said legs above the spiked ends thereof.

3. A device as set forth in claim 2, wherein the lower end of each of said legs is formed of a threaded rod, with an internally threaded cylindrical bushing in engagement therewith, with each spiked end extending from the lower end of the bushing, and the limit stop formed of an annular disk extending from the lateral wall thereof.

4. A device as set forth in claim 3, including a locknut in engagement with the threaded end of each leg above each bushing to fix the annular disk in desired adjusted position.

5. A golf ball and tee positioning device comprising
   a. a handle for setting a tee and a golf ball resting thereon, into the ground while the player is in standing position,
   b. a cylindrical sleeve at the lower end of said handle,
   c. a cylindrical member mounted for reciprocable movement beyond the open end of said sleeve,
   d. a yieldable rest for the top portion of the golf ball at the free end of said cylindrical member,
   e. a pair of spaced legs extending laterally from the end of said cylindrical member and bent in directions parallel to the common central axis of said handle, sleeve and cylindrical member,
   f. said legs terminating in threaded cylindrical ends,
   g. an internally threaded bushing for adjustable mounting on each of the threaded ends of said legs and fitted with a sharp projection at the free end of said bushing for penetration of the turf, and a transverse flange at an intermediate part of said bushing for limiting the extent of penetration of said projection,
   h. a retainer for the tee adapted to clamp the tee and golf ball in assembled position against said yieldable rest,
   i. means for mounting said retainer for pivotal movement between a position in alignment with said rest and lower end of said cylindrical member and handle, and a position laterally thereof around a pivotal axis above said rest and legs, and
   j. means responsive to a longitudinal movement of said handle in the direction of its longitudinal axis following the insertion of the tee into the ground and the conclusion of the penetration thereof to a predetermined depth, for moving said retainer to its lateral position to permit the withdrawal of the handle from the tee and golf ball resting thereon.

6. A device as set forth in claim 5, including spring means within said sleeve and cylindrical member for biasing the latter in an outward direction, with the axis of said pivotal movement disposed above said spring means.

7. A device as set forth in claim 6, including an abutment for the upper end of said spring means comprising a rotary cylindrical pin extending across both said sleeve and cylindrical member, an arm having one end thereof extending from said retainer with the upper end thereof affixed to said cylindrical pin, and said sleeve and cylindrical member having cooperating elongated slots in proximity to said cylindrical pin to permit translating and pivotal movements of the components of the device.

8. A device as set forth in claim 7, wherein said last-mentioned arm is comprised of upper and lower offset portions, and locking means for the upper portion mounted at the lower end of said cylindrical member.

9. A device as set forth in claim 8, wherein the upper portion of said arm is disposed in close proximity to the lateral wall of said sleeve and the lower portion thereof is more widely spaced from the longitudinal axis of said handle and sleeve.

10. A device as set forth in claim 9, including connections for fastening said retainer to the threaded end of the lower portion of said arm.

11. A device as set forth in claim 10, wherein said retainer is provided with symmetrically disposed upstanding guides for the ball adjacent to the fastened end thereof, and bifurcated wings at the free end thereof for supporting the neck of the golf tee, with an opening therebetween wider than the thickness of the stem below the neck of the tee.

12. A device as set forth in claim 10, wherein said arm is of cylindrical cross-section having a narrowed portion adjacent to said locking means, said locking means having a cylindrical passage therein opening into a narrow slot at the free end of said locking means, for permitting limited restrictive movement of said arm in a longitudinal direction until said narrowed portion arrives opposite said narrow slot, which permits the lateral throw of said arm through said slot.

13. A device as set forth in claim 10, wherein said arm is a flattened bar provided with a vertically disposed bayonet slot therein comprised of a narrowed passage below a widened passage, and said locking means comprises an enlarged head in engagement with the narrowed passage, for permitting limited restrictive movement of said arm in a longitudinal direction until said widened passage arrives opposite said enlarged head, which permits the lateral throw of said arm from said enlarged locking head.

* * * * *