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A63B 57/00 (2006.01)(52) **U.S. Cl.** **473/387; 473/399**(57) **ABSTRACT**

The invention is a new invention type of golf tee. It is used to position a golf ball at a certain height. This golf tee comprises a golf tee having upper and lower ends and a shaft

of substantially uniform diameter connecting the ends, the upper end having a cup of a substantially uniform diameter for receiving a golf ball, the lower end being tapered for insertion into a playing surface, and the composition of the tee being a combination of natural materials bound by biodegradable materials, the natural materials consisting of waste products of healthy animals which will become wetted, slick, softened, and slowly disintegrate biologically as it lays on the ground and is exposed to the moisture of the ground, turf and course water over the subsequent few days. The process of disintegration will also be hastened by the grinding and cutting effect of the mowing of the course surfaces. The tee products will provide nutrients to the turf surface of the golf course tee boxes and surrounding area, therefore being environmentally friendly as it decomposes and provides nutrients to the tee boxes and the surrounding areas. This can reduce necessary purchases of fertilizers applied to the turf. The tees will reduce the potential to become flying debris projected by grass cutting machines, which may cause injury, and will reduce the unsightly appearance of broken pieces of golf tees around the tee boxes. Further, these golf tees will not present an object which may be harmful to the equipment used to maintain the turf.

ECOSMART GOLF TEE

NO CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This invention is not federally-sponsored research or development.

[0002] The two named applicants, Richard Allen Dickey and Frank Xavier Azzarita, jointly developed this invention.

[0003] There is no "Sequence Listing," and there are no tables, computer programs or compact disks submitted with this application.

BACKGROUND OF THE INVENTION

[0004] 1. Field of the Invention

[0005] The present invention relates to a golf tee, more particularly one which is composed of a combination of natural materials bound by biodegradable materials, the natural materials consisting of processed waste products of healthy animals or a manure-based compost product which will provide nutrients to the turf surface of the golf course tee box and surrounding area such that the tee is environmentally friendly and is less likely to present an object which may become flying debris and which may be harmful to persons or to the equipment used to maintain the turf. This tee invention is ecologically friendly, biodegradable and not harmful to persons or to the equipment used to maintain the areas of the turf and golf course where it is to be used.

[0006] 2. Description of the Related Art

[0007] 1. Golf is a sport which is growing rapidly in popularity, both as a participation sport and as a spectator sport. The golfing tees presently used are dominated by the wooden or plastic variety. Wooden golf tees are easily broken by the impact of the golf club striking them. Hence, golf tees are readily consumed and require replacement often, thus becoming useless debris. The golfer often has to replenish the supply of his/her golf tees by purchasing a supply of them. Use of golf tees thus requires either the consumption of wood sources, including trees, or the manufacture of plastic. Plastic golf tees presently used are less likely to be broken except after prolonged use but are deformed progressively during repeated use and are ecologically undesirable because the debris remains on the ground for long period of time. Also, because of their non-biodegradable character but due to their likelihood to become harmful flying debris or possibly damage golf course maintenance equipment.

[0008] 2. Golf tees are typically manufactured from natural wood or any of a variety of plastic compositions. In the past, plastic golf tees were popular due to the ability to economically mass produce tees of consistent size and shape, without imperfections, using inexpensive material. However, the inability of plastic golf tees to disintegrate when discarded on the golf course has become a serious environmental concern. In fact, many golf courses now ban the use of tees formed of non-biodegradable material. For this reason, most golf tees sold in today's market are formed of natural wood which requires significant time before decomposing. Whereas the golf tee we describe will decompose relatively quickly, provide natural nutrients to the tee box and surrounding areas, thus providing cost reduction benefits to the golf course proprietors.

[0009] 3. In view of the above issues associated with the use of plastic, non-biodegradable golf tees and wood tees,

there remains an urgent need in the golf industry for a biodegradable golf tee which is disposable, environmentally friendly, and cost-effective to manufacture and to player and to golf course owners. Also, promote the national concept to support the "natural," environmental concepts which have gained wide support and recognition.

[0010] 3. Brief Description of the Prior Art

[0011] 1. A search of the prior art did not disclose any patents that read directly on the claims of the instant invention.

[0012] 2. Generally golf begins at a tee ground area which is a starting point of a game playing eighteen holes with as many as seventy two tee boxes. The golfer begins by burying a golf tee in a predetermined position of the tee ground indicated by the tee markers, puts a golf ball on the buried golf tee and executes the tee shot, called the drive shot. When the golfer's golf club strikes the golf ball, shock resistance generated in a club head deteriorates the hit sense of the golfer and tends to reduce the flying distance which the golf ball would otherwise have attained. Almost all golf tees are made of wood or light plastic, the inner part of which is filled so as not to be deformed due to the applied pressure of the club head strike.

[0013] 3. When the golfer strikes the golf ball the golf tee is shattered, broken, or lost. Therefore, the golfer, and others accompanying him/her may make an effort to retrieve and collect the scattered golf tee, often unsuccessfully and a waste of time and left where it lays and thus becomes debris.

[0014] 4. Tees are used to hold a golf ball a small distance (inches) above the ground of a golf tee box. The action prevents the club head from hitting the ground and being damaged or slowed when the golf player is teeing off the golf ball with a hard surfaced club.

[0015] 5. The common golf tee has some disadvantages for the following reasons:

[0016] 6. A conventional golf tee is made of wood or plastic materials in various forms. These materials are either non-biodegradable or very slowly degradable.

[0017] 7. Such hard materials as wood or plastic may cause personal injury if they pierce a person's skin. Furthermore, such hard materials can be harmful to the sharp equipment used to maintain the surface and turf of a golf course, dulling it and requiring more frequent sharpening of the equipment or may become flying debris due to the equipment such as grass mowers or blowers in use to maintain the course.

[0018] 8. Golf course maintenance requires the regular application of costly materials to stimulate healthy growth of the turf.

BRIEF SUMMARY OF THE INVENTION

[0019] 1. It is the principal objective of the present invention to provide a golf tee to overcome the above disadvantages.

[0020] 2. The golf tee of this present invention is ecologically friendly by being readily biodegradable into a material which contributes to the health of the surface of the golf course as a source of desirable nutrients for the turf, a cost savings to players and golf course proprietorships and the promotion of environmental well-being.

[0021] 3. The present golf tee avoids the use of materials which may be harmful to persons or contribute to the

efficiency of the equipment used to maintain the surface and turf of a golf course, dulling it and requiring more frequent sharpening of the equipment.

[0022] 4. The present golf tee does not incorporate use of wood-like or plastic materials which, in large part, due to their hardness and resistance to rapid breakdown, can be harmful to persons as flying debris or splintered material.

[0023] 5. The present golf tee offers the advantage of contributing to the efficiency of the golf course equipment used to maintain the surface and turf of a golf course because the present golf tee, because it breaks down rapidly, will limit the dulling effects of other types of golf tees used.

[0024] 6. The present golf tee offers the potential advantage of reducing the need to sharpen course mowing equipment frequently due to the dulling effects of other golf tees made of harder material(s).

BRIEF DESCRIPTION OF SEVERAL VIEWS OF THE DRAWINGS

[0025] There are no drawings in this application.

DETAILED DESCRIPTION OF THE INVENTION AND CLAIMS

[0026] 1. A golf tee for positioning a golf ball at various, certain heights, comprising a golf tee, the golf tee having upper and lower ends and a shaft of substantially uniform diameter connecting the ends, the upper end having a cup of a substantially uniform diameter for receiving a golf ball, the lower end being tapered for insertion into a playing surface

[0027] 2. The composition of the tee being a combination of natural materials bound by biodegradable materials, the natural materials consisting of waste products of healthy animals which will provide nutrients to the turf surface of the golf course tee box and surrounding area such that the tee is environmentally friendly and does not present itself as a flying object which may be harmful to persons or caused by the equipment used to maintain the turf

[0028] 3. The process used in binding the product consists of the use of one or more materials which provide the requisite tensile strength for the product. These materials include polyvinyl alcohol (PVA), potato starch, and/or any other similar vegetable-based starch which is similarly biodegradable.

[0029] 4. The typical first cut process for the production of this golf tee invention involves the acquisition of the basic ingredient from processed cow/bovine or any similar excrement. Acceptable alternatives would be excrement of other animals such as horse/equine, chicken, goat or sheep excrement or even a manure-based compost product.

[0030] 5. The excrement, if necessary, may be disinfected by use of either radiation or a hypochlorite product.

[0031] 6. The resulting product (5. above) is mixed with the binding product (3. above) most appropriate for use with the basic ingredient (2. above) utilized. Additionally and optionally, a fiber material, such as sawdust, may also be incorporated into the tee material for additional binding effects.

[0032] 7. The resulting mixed materials are placed in a mold to form the golf tee.

[0033] 8. The molded material may be baked, vacuum dried, or racked and dried in order to remove any water remaining in the material, to harden the product and to give it strength.

1. The invention described and claimed herein is not to be limited in scope by the specific embodiments herein disclosed, since these embodiments are intended solely as illustration of several aspects of the invention. Any equivalent embodiments and various modifications apparent to those skilled in the art are intended to be within the scope of this invention. It is further understood that the various features of the present invention can be used singly or in combination thereof. Such modifications and combinations are also intended to fall within the scope of the appended claims.

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