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**FOREIGN PATENTS**

109,972 3/1940 Australia ..... 273/207

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[54] **GOLF TEE**  
**5 Claims, 4 Drawing Figs.**

[52] U.S. Cl. .... 273/212

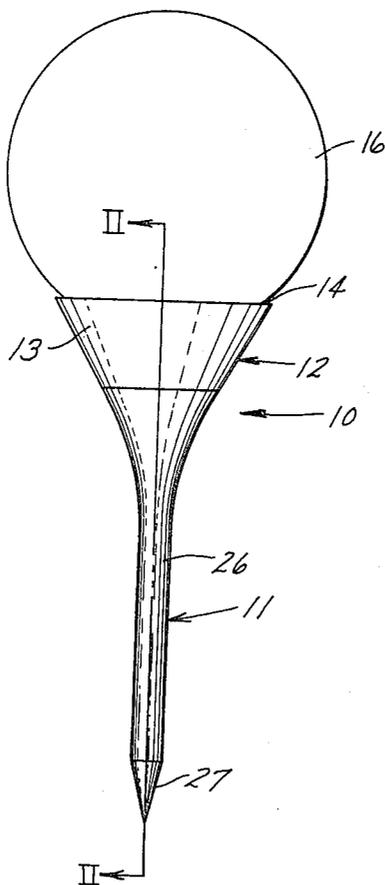
[51] Int. Cl. .... A63b 67/14

[50] Field of Search ..... 273/33,  
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[56] **References Cited**  
**UNITED STATES PATENTS**

1,550,483 8/1925 Wulkop ..... 273/212X

**ABSTRACT:** A plastic golf tee having upper and lower parts, the lower part being relatively rigid for insertion into the ground and the upper part being relatively resiliently flexible for engaging and supporting the golf ball, said upper part including a manually engageable, centrally disposed abutment for pressing the lower part of the tee into the ground, said abutment being located so that it does not normally engage the golf ball. The upper part of the tee has a flexible and upwardly diverging sidewall defining a frustum of a cone. The upper edge of the sidewall normally supports the ball out of contact with the abutment. A pin extends downwardly from the abutment into an aperture in the lower part to secure the upper and lower parts together.



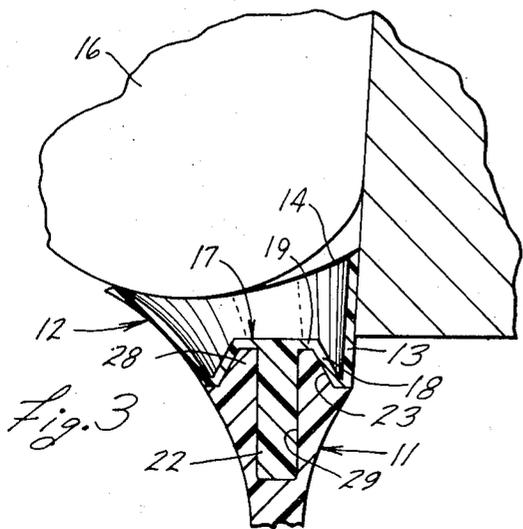


Fig. 3

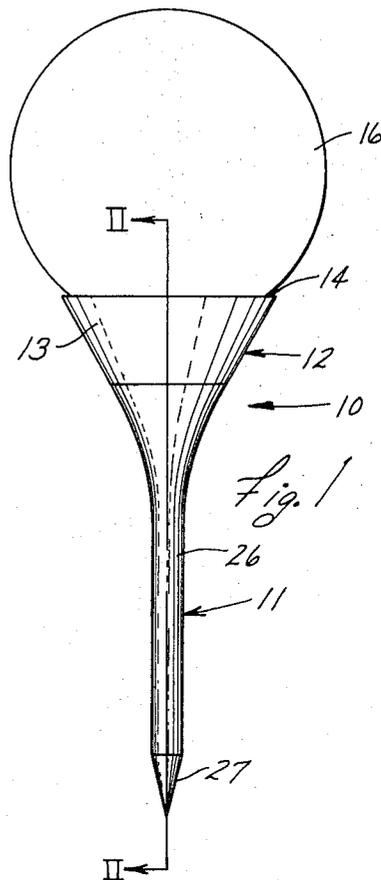


Fig. 1

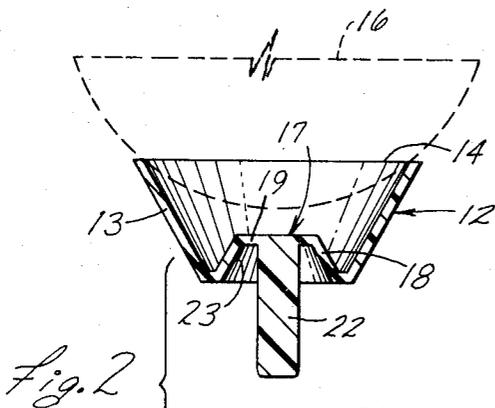


Fig. 2

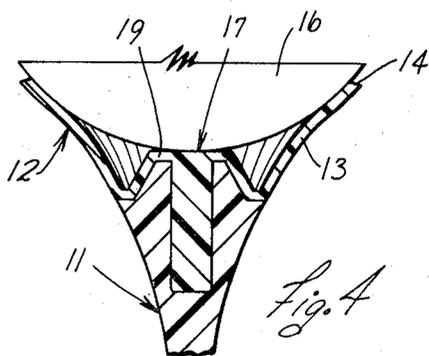
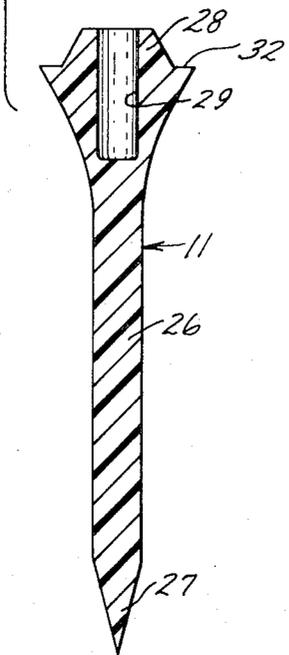


Fig. 4

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## GOLF TEE

## BACKGROUND OF THE INVENTION

This invention relates in general to a golf tee and, more particularly, to a type thereof providing more stability in the support of a golf ball, minimizing breakage and minimizing interference of the tee with the movement of the golf ball and/or golf club when the ball is struck while supported by the tee.

Any person having average experience at playing golf is aware of the number of golf tees that are broken in playing golf. Such broken tees create many problems, such as an untidy appearance on the golf course, the necessity for constantly replacing them and the interference they can create for mechanical mowing equipment used on the golf course. In order to minimize the foregoing problems, as well as the financial loss, golf tees are frequently made as small as possible. However, this increases the difficulty of locating the tee after it has been used and renders the tee more easily breakable.

Some attempts have been made to overcome the foregoing problems by providing a relatively soft or pliable and pointed tee, but these have been difficult to urge into the ground, particularly when the ground was dry or hard.

It is believed by some golfers that conventional rigid golf tees, such as those made from wood or substantially rigid plastic, create some obstruction to movement of the ball away from the tee. In order to minimize such obstruction, some golfers insert the tee into the ground so that it leans in the direction of intended movement. Thus, the lip of the ball-engaging cup creates a minimum of interference. However, this is a delicate procedure and sometimes permits the ball to roll off the tee just as it is being struck.

Accordingly, a primary object of this invention is the provision of a golf tee which gives adequate support to the golf ball, which can be urged with ease into relatively hard ground, and which creates a minimum of obstruction to the movement of the ball away from the tee when struck by a golf club.

A further object of this invention is the provision of a golf tee, as aforesaid, which is capable of withstanding the blows from a golf club without breaking, even when it is in hard ground, and which is not easily knocked out of the ground, but which can be easily seen if it is.

Other objects and purposes of this invention will become apparent to persons familiar with golf tees after reading the following descriptive material and examining the accompanying drawings, in which:

FIG. 1 is a side elevational view of a golf tee embodying the invention and supporting a golf ball.

FIG. 2 is a sectional view taken along the line II-II in FIG. 1.

FIG. 3 is a fragment of FIG. 2 including part of a golf club and showing the tee during impact by the club.

FIG. 4 is a fragment of FIG. 2 showing the ball in engagement with the abutment.

## SUMMARY OF THE INVENTION

The objects and purposes of the invention, including those set forth above, have been met by providing a plastic golf tee having a relatively rigid lower part and a resiliently flexible upper part for engaging and supporting a golf ball. A relatively rigid abutment is provided in the upper part for urging the tee into the ground, but the abutment is normally spaced from the supported ball.

## DETAILED DESCRIPTION

The tee 10, a preferred embodiment of which is illustrated in FIGS. 1 and 2, is comprised of a relatively stiff lower part 11 and resiliently flexible upper part 12 which are firmly held together. The lower part may be fabricated from nylon or similar plastic material which can be molded, which can be bent without breaking and which can be urged into the ground with relative ease. The upper part 12 of the tee may be fabricated from polyethylene or similar plastic material which is durable, relatively easily bent and resiliently flexible.

The upper part 12 of the tee has an upwardly diverging, relatively thin sidewall 13 which defines an inverted frustum of a cone. The upper edge 14 of the sidewall 13 is preferably disposed substantially within a plane perpendicular to the axis of revolution of the sidewall 13 for engaging and thereby supporting a golf ball 16. The upper part 12 has a central abutment 17 including a radial wall 18 which defines a frustum of upwardly converging cone within the sidewall 13. The lower edge of the radial wall 18 is integral with the lower edge of the sidewall 13. The abutment 17 has a flat top wall 19 which preferably lies within a plane disposed intermediate the upper and lower edges of the sidewall 13. The top wall 19 is preferably spaced slightly downwardly from the adjacent side of the golf ball 16 supported upon the upper edge 14 of the sidewall 13, as shown in FIG. 2.

It will be seen that the diameter of the upper edge 14 of the upper part 12 can be varied substantially, while keeping the supported ball 16 at a substantially constant distance from the abutment 17. For example, the height of the wall 13 can be increased as the diameter of the edge 14 is increased. However, it is believed that the diameter of the edge 14 is preferably and approximately in the range from three-eighths inch to 1 inch.

The spacing between the abutment 17 and the supported ball 16 is preferably such that the tee can, if desired, be urged into the ground by holding the two in their FIG. 1 position. The sidewall 13 will be stretched sidewardly (not beyond its elastic limit) until the ball 16 bears against the abutment 17 (FIG. 4) which thereafter transmits the pressure to the lower part 11.

The upper part 12 of the tee 10 also includes a downwardly extending pin 22 which is integral at its upper end with the top wall 19 and which is spaced radially inwardly from and concentric with the radial wall 18. The radial wall 18 and pin 22 define an annular recess 23 within the abutment 17. The pin 22 preferably extends a substantial distance below the lower edge of the sidewall 13 as illustrated in FIG. 2.

The lower part 11 of the golf tee 10 has a substantially conventional shank 26 terminating at its lower end in a pointed tip 27 which facilitates pressing of the golf tee into the ground. The extreme upper end portion 28 of the lower part 11 is in the form of an upwardly diverging frustum of a cone which is snugly receivable into the recess 23. However, in order to permit such recessing, a pin opening 29 is provided concentrically within the upper end of the lower part 11 and it extends downwardly to receive the pin 22.

The upper portion of the shank 26, just below the frustum end 28, defines a portion of an upwardly diverging cone which at its lower end merges with the cylindrical central portion of the shank. The upper end of this diverging cone blends into the outside surface of the sidewall 13 when the portion 28 is within the recess 23. Thus, the lower part 11 has a flat, annular and upwardly facing surface 32 near the upper end thereof which engages the lower edge of the sidewall 13.

The diameters of the pin 22 and pin opening 29 are preferably such that the pin 22 is firmly held by the walls defining the opening 29. An adhesive, such as an epoxy resin, may be applied to the engaging surfaces of the upper and lower parts 12 and 11, respectively. Also, the pin 22 and the walls of the opening 29 may be provided with cooperating gripping means such as a screw thread. Further, due to the axial length of the pin 22, a secure and strong connection is provided between the upper and lower parts 11 and 12 so that the upper part does not tend to tear or pull off from the lower part when hit by the golf club.

It will be recognized that, by using refined molding techniques, it is at least possible to mold the upper and lower parts of the tee together from two different plastics in a single molding operation. Furthermore, it is within the contemplation of this invention that, by appropriate processing during the molding operation, a selected plastic material might be provided with more rigid characteristics in the lower part of the tee and with more resiliently flexible characteristics in the upper part of the tee so that only one type of plastic material is actually required to produce both parts of the tee.

## OPERATION

While the operation of the above-discussed tee will be apparent to skilled persons from an examination of the foregoing descriptive material, it is summarized hereinafter.

The lower part 11 of the tee is inserted into the ground by placing said lower part between the first and second fingers of the hand and placing the thumb on the top wall 19 of the abutment 17. Alternatively, the ball and tee can be gripped together in a conventional manner so that the ball 16 can be used to drive the tee in the ground as discussed above. That is, the ball will be urged against the abutment 17 (FIG. 4) whereby the tee is urged into the ground. The ball 16 is then placed upon the upper edge 14 of the upper part 12 of the tee which the ball can be struck with the golf club in the usual manner. However, if the golf club head strikes the ball only, and does not touch the tee, the resiliently flexible sidewall 13 will bend readily as the ball departs from the tee so that the tee does not obstruct the movement of the ball away from the tee.

If, as usually happens, the upper part 12 of the tee is engaged by the golf club head, the sidewall 13 will flex under the force exerted by the golf club head and, it will produce no material obstruction to the movement of the golf club head as it strikes the ball. Moreover, as the sidewall 13 of the upper part is collapsed on the side thereof engaged by the club head, as shown in FIG. 3, the volume of air within the wall means is compressed, thereby urging the ball upwardly out of the upper part of the golf tee. At the same time, the portion of the sidewall 13 struck by the golf club head will be pivoted upwardly against the golf ball, thereby also lifting the golf ball slightly away from the tee in cooperation with the lift created by the compression of the air within the upper part of the tee.

While the amount of lift produced by the engaged edge of the wall means and the compressed air within the upper part of the golf tee may be relatively minor, it is such that it will tend to improve the initial flight of the ball rather than obstruct it, as do conventional tees.

Because of the resilient flexibility of the sidewall in the upper part 12 of the tee, the tee 10 is less likely to be disturbed from its position within the ground so that the golfer can promptly remove it from the ground and return it to his pocket for use at the next teeoff. However, if the golf tee is knocked loose from its position in the ground, the relatively large upper part thereof can be seen more easily than the smaller conventional tees. Moreover, because of the resiliently flexible nature of the upper part, there is much less likelihood that the tee will be broken, even if it is knocked loose from the ground.

By making the lower part of the tee from a readily noticeable colored plastic, such as a brilliant pink, the tee can be readily found when it is knocked loose from the ground. Yet the pink portion will not interfere in any way with the attention of the golfer since most of it will be buried when the tee is used. That is, the upper part of the tee can be fabricated in a less noticeable color.

Although a particular preferred embodiment of the invention has been disclosed in detail above for illustrative purposes, it will be recognized that variations or modifications of such disclosure, which come within the scope of the appended claims, are fully contemplated.

I claim:

1. A plastic golf tee comprising an upper part and a lower part fixedly connected to each other, the lower part having a downwardly converging lower end and an upwardly diverging upper end, said lower part being fabricated from relatively

stiff material; the upper part of said tee having a thin, resiliently flexible and upwardly diverging sidewall defining a frustum of a cone, said sidewall being formed of material substantially less rigid than said lower part, said upper part having within said sidewall a central, upwardly projecting and relatively rigid abutment with a flat top spaced below the adjacent surface of a golf ball engaged by and supported upon the upper edge of said sidewall of said upper part, the lower edge of said sidewall being disposed below the flat top of said abutment and being integrally interconnected to said abutment, said abutment being engageable by the thumb of a normal adult hand for pressing the lower part of said tee into the ground, and the diameter of the upper edge of said sidewall being such that said ball can be urged into engagement with the flat top of said abutment, thereby to drive the tee into the ground, after which the sidewall will return to its initial shape, wherein the ball is spaced from the abutment.

2. A golf tee according to claim 1, wherein the diameter of the upper edge of the sidewall is approximately in the range of between three-eighths of an inch and 1 inch.

3. A golf tee according to claim 1, wherein a centrally disposed pin is integral with the abutment and extends downwardly therefrom below the lower edge of said sidewall; and wherein said lower part has an upper portion containing a downwardly extending pin opening formed therein into which said pin is snugly received, whereby the upper and lower parts are rigidly and firmly positioned with respect to each other.

4. A plastic golf tee comprising an upper part and a lower part fixedly connected to each other, the lower part having a downwardly converging lower end and an upwardly diverging upper end, said lower part being fabricated from relatively stiff material;

the upper part of said tee having a thin resiliently flexible and upwardly diverging sidewall defining a frustum of a cone, said sidewall being formed of material substantially less rigid than said lower part, said upper part having within said sidewall a central, upwardly projecting and relatively rigid abutment with a flat top spaced below the adjacent surface of a golf ball engaged by and supported upon the upper edge of said sidewall of said upper part, said abutment being engageable by the thumb of a normal adult hand for pressing the lower part of said tee into the ground, and the diameter of the upper edge of said sidewall being such that said ball can be urged into engagement with the flat top of said abutment, thereby to drive the tee into the ground, after which the sidewall will return to its initial shape, wherein the ball is spaced from the abutment;

said abutment defining a frustum of an upwardly converging cone having a downwardly diverging, concentric recess, and a centrally disposed pin integral with the upper end of said abutment and extending downwardly therefrom through said recess and below the lower edge of said sidewall; and

said lower part having an upper end portion defining a frustum of an upwardly converging cone snugly receivable into the recess in said abutment, said upper end portion having a downwardly extending pin opening into which said pin is snugly received, whereby the upper and lower parts are rigidly and firmly positioned with respect to each other.

5. A golf tee according to claim 1, wherein said lower part is fabricated from nylon and said upper part is fabricated from polyethylene.