March 31, 1964 E. BENKOE 3,127,177

GOLF BALL DISPENSING AND TEEING DEVICE

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FIG. 1

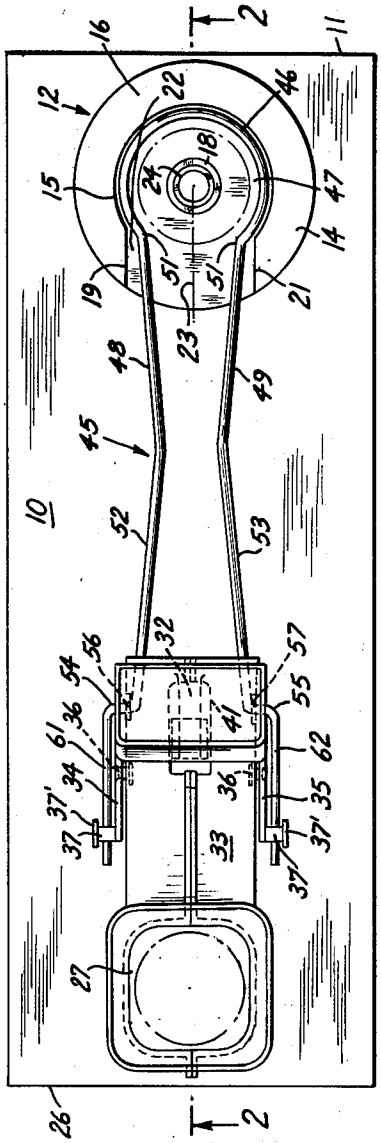
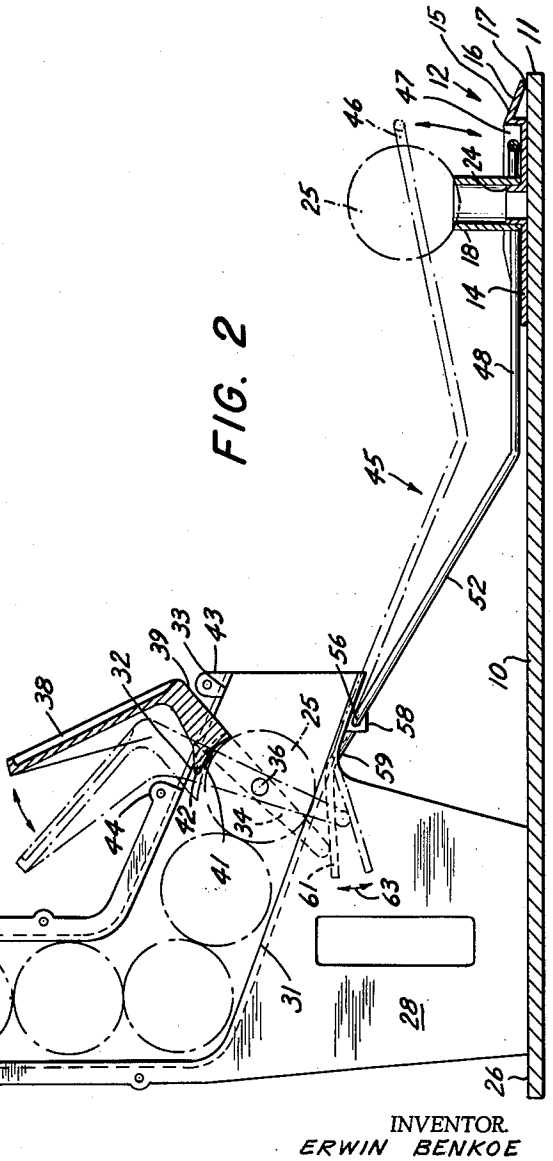


FIG. 2



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GOLF BALL DISPENSING AND TEEING DEVICE

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This invention relates to a simple, compact and relatively inexpensive golf ball teeing device, and more particularly to such device adapted to contain a supply of golf balls and upon actuation of a release member to tee-up the balls from the supply, one by one, as said release member is actuated.

The golf ball teeing device of this invention is particularly adapted for use in practicing tee shots, with any desired golf club, enabling the user to tee-up a ball from the supply thereof, whenever desired, expeditiously and with no inconvenience to the user, such as having to bend down to insert a tee or place a ball on the tee.

It is a principal object of the present invention to provide a simple, compact and relatively inexpensive golf ball teeing device designed to positively and accurately tee-up golf balls, one by one, from a supply, as desired by the user of the device.

Other objects and advantages of this invention will be apparent from the following detailed description thereof taken in connection with the accompanying drawing, which shows for purposes of exemplification a preferred embodiment of this invention, to which preferred embodiment, however, the present invention is not limited. In the drawing:

FIGURE 1 is a plan view of a preferred embodiment of a golf ball teeing device embodying the present invention; and

FIGURE 2 is a vertical section, partly in elevation, taken in a vertical plane passing through line 2—2 on FIGURE 1.

In describing the golf ball teeing device the end thereof at which the ball is teed-up will be referred to as the forward or front end of the device and the ends of the component parts closest to this portion of the device will be referred to as the forward or front end and the opposite end of each such component will be referred to as the rear end. It will be understood that this is for the purpose of facilitative description of the embodiment of the invention shown in the drawing and is not intended to limit the invention to the particular shape of or position of the parts.

Referring to the drawing, 10 is a suitable support desirably in the form of a flat plate which can be of fiberboard or any other suitable material. Mounted at the forward end 11 of support 10 is a tee member 12. Member 12, which can be of rubber, synthetic or natural, or plastic, such as polyethylene or polypropylene, or other suitable flexible material of construction, comprises a base 14, desirably circular in shape, suitably secured to support 10, for example, by being adhesively bonded thereto. Base 14 has an upstanding wall 15 near its outer periphery from the top of which wall extends the inclined golf club head protecting surface 16 into engagement with the support 10 as at 17. Inclined surface 16, is generally annular in configuration and extends about the sides and front of a tubular tee 18. Desirably, the inclined surface 16 extends approximately 270° about the front and sides of tee 18, as shown in FIGURE 1, and terminates in upstanding walls 19 and 21 which define an opening 22 approximately 90° in extent in the surface 16. The median 23 of this opening is coincident with the horizontal diameter of the tee 18 and hence also of the base 14. The function of opening 22 will be pointed out hereinafter.

Tee 18 is secured to an upstanding nipple 24 centrally positioned on base 14. Nipple 24 can be formed integrally with the base 14 as shown in FIGURE 2. The inner walls of the lower portion of tubular tee 18 is adhesively or otherwise secured to nipple 24. Tee 18 is of rubber or flexible plastic material, having inherent resiliency so that the tee 18 returns to its vertical position whenever it is inadvertently struck by the golf club head, yielding when this happens and thereafter snapping back to its vertical position after the golf club head no longer engages the tee 18. This construction of tee supporting member 13, including the golf club head protecting surface 16 and tee 18 minimizes, if it does not completely prevent, damage to the golf club head due to it being inadvertently swung into contact with member 13. Furthermore, the inclined surface 16 serves to deflect the swung head of the club, when swung in an arc to engage surface 16, from contacting the support 10, thus minimizing damage to support 10.

If desired, tubular tee 18, nipple 24, base 14 and protecting inclined surface 16 can be of one-piece or integral construction, formed from rubber or suitable resilient plastic, rather than having the tee 18 formed separately and secured to the nipple 24. The height of the tee 18, as clearly shown in FIGURE 2, is appreciably greater than that of the wall 15, so that the tee 18 supports the golf ball 25, when teed-up, with the lowermost portion of the ball above the upper edge of wall 15, say, a distance of about ½" to 1" or more, if desired.

At the opposite end 26 of the support 10, a substantially L-shaped chute or container 27, for the golf balls, is mounted on a mounting bracket 28 the lower end of which is suitably secured to the support 10. The L-shaped container 27 comprises an upright portion 29 communicating with a downwardly inclined discharge portion 31, each having an internal diameter such as to accommodate a row of golf balls 25 with adequate clearance between the periphery of the balls and the inner walls of the container to enable the balls to move therethrough under their weight. The discharge portion 31 has a slot 32 in the upper wall 33 thereof.

Pivotally mounted to the sides of the discharge portion 31 are levers 34, 35. These levers pivot about pivot pins 36 on the outer walls of the discharge portion 31. Levers 34 and 35 each has on its lower extremity a laterally extending projection 37, desirably provided with a flanged end 37'. The upper ends of levers 34 and 35 are secured to an actuating shoe or member 38 extending across the top of discharge portion 31. Actuating member 38 has on its underside, at approximately the median thereof, an arm 39 which extends through the slot 32 in wall 33. An arcuate ball stop 41 is carried by the lower end of arm 39; stop 41 is positioned within the discharge portion 31 at the forward end thereof as shown in FIGURE 2.

Levers 34 and 35 and the actuating member 38 carried thereby are so weighted that in their normal position, shown in full lines in FIGURE 2, the arcuate ball stop 41 engages the periphery of the leading golf ball 25 near its top and acts as a stop to prevent discharge of this leading ball from discharge portion 31. When the actuating member 38 is actuated, for example, by a golf club or by the foot or hand of the user, it and the levers 34 and 35 swing about pivot pins 36 moving the ball stop 41 to the dot-dash line position shown in FIGURE 2 where the rear end 42 thereof engages the succeeding golf ball in the discharge portion 31 to act as a stop therefor, releasing the leading golf ball 25 and permitting it to be discharged from the discharge end of the discharge portion 31.

A stop 43 is desirably formed at the top of the discharge portion 31 to limit pivotal movement of the actuating member 38 toward the front end of the device.

Movement of actuating member 38 in the opposite direction is similarly limited by a rear stop 44 positioned adjacent the rear end of slot 32.

Pivoted to the underside or base 59 of discharge portion 31 is a guide frame 45. This frame desirably is formed of relatively small diameter rods or wire shaped to provide at its front end a substantially circular ball discharge end or portion 46 preferably extending through an arc of about 270° and having a diameter slightly greater or, if desired, somewhat smaller than the diameter of a golf ball. When the diameter is slightly greater than that of the ball the discharge end functions as a guide to permit the ball to roll therethrough onto the tee. When the diameter is somewhat smaller than that of the ball the discharge end or portion of the guide frame serves as a ball holder or support, to position the ball above the tee and deposit the ball onto the tee when the holder is moved to the full line position shown in FIGURE 2. Discharge portion 46, will sometimes hereinafter be referred to as a ball support, but it will be understood it can be dimensioned so that the ball passes therethrough and thus is not actually supported by portion 46.

As noted, it is preferred to shape the walls of the discharge portion 46 of the guide frame so that they extend through an arc of about 270°, substantially the same as the arc of the inclined surface 16 and the upstanding wall 15. The wall 15 thus defines a substantially annular recess or chamber 47 between the periphery of tee 18 at the lower end thereof and the wall 15. The center of circular discharge portion 46 is positioned substantially on the vertical axis of tee 18 when in the dot-dash line position shown in FIGURE 2 to facilitate positioning of the ball properly centered relative to tee 18. In the rest position, shown in full lines in FIGURE 2, the discharge end 46 is positioned in the chamber or recess 47.

Sides 48, 49 of guide frame 45 extend from the ends 51 of the arcuate shaped ball support 46 and lie in a substantially horizontal plane, the same as the plane of the ball support 46 when in the rest position shown in full lines in FIGURE 2. These sides 48, 49 extend rearwardly, a distance approximately one-half the distance between the tee 18 and the discharge end of ball container 27 and are spaced apart, at their widest portion where they join ball support 46, a distance less than the diameter of a golf ball so that the ball cannot fall therethrough. As shown in FIGURE 1 sides 48 and 49 converge in a direction from front to rear of the device and lead into the upwardly inclined sides 52, 53, respectively, which diverge in a direction from front to rear of the device. Sides 52 and 53 are spaced apart throughout the area where a golf ball is received thereby and moves therealong a distance such that a ball resting thereon cannot fall therethrough.

Sides 52 and 53 lead into the laterally extending portions 54 and 55, respectively. Portions 54 and 55 extend from their sides 52 and 53, respectively, in a direction away from each other and towards the sides of the base 10. These laterally extending portions 54 and 55 are pivotally mounted in supports 58 extending downwardly from the base 59 of discharge portion 31 at the opposite sides thereof for pivotal movement about pivots 56 and 57. The guide frame 45 is thus mounted for pivotal movement about pivots 56 and 57.

The outer ends of portions 54 and 55 have rearwardly extending arms 61 and 62, respectively positioned, as shown in FIGURE 1, adjacent the discharge portion 31. When the guide frame 45 is in its rest position shown in full lines in FIGURE 2, and when the arcuate stop 41 is in its full line position shown in FIGURE 2, to prevent discharge of the leading golf ball 25, the lateral projections 37 on the levers 34 and 35 are in light contact with the arms 61 and 62, respectively. This position of the parts is the upper position represented by the curved line 63 having arrow heads at the opposite ends thereof indicating the rocking or pivotal movement of the lower ends

of levers 34 and 35 having the lateral projections 37 and the actuating arms 61 and 62.

When the actuating member 38 is engaged, say by a club head or foot of the user and a force exerted in a direction toward the rear of the device, levers 34 and 35 are rocked about pivots 36 causing projection 37 to move arms 61 and 62 and hence the guide frame 45 from the full line to the dot-dash line position shown in FIGURE 2. This elevates the ball support 46 above the tee 18 a distance adequate to support the lowermost surface of the ball slightly above the top of tee 18. Simultaneously with this movement arcuate stop 41 moves to release the leading ball and maintain the succeeding ball and hence all following balls within the ball container 27. As the leading golf ball 25 is released it gravitates onto the guide frame 45 then completing its movement to the dotted line position shown in FIGURE 2, so that the ball rolls gently along the downwardly inclined sides 52 and 53 and thereafter along the sides 48, 49 which are then inclined upwardly. It will be noted that elevation of the guide frame 45, from the full line to the dot-dash line position shown in FIGURE 2, moves the sides 48, 49 which lead into the circular ball support 46 into an upwardly inclined position. The upward inclination of sides 48 and 49 function to retard the velocity of the rolling ball and insure that the ball will come to rest within the circular ball discharge portion 46 when the diameter of arcuate discharge portion 46 is smaller than that of the ball and the ball will pass therethrough onto the tee 18 when the diameter is greater.

Upon release of the actuating member 38, the levers 34 and 35 and the stop member 41 return to the full line position shown in FIGURE 2, permitting the balls in the container 27 to move under the influence of gravity with the then leading ball engaging the stop 41 and hence in position for release when the actuating member 38 is again actuated. Simultaneously the guide frame 45 descends to the full line position where arms 48 and 49 are disposed horizontally with the forward ends thereof positioned in recess 47 out of the path of movement of the club when it is swung to strike the ball. When the diameter of arcuate discharge portion 46 is smaller than that of the ball, the downward movement of guide frame 45 accurately places the golf ball on the tee 18.

Thus the golf balls are released one by one, as desired, and teed-up automatically.

It will be noted that the golf ball teeing device of this invention is simple, compact and hence relatively inexpensive to construct, and in use positively and accurately tees-up golf balls one by one, from a supply, as desired by the user and with a minimum of inconvenience or effort on the part of the user in effecting its operation.

Since certain changes can be made in the golf ball teeing device hereinabove described, and shown in the accompanying drawing, without departing from the scope of the invention, it is intended that all matter contained in the above description, as well as the showing of the accompanying drawing, shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. A golf ball teeing device comprising, in combination, a support, a container for a supply of golf balls mounted on said support, said container having a downwardly inclined discharge end constructed and arranged to maintain therein a row of golf balls, a tee on said support spaced from said discharge end, the discharge end of said container having a slot in the upper wall thereof, an arm extending through said slot, an arcuate stop member on the end of said arm within the discharge end of said container movable from a position to engage the leading ball and prevent movement thereof from said discharge end of said container to a position to release said leading ball and act as a stop for the succeeding ball, an actuating member on the end of said arm positioned exteriorly of said discharge end of said container, lever

means pivotally mounted on said discharge end, said actuating member being operatively connected to said lever means, a pivoted guide frame arranged to receive at one end thereof balls from the said discharge end, said guide frame having a ball discharge portion at the end thereof remote from the ball receiving end, said ball discharge portion being movable from a lower position adjacent said support to an upper position in which said ball discharge portion effects the discharge of the ball onto said tee, said guide frame being actuated by said lever means, whereby upon actuation of said actuating member to actuate said arm, said arcuate stop is moved to release the leading ball and the guide frame is simultaneously moved to elevate the said ball discharge portion above the tee and provide a guide surface along which the leading ball rolls from said discharge end of said container to said ball discharge portion above the tee, and release of said actuating member returns said arcuate stop to its original position where it prevents discharge of the leading ball and simultaneously releases the guide frame for descent to its original position with the ball discharge portion adjacent said support.

2. A golf ball teeing device comprising, in combination, a support, a container for a supply of golf balls mounted on said support, said container having a downwardly inclined discharge end constructed and arranged to maintain therein a row of golf balls extending in a substantially longitudinal direction with one ball in back of the next, a flexible upstanding tee mounted on said support spaced from said container, the discharge end of said container having a slot in the upper wall thereof, an arm extending through said slot, an arcuate stop member on the end of said arm within the discharge end of said container positioned to engage the leading ball and prevent movement thereof from said discharge end of said container, an actuating member on the end of said arm positioned exteriorly of said discharge end of said container, levers pivoted to the sides of said discharge end of said container and having the upper ends thereof secured to said actuating member and the lower ends thereof extending below the pivots therefor, a guide frame pivoted to said container at the discharge end thereof and having at its forward end a substantially circular ball discharge portion, said guide frame being movable from a lower position with said circular ball discharge portion adjacent said support to an upper position in which said ball discharge portion is positioned above said tee, said guide frame having rearwardly extending portions positioned on opposite sides of said discharge end of said container and in substantial contact with the said lower ends of said levers so that upon actuation of said actuating member to move said levers about their pivots said arcuate stop is moved to release the leading ball and the guide frame is simultaneously moved to elevate the said ball discharge portion above the tee and provide a guide surface along which the leading ball rolls from said discharge end of said container to said ball discharge portion above the tee, release of the actuating mechanism returning said arcuate stop to its original position where it prevents discharge of the leading ball and simultaneously releasing the guide frame for descent of the ball discharge portion to its position adjacent said support.

3. A golf ball teeing device comprising, in combination, a container for a supply of golf balls, said container having a downwardly inclined discharge end, a substantially flat supporting surface for said container, a golf ball teeing structure on said supporting surface, said golf ball teeing structure comprising a substantially annular member having a substantially vertical upstanding wall defining a depressed area relative to the top of said wall, said annular member having an opening therein extending laterally therethrough with the median of said opening coincident with the diameter of said annular member, an inclined wall extending from the top of said vertical wall to said supporting surface, a tubular tee fixed to the central portion of said depressed area and extending a height above the height of said vertical wall, the top wall of said discharge end of said container having a slot therein, an arm extending through said slot, an arcuate stop member on the end of said arm within the said discharge end of said container to engage a leading ball and prevent movement thereof from said discharge end, an actuating member on the end of said arm positioned exteriorly of said discharge end, levers pivoted to the sides of said discharge end and having the upper ends thereof secured to said actuating member and having their lower ends extending below the pivots therefor, a guide frame having at its forward end a substantially circular ball discharge portion, said guide frame being movable from a lower position with said ball discharge portion adjacent said support to an upper position in which said ball discharge portion supports a ball above said tee, the diameter of said ball discharge portion being slightly greater than that of a golf ball, the center of said circular ball discharge portion being substantially in line with the vertical axis of said tubular tee, said circular ball discharge portion merging into sides extending rearwardly therefrom having the portions thereof contiguous to said circular discharge portion lying in substantially the same horizontal plane as said circular discharge portion when the latter is positioned adjacent said support, said portions of said sides merging into portions inclined upwardly which latter portions are pivoted to said discharge end of said container and have extensions on opposite sides of said discharge end of said container positioned to be engaged by the said lower ends of said levers so that upon actuation of said actuating member to move said arcuate stop to release the leading ball in said discharge end of said container, said guide frame is simultaneously moved to elevate the said ball discharge portion above the tee and provide a guide surface along which the leading ball rolls into a position above the tee, release of the actuating mechanism returning said arcuate stop to its original position where it prevents discharge of the leading ball and simultaneously releasing the guide frame for descent of the ball discharge portion to its position adjacent said support.

4. A golf ball teeing device comprising, in combination, a substantially L-shaped container for a supply of golf balls consisting essentially of a substantially vertical golf ball receiving housing and a communicably connected downwardly inclined golf ball discharging chute, each of said housing and chute having a cross-sectional extent slightly larger than the diameter of a golf ball, a substantially flat longitudinally elongated supporting surface for said container on one end of which said container is mounted, a golf ball teeing structure on the other end of said supporting surface, said golf ball teeing structure comprising a substantially annular member having a substantially vertical upstanding wall defining a depressed area relative to the top of said wall, said annular member having an opening therein extending laterally therethrough with the median of said opening coincident with the diameter of said annular member, an inclined wall extending from the top of said vertical wall to said supporting surface, a tubular tee fixed to the central portion of said depressed area and extending a height above the height of said vertical wall, the top wall of said chute having a slot therein, an arm extending through said slot, an arcuate stop member on the end of said arm within said chute to engage a leading ball and prevent movement thereof from said chute, an actuating member on the end of said arm positioned exteriorly of said chute, levers pivoted to the sides of said chute and having the upper ends thereof secured to said actuating member and having their lower ends extending below the pivots therefor, a guide frame having at its forward end a substantially circular ball discharge portion, said guide frame being movable from a lower position with said ball discharge portion in said depressed area and adjacent said support to an upper position in which said ball discharge portion is positioned

above said tee, the center of said ball discharge portion being substantially in line with the vertical axis of said tubular tee, said circular ball discharge portion merging into sides extending rearwardly therefrom having the portions thereof contiguous to the ball discharge portion lying in substantially the same horizontal plane as the said discharge portion when the latter is positioned adjacent said support, said portions of said sides merging into portions inclined upwardly which latter portions are pivoted to said chute and have extensions on opposite sides of said chute positioned to be engaged by the said lower ends of said levers so that upon actuation of said actuating member to move said arcuate stop to release the leading ball in said chute said guide frame is simultaneously

moved to elevate the said ball discharge portion above the tee and provide a guide surface along which the leading ball rolls into and through said ball discharge portion onto said tee, release of the actuating mechanism returning said arcuate stop to its original position where it prevents discharge of the leading ball and simultaneously releasing the guide frame for descent of the ball discharge portion to its position adjacent said support.

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