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ARTIFICIAL PLAYING SURFACE

Filed June 12, 1967

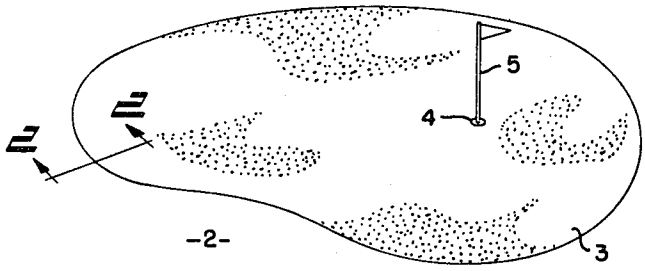


Fig. 1

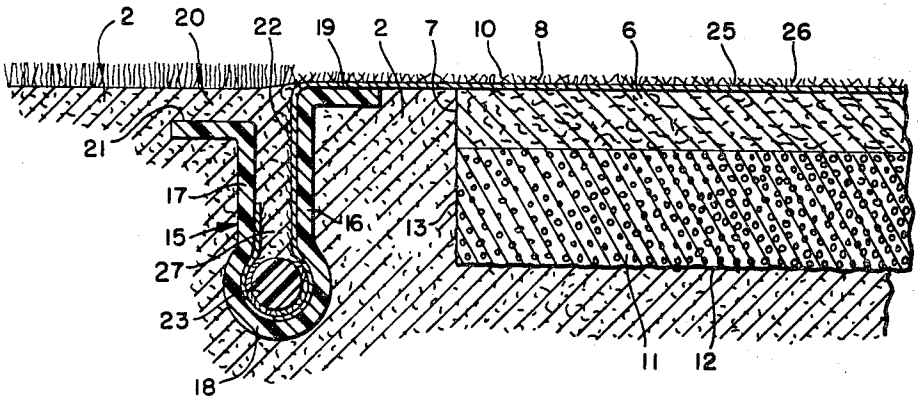


Fig. 2

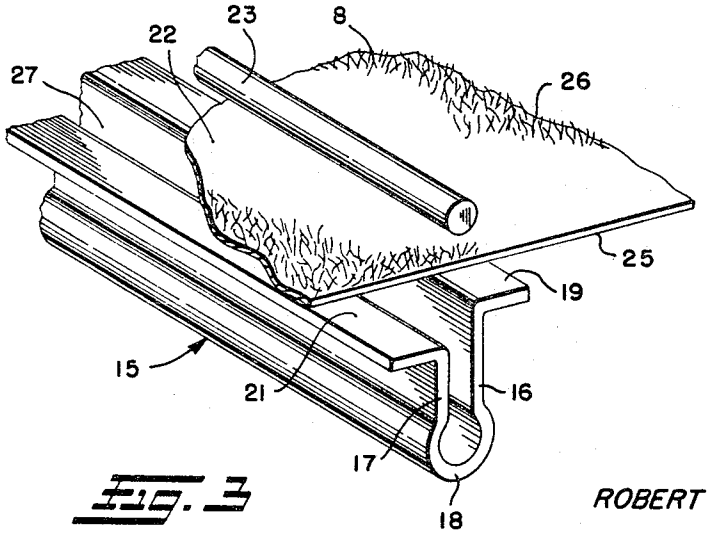


Fig. 3

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ARTIFICIAL PLAYING SURFACE

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ABSTRACT OF THE DISCLOSURE

An artificial playing surface having a continuous layer of artificial grass stretched over a layer of all-weather carpeting or the like with the periphery of the artificial grass layer anchored in the ground outside the periphery of the carpeting.

Background of the invention

This invention relates to an artificial playing surface, particularly an artificial putting green, which possesses substantially the same properties as a natural playing surface thereby providing substantially the same playing conditions and without the considerable expense normally required to install and maintain a natural putting green.

Today there are many aspiring amateur golfers and would-be golfers who would enjoy having a practice putting green in his own backyard to improve his putting skills, but the cost of installing and maintaining a natural putting green is prohibitive. Moerover, while various types of artificial playing surfaces have been devised for use in place of natural putting greens which provide closely similar playing conditions, they are generally so elaborate and expensive that as a practical matter the average person cannot afford an artificial putting green any more than he can the real thing.

Summary of the invention

The artificial playing surface of the present invention, like those of the prior art, has substantially the same properties as a natural playing surface, and in addition is much less expensive in construction and can be readily installed by anyone without the use of special tools, these being principal objects of the present invention. These and other objects are achieved by providing a playing surface having a base layer of all-weather carpeting or the like which has the "give" of turf and a top layer of artificial grass stretched over the base layer with its periphery anchored in a channel member in the ground outside the periphery of the carpeting by forcing a rod member into such channel member.

It is accordingly another object of this invention to provide an artificial playing surface with a novel anchoring means for holding the outermost layer of the playing surface in a tightly stretched condition to provide uniform resistance to a rolling ball over its entire area.

To the accomplishment of the foregoing and related ends, the invention, then, comprises the features hereinafter fully described and particularly pointed out in the claims, the following description and the annexed drawing setting forth in detail a certain illustrative embodiment of the invention, this being indicative, however, of but one of the various ways in which the principles of the invention may be employed.

Brief description of the drawing

In the annexed drawing:

FIG. 1 is a perspective view of a preferred form of artificial playing surface in accordance with this invention shown being used as a putting green;

FIG. 2 is a fragmentary section view through the outer periphery of the playing surface of FIG. 1 illustrating the surface and particularly showing the manner in which the artificial grass layer is anchored in the ground; and

FIG. 3 is an exploded fragmentary perspective view of the anchoring means of FIG. 2 in disassembled form.

Description of the preferred embodiment

Referring now in detail to the drawing and first especially to FIG. 1, there is shown by way of example an artificial playing surface **1** in accordance with this invention installed in a backyard **2** or other such location for use as a putting green **3** having a cup **4** therein which may be marked by a flag **5** in conventional manner. Sand traps or other obstacles, not illustrated, may be placed around the green **3** as desired.

As will be apparent from FIG. 2, the artificial playing surface **1** generally comprises a base layer **6** disposed in a shallow recess **7** in the ground **2** and covered by a thin layer **8** of artificial grass. The base layer **6** may be of any of the commercially available all-weather carpetings having the required resiliency and compressibility to simulate turf, a good example being the so-called inside-outside patio rugs presently on the market, and desirably has a thickness of about ⅜ inch with its upper surface **10** approximately flush with the ground **2** adjacent the recess **7**. If desired, a layer **11** of fine gravel or other such material having a depth of about 1 to 1½ inches may cover the bottom **12** of the recess **7** to facilitate drainage, in which case the recess **7** would have to be dug approximately 1½ inches deep at its periphery **13**. In any event, the recess **7** should be deep enough to remove all of the grass and weeds and should be subsequently sprayed or coated with a suitable weed killer prior to placement of the gravel layer **11**. Inwardly of the periphery **13** the recess **7** may be of any desired contour which can be assumed by the carpet layer **6** without the formation of bulges or wrinkles.

After the carpet layer **6** has been installed, elongated channel sections **15** of extruded plastic having parallel side walls **16**, **17** and a round bottom **18** are driven into the ground **2** outside the periphery of the recess **7** and carpet layer **6**. The channel sections **15** may have an overall height of approximately 2½ inches and be continuous in length, or there may be a plurality of such sections spaced approximately 18 to 20 inches apart in the ground. The flanged top **19** of the inner side wall **16** may be flush with the ground, but the outermost side wall **17** is desirably slightly shorter than the inner side wall **16** to permit sod **20** to be placed over its top flange **21** without forming a hump. Should the soil be too hard to permit driving of the channel sections, a shallow trench may be cut in the ground for receipt of the channel sections.

The artificial grass layer **8** may now be placed over the carpet layer **6** and pulled tightly to remove most wrinkles and the like, after which the grass layer **8** is cut outwardly of the channel sections **15** so that its outer periphery **22** overlies the channel sections a distance somewhat greater than the depth of the channel sections, in this case about 2½ inches. Next one or more rods **23** which may be of plastic having a diameter slightly larger than the spacing between the side walls **16**, **17** of the channel sections **15** are used to push the periphery **22** of the grass layer **8** into the channel sections and lock or anchor such periphery **22** in place by the rods **23** engaged in the round bottom portion **18** of the channel sections. As the periphery **22** of the grass layer **8** is forced into the channel sections, the grass layer is caused to be tightly stretched over the carpet layer **6** and is permanently held in such stretched condition by the plastic rods **23**.

The grass layer **8** has a thin woven backing **25** and a nap **26** of flexible fibers projecting a slight distance above the backing which closely resembles close-cut grass

to provide the desired resistance to rolling of a golf ball thereon similar to the grass on a natural putting green. Such artificial grass **8** like the carpet layer **6** should be able to withstand the rain, ice, and snow so that the artificial playing surface **1** may be left in the ground year around, but the playing surface **1** could be taken up for the winter months or covered during bad weather if desired. An example of a commercially available artificial grass which has proven satisfactory in use is "Velvetex."

With the artificial grass layer **8** properly anchored as just described, the open end **27** of the channel sections **15** may be filled with sod **20** and the cup **4** located on the green where desired by cutting a hole through the artificial playing surface **1** and digging out the ground therebeneath to the extent necessary to receive the cup **4** therein.

From the above discussion, it can now be seen that the artificial playing surface of the present invention is of a relatively inexpensive construction and yet provides a durable playing surface having substantially the same properties as a natural putting green and requires very little care or upkeep. The artificial grass layer is firmly anchored in a stretched condition around its entire periphery thereby providing a playing surface which closely matches the contour of the carpet layer therebeneath for uniform resistance to rolling of a golf ball thereon.

While the artificial playing surface disclosed herein has been specifically described with reference to its use as an artificial putting green, it should be understood that the principles of the invention are also applicable to the other types of artificial playing surfaces as well, such as outdoor lawn tennis courts, badminton courts, and volley ball courts, to name a few.

Other modes of applying the principles of the invention may be employed, change being made as regards the details described, provided the features stated in any of the following claims or the equivalent of such be employed.

I, therefore, particularly point out and distinctly claim as my invention:

1. An artificial playing surface such as may be used for putting greens and the like comprising a base layer of a carpet-like material having the desired resiliency and compressibility disposed in a recess in the ground, an outer layer of artificial grass covering said base layer, and means for anchoring the outer periphery of said outer layer in the ground outside said recess to maintain said outer layer in a tightly stretched condition over said base layer.

2. The artificial playing surface of claim **1** wherein said means for anchoring said outer layer in the ground as aforesaid comprises a channel section embedded in the ground outside the periphery of said recess, said channel section having vertically extending side walls and a round bottom, and an elongated rod engaging the bottom of said channel section locking the periphery of said outer layer between said rod and the bottom of said channel section.

3. The artificial playing surface of claim **2** wherein the inner side wall of said channel section is longer than the outer side wall, whereby when the top of said inner side wall is flush with the ground the top of said outer side wall is below ground level to permit sod to be placed over the top of said outer side wall without forming a hump.

4. The artificial playing surface of claim **2** wherein said rod causes said top layer to be stretched during pushing of the periphery of said top layer into said channel section by said rod.

5. The artificial playing surface of claim **2** wherein there are a plurality of said channel sections embedded in the ground in spaced apart relation.

6. The artificial playing surface of claim **2** wherein said channel section is a plastic extrusion and said rod is also plastic.

7. The artificial playing surface of claim **1** further comprising a layer of fine gravel covering the bottom of said recess to facilitate drainage.

8. The artificial playing surface of claim **1** wherein said base layer comprises an all-weather inside-outside patio rug, and said artificial grass layer comprises a thin woven backing having a nap of flexible fibers projecting therefrom.

9. The artificial playing surface of claim **8** wherein said base layer is approximately ⅜ inch thick and its outer surface is substantially flush with the ground adjacent the periphery of said recess.

10. The artificial playing surface of claim **9** further comprising a layer of gravel covering the bottom of said recess to facilitate drainage, said gravel layer being approximately 1 to 1½ inches deep.

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