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3,220,727

DEVICE FOR INSERTING GOLF TEES INTO THE GROUND

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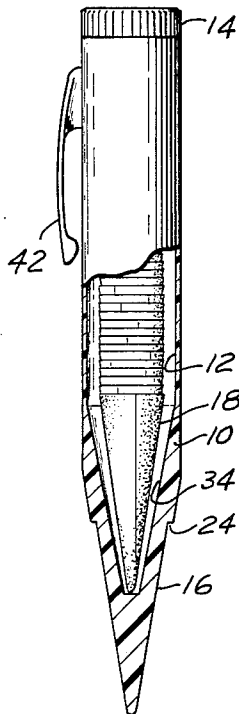


FIG. 1

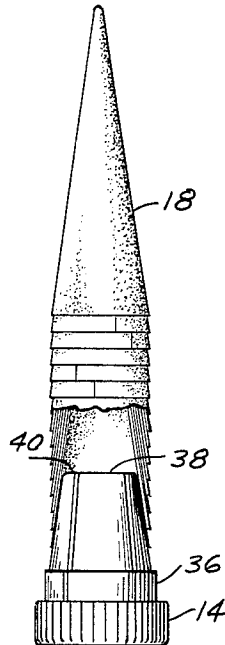


FIG. 2

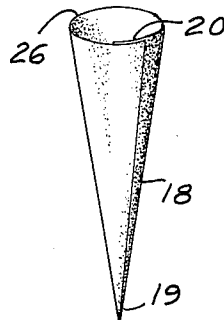


FIG. 3

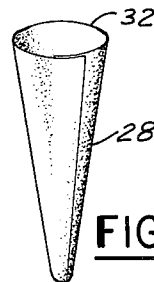


FIG. 4

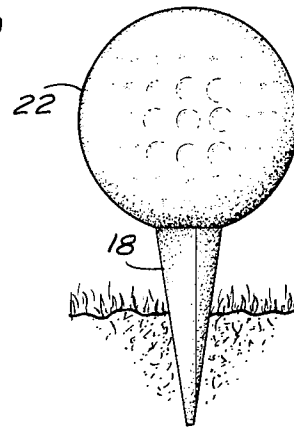


FIG. 5

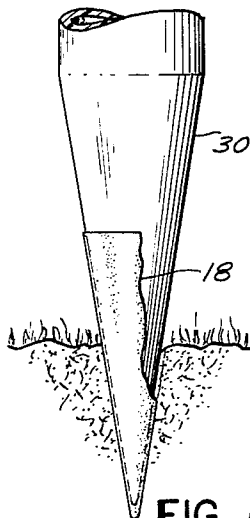


FIG. 6

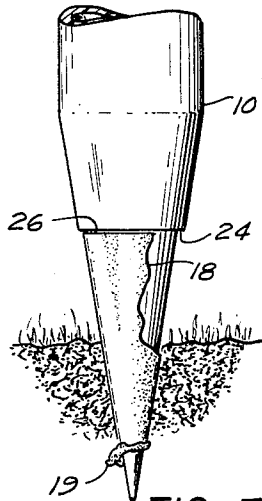


FIG. 7

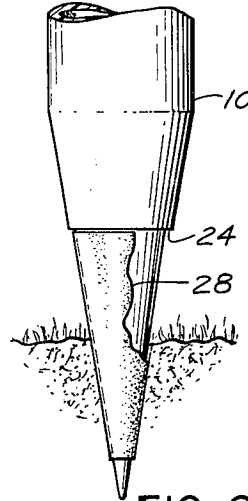


FIG. 8

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3,220,727 DEVICE FOR INSERTING GOLF TEES INTO THE GROUND

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This invention relates to golf tees and a cooperating device for setting or inserting such golf tees into the ground. More particularly, the invention is concerned with a golf tee made in the form of a hollow member having a relatively thin side wall made, for example, from a sheet of paper formed into a hollow conical support, and with a device which will insert these tees into the ground in upright golf ball-supporting position.

As it is well known, golf tees are used to elevate golf balls above the surface of the ground on the driving tee in order that the golf balls may be driven by a club. Such golf tees are generally made of wood or plastics and because of their cost relative to their frequency of use, the tees are reused whenever possible. Frequently however, the tees are lost, or for other reasons they are not recovered each time that they are used. If the club touches the tee during the stroke, for example, the tee may be broken or driven from its placement to an obscured position in the grass. Apart from the expense of replacing the tee, such occurrences are undesirable because the driving greens tend to become cluttered with lost or broken tees and therefore have to be cleaned periodically.

Accordingly to the present invention, the aforesaid difficulties are overcome by providing a tee which is so inexpensive that, from a practical point of view, the tee may be discarded after it has been used one time. To provide this feature the tee may be made from an inexpensive sheet-like material such as paper formed into a shape such as a cone to support the ball above the ground. One problem presented with this type of tee however, is forcing it into the ground so that it can properly support the ball. Attempting to insert into the ground a tee made from a paper cone, for example, would generally result in the tee being destroyed, or at least torn or crumpled to such an extent that it could not stand upright properly to support the ball satisfactorily. This problem is overcome in the present invention by providing a cooperating insertion device which will engage and support a tee of the type described as the tee is driven into the ground by the insertion device. Once the tee is placed in the ground, the insertion device may be removed from the tee leaving the latter in an upright golf ball-supporting position.

Accordingly, it is an object of the present invention to provide a golf tee and a cooperating golf tee insertion device for inserting into the ground a hollow tee having relatively thin walls such that when the device is subsequently separated from the tee, the tee will remain in the ground in an upright golf ball-supporting position.

Another object is to provide a device capable of inserting into the ground a tee made from a relatively inexpensive sheet material such that the tee, from a practical point of view, may be used only once and then discarded.

Another object is to provide a device capable of inserting into the ground a tee made from a sheet-like material which will disintegrate more or less in a comparatively short time when exposed to outdoor weather conditions.

Another object is to provide a tee insertion device which serves as a carrying case for a plurality of tees made from a sheet-like material and which is able to insert such tees into the ground in a golf ball-supporting position.

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Other objects and features of the invention will appear as the description of the particular physical embodiments selected to illustrate the invention progresses.

For a better understanding of the present invention reference should be had to the accompanying drawings, wherein like reference numerals indicate similar parts throughout the several views and wherein:

FIG. 1 is an elevational view, partly in section, of a golf tee insertion device according to the present invention.

FIG. 2 is an elevational view, partly in section, of a stack of tees shown in an inverted position relative to that of FIG. 1 to illustrate how the cap of the insertion device engages one of the tees to facilitate its removal from the insertion device.

FIG. 3 is a perspective view of a golf tee constructed according to the present invention.

FIG. 4 is a perspective view of a modified golf tee constructed according to the present invention.

FIG. 5 is an elevational view of the tee of FIG. 3 shown inserted in the ground in golf ball-supporting position.

FIG. 6 is an elevational view, partly broken away, of a tee and a modified insertion device.

FIG. 7 is an elevational view, partly broken away, of a portion of the insertion device of FIG. 1 illustrating how the tee of FIG. 3 is supported by the insertion device even though the tip of the tee has been torn during insertion, and

FIG. 8 is an elevational view partly broken away, of a portion of the insertion device of FIG. 1 as it inserts the tee of FIG. 4.

Referring to the drawings, FIG. 1 shows an insertion device comprising a housing 10 having a cavity 12 therein closed off on one end by a removable cap 14. The housing 10 may be made of any suitable material such as a transparent plastic. The outside end of the housing opposite the cap 14 is provided with an extension 16 shaped as a cone for receiving a hollow tee 18 in the shape of a matching cone. Such a tee may be made from a flat sheet of material, paper for example, having a configuration so that it may be rolled into a hollow cone having a closed tip 19 as shown in FIG. 3. After the material is rolled to form the cone structure of FIG. 3, the overlapping edge portions 20 are suitably secured to one another such as by an adhesive. The tee of FIG. 3 is adapted to be inserted into the ground by the insertion device of FIG. 1 to support a golf ball 22 thereon as shown in FIG. 5.

Paper tees and tees made of similar inexpensive materials are not generally sufficiently rigid to permit them to be pressed directly into the ground without collapsing, crumbling, or tearing of the material. However, the insertion device of the present invention supports such tees as they are driven into the ground such that the aforementioned difficulty is overcome. Thus by placing the tee 18 over the cone shaped end 16 of the housing 10 and pressing the housing 10, with the cone portion 16 facing downwardly, into the ground, the tee 18 will be supported by the cone shaped portion 16 as it is driven into the ground.

The configuration of the cone shaped portion 16 of the insertion device may be made to conform to the configuration of the hollow cone shaped tee 18 such that the tee will be supported at the tip 19 thereof and also along the conical side walls which are inherently stiff. In order to aid further in the support of the tee as it is inserted into the ground, a circumferential face or ridge 24 is provided on the housing at the upper wider end of the cone shaped portion 16. This ridge 24 is positioned such that it will be engaged by the upper circumferential edge 26 of the tee 18. The tee is therefore supported

along its entire upper circumferential edge 26 in addition to its conical side face and its tip 19 to afford maximum support to the tee as the latter is driven into the ground. The tip of the cone shaped portion 16 of the insertion may be rounded or otherwise made blunt to avoid a sharp point which would tend to damage the tee as the latter is inserted into the ground.

The distribution of the driving force over the aforementioned areas enables the tee 18 to be inserted even in hard or moist ground. Also the added support afforded by the ridge 24 makes it possible to reduce the thickness of the paper used for making the tee, or to use paper stock of inferior rigidity, such as self-dissolving paper, than would otherwise be the case if a ridge were not provided. In addition, since the ridge 24 provides added support, it is possible, if desired, to dispense with the tip 19 of the tee and to use a modified tee 28 in the form of a truncated cone, such as shown in FIG. 4, in which there is no closed tip at all. The possibility of using a tee not completely closed at the tip and the use of a thinner paper reduce the production costs of the tees.

Furthermore, if the ridge 24 were not provided, the tip of the insertion device would tend to penetrate the tip 19 of the tee, particularly when the ground is very hard or moist. When this occurs, the tee develops a tendency to ride up over the tip of the insertion device and to tear or crumble as it is being inserted into the ground. In the absence of a ridge, the entire driving force is substantially concentrated upon a single point such that as increased force is applied, the tee will tend to be torn at this point under unfavorable conditions, such as hard or wet ground and as the tee rides up the cone shaped portion of the insertion device, the tee may tear along its length. FIG. 6 shows an insertion device 30 of FIG. 6 without a ridge. As the tee 18 is inserted into the ground with this device 30, the resistance offered by the ground may tear the paper tee as it is indicated and also ride up on the conically shaped device, thereby causing it to tear or split and crumble. However, by providing the ridge as heretofore described, the tendency of the tee to break at the tip and ride up on the cone will be greatly reduced, since the tee will be engaged by the conical surface of the insertion device and the upper circumferential edge of the tee will be engaged by the ridge 24.

Accordingly, the insertion device of the present invention may be satisfactorily used even in hard or moist ground. FIG. 7 shows, for example, a tee 18 of the type shown in FIG. 3 being inserted into relatively hard ground. In this case the tip 19 of the tee has been pierced by the tip of the insertion device and is shown crumpled up, but the tee 18 continues to be driven by the engagement along its conical surface and the ridge 24. Although the tip 19 is not usually pierced, FIG. 7 illustrates that the insertion device operates effectively even if this should occur in hard ground. FIG. 8 shows a tee 28 of the type shown in FIG. 4 being driven into soft ground by the engagement along its conical surface and upper circumferential surface 32.

As can best be seen in FIG. 1, the cavity 12 of the insertion device may be used as a holder for a large number of tees nested one within another. The cavity 12 may have an internal conically shaped end 34 adjacent the external conical portion 16 to accommodate the pointed end of the stack of tees and thereby increase the holding capacity of the cavity. The cap 14 which is frictionally held at the end of the cavity 12 by the engagement between the inside of the cavity 12 and the annular portion 36 of the cap 14, may be provided with resilient prongs 38 extending into the cavity when the cap is placed in its normal cavity-closing position on the housing 10. The prongs 38 each have a configuration in which they taper radially inwardly as their ex-

treme ends are approached to conform generally to the taper of the tees. Thus by shaking the entire housing 10, or turning it upside down, the tee closest to the cap 14 will seat itself on the resilient prongs 38 of the cap 14 so that a single tee can be conveniently withdrawn from the cavity with the cap. FIG. 2 shows a stack of inverted tees in which the lowermost tee is engaged by the prongs of the cap 14. The prongs 38 may be formed integral with the cap 14 by providing slits 40 in a frusto-conical shaped extension of the cap 14. By making the cap of a suitable plastic material, the prongs 38 thus formed will be resilient to facilitate engagement with the tee.

The housing 10 may be provided with a suitable pocket clip 42 for holding the insertion device to an article of clothing, or other suitable support, such as a golf bag.

In order to facilitate withdrawal of the insertion device from the tee after the latter has been inserted into the ground, the angle of the cone portion 16 of the insertion device may be made slightly smaller, one-half degree for example, than the angle of the cone defined by the tee. This difference in angle is relatively small so that it will not prevent contact between the conical surfaces as pressure is brought against such surfaces when the tee is inserted into the ground but it will facilitate removal of the insertion device as such surfaces are separated from one another during withdrawal of the device from the tee.

Although paper has been mentioned as one type of sheet material out of which the tees may be made, other inexpensive materials such as cellophane or tinfoil may also be used. Also, instead of a cone shaped insertion device and tees, other tapered shapes may be used such as, considered in transverse cross section, squares, triangles, rectangles, hexagonal, oval, and others.

From the above description it can be seen therefore, that the tees may be made so inexpensively that they may be discarded after being used only one time. The use of tees made of sheet material as described tends to enable the golfer to obtain better yardage on the drive by practically eliminating friction or interference between the club head and the ball. The tees of the present invention may be nested such that they take up a minimum of space and a relatively large number of such nested tees may be carried within the insertion device. The insertion device may be made of transparent plastic so that the number of tees in the cavity thereof will be readily discernable. The use of the tees and insertion device affords economy over conventional wooden or plastic tees which are frequently lost or broken during a golf game and eliminates the necessity of having to carry these conventional sharp pointed wooden or plastic tees. The tees of the present invention may be colored green so as not to disfigure the turf or they can conveniently carry a printed advertisement. They can also be made from a paper which dissolves easily when exposed to moisture, thereby solving the clean-up problem on the green. The insertion device may be made of such a size that it may be easily contained and clipped to a pocket of the golfer's clothing.

The invention hereinabove described may be varied in construction within the scope of the claims, for the particular device selected to illustrate the invention is but one of many possible embodiments of the same. The invention, therefore, is not to be restricted to the precise details of the structure shown and described.

What is claimed is:

1. A device for inserting a hollow conical tee of sufficient rigidity for driving into the ground, said device comprising a housing having a cavity therein for accommodating a plurality of tees therein, a cap on said housing for providing access to said tees, said housing having a conically tapered end section adapted to engage the inside surface of a correspondingly tapered hol-

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low tee, an external peripheral ridge on said housing adjacent said tapered end section, said tapered end section of said housing and said ridge being engageable with the inside tapered surface of said hollow tapered tee and the terminating peripheral edge of the large end of said tapered tee respectively, to apply driving pressure to the edge of the tee as it is driven into the ground by said device, said ridge also limiting the depth of entry of said end section of the housing into the tee.

2. A device as set forth in claim 1 wherein said cap is provided with an extension extendable into said cavity to engage the housing with a frictional grip, said cap extension having a portion tapered corresponding generally to the taper of tees in said cavity such that the tapered portion will engage an adjacent tee in said cavity to facilitate removal of the latter from the cavity of said housing, said tapered cap portion being in the form of a hollow frustrum of a cone made of resilient material and provided with circumferentially spaced lengthwise slits to define prongs for engaging said tees as they are removed from the cavity of the housing.

3. A device for inserting a tapered hollow conical tee made of sheet material of sufficient rigidity for driving into the ground, said device comprising a housing having a cavity therein for accommodating a plurality of hollow tapered tees nested one within the other, a cap frictionally insertable in said housing for providing access to said tees, said cap having a tapered portion matching the inner taper of the tees and extending into said cavity for engaging the inner wall of an adjacent tee with a frictional grip to facilitate removal of the latter from the cavity, said housing having a conically tapered end section adapted to engage the inside surfaces of a

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correspondingly tapered hollow tee, an external peripheral ridge on said housing adjacent said tapered end section, said tapered end section of said housing and said ridge being engageable with the inside tapered surface of said hollow tapered tee and the terminating peripheral edge of the large end of said tapered tee respectively, to apply driving pressure to the edge of the tee as it is driven into the ground by said device, said edge also limiting the depth of entry of said end section of the housing into the tee.

4. A device as set forth in claim 3 wherein the cavity of said housing has a tapered end for accommodating the smaller end of said stack of nested hollow tees, said tapered end of said cavity being arranged adjacent said tapered end section of said housing.

5. A device as set forth in claim 3 wherein said housing is made of transparent plastic to permit viewing of a stack of tees in said cavity.

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