ANCHORING SYSTEM FOR SYNTHETIC SURFACE MATERIALS

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FIG. 1.

FIG. 2.

FIG. 3.

INVENTOR
ZACK L. HENDERSON

BY
Ray H. Massengill
ATTORNEY
ANCHORING SYSTEM FOR SYNTHETIC SURFACE MATERIALS

Zack L. Henderson, Greenwood, S.C., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

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ABSTRACT OF THE DISCLOSURE

An anchoring system which provides for the joinder of separate units of synthetic recreational surface materials such as synthetic grass which is comprised of means for securing the separate synthetic surface products in a common preferred trend and a section of the surface product which bridges the gap between the adjoining surfaces. The system is particularly useful for installing man-made surfaces on areas which may be readily converted to accommodate a different type event without necessitating the removal of the entire installation of surface material.

Since the recent advent of synthetic turf products which resemble grass, several different types of activities are being conducted on these man-made surfaces. Primarily, these surfaces are installed on playing areas in enclosed stadiums or arenas where it is advantageous to convert the playing area from one type to another to accommodate a variety of sports and other activities. It would not be economically feasible or practical to have an individual surface assembly for each different use. Therefore, it is necessary to employ a conversion system capable of facilitating the use of selected areas of the synthetic turf without removal for each different sport or activity. With the foregoing in mind, the primary object of this invention is to provide method and apparatus for forming a juncture between a number of separate strips of synthetic turf whereby the installation and conversion from one type of sporting activity to another can be achieved.

One embodiment of the present invention contemplates a U-shaped member having means on each leg for securing a surface product and means for supporting a strip of the surface product at the same horizontal level so that the edges of the strip are in close proximity to the separately secured synthetic surfaces to form a juncture. The U-shaped member is supported on a foundation in a preformed trench and is preferably removable.

The invention is more clearly illustrated by the following drawings, in which:

FIGURE 1 is a cross-sectional view of one end of the preferred embodiment for carrying out the principles of this invention;

FIGURE 2 is a partial perspective view of the anchoring system shown in FIGURE 1 illustrating the means employed for securing the surface product and additional means for supporting the joinder strip of material; and

FIGURE 3 is a plan view illustrating the strips laminated to the surface product which are employed to secure the surface product to the U-shaped member.

With reference to the accompanying figures wherein like numerals designate similar parts, and particularly to FIGURE 1, there is shown a formed, sheet steel U-shaped member 10 with vertical legs having outwardly turned edges 12 and 14 at the top elevation of said legs. Angle support members 16 and 18 are superimposed on the flanges 12 and 14 to provide a flat surface area which in conjunction with the vertical walls of member 10 forms a right angle shoulder. Interiorly of U-shaped member 10 there are a plurality of finger-like elements 20 preferably spaced about 12 inches apart and a plurality of cross-bars 22 selectively spaced along a horizontal plane above the elements 20.

The U-shaped member is mounted on a double layer of treated plywood in a normal position as shown in FIGURES 1 and 2. A wood nailer 24 is embedded in a cement foundation 25 to support the plywood layers 26 and 28. On each side of U-shaped member 10 a pair of wood guide rails 30 and 32 are provided in parallel relationship to accommodate the base of member 10. The wood members should be treated with a preservative of a well known type to extend the useful period of these members. With the guide rails 30 and 32 in place, member 10 is positioned between these members and nailed to the plywood layers with double headed nails 34 which provide ready removal.

The U-shaped assembly 10, which includes the angle supports 16 and 18 and the interiorly attached finger-like elements 20 and cross-bars 22, is prefabricated and subsequently installed. The installation is made in a preformed trench that spans the distance between the separate portions of synthetic turf that are to be effectively joined by the bridged section 36. The trench is then backfilled to a level slightly above the uppermost portion of angle supports 16 and 18. Installation of the synthetic turf on either side of the juncture assembly of this invention is accomplished by attaching a strap or leader 40 to the margin of the cover product at spaced intervals. In illustrating the invention, a synthetic turf of the type disclosed in copending application Ser. No. 526,007, filed Dec. 28, 1965, is employed to cover an area of ground with separate pieces of synthetic turf which are joined together in accordance with this invention to provide a uniform continuous man-made surface.

As shown in FIGURES 2 and 3, the several straps 40 are sewn to a base fabric 41 which is attached to the turf 42 by peeling back the resilient layer 44 from the backing 46 and cementing the strips of base fabric in place sandwiched between layers 44 and 46. Each of the straps or leaders 40 is provided with a metal grommet 45 which is hooked over a finger-like element 20 to secure the turf 42 in place against the ground. Preferably a layer of resilient material 50, such as polyvinylchloride or polyurethane foam, is adhered to the top surface of the angle supports 16 and 18 to provide a semi-firm shoulder which is flush with the surface of the adjacent soil.

After the turf 42 has been connected to the assembly 10 on both sides, the area between the separated portions is covered by pressing into position an assembly 36 which consists of a channel 60 having a layer of resilient material 62 cemented thereto and a strip of synthetic turf 64 cemented to layer 62. Channel bar 60 should be dimensioned to provide a snug fit with the opening provided by U-shaped member 10. In order to obtain a uniform juncture, the turf strip 64 should be wider than the gap between sections of turf to produce a press fit which will insure that the joinder will be unnoticeable. Thus, the turf strip 64 should be approximately ¼ to ½ inch wider on each side of the channel bar 60 to obviate the possibility of the existence of a gap on either side of the turf strip.

The joinder assembly provided by the present invention provides means for anchoring two or more sections of a surface material together over a desired area to be covered. One important accomplishment made possible by this invention is the economical and efficient conversion of a baseball playing field for example, into a football playing field without having to remove all of the baseball surface. Certain areas of the surface material can be removed and additional strips can be joined to the remaining portions as necessary to obtain the area required for foot-
ball, racetracks, track and other activities or events which require differently shaped areas. Other advantages include the uniformness of the juncture which is undetectable from observation and the unaltered surface performance of the synthetic turf in the immediate area of the juncture.

It will be apparent to those skilled in the art that materials other than those set forth herein may be employed to construct the structures of this invention and that modifications can be made without departing from the scope of the invention except as defined by the appended claims.

What is claimed is:

1. An anchoring system for securing a marginal edge of separate synthetic turf products along a common line of juncture which comprises:
   (a) channel-shaped members suitably supported in spaced relationship,
   (b) securing elements at spaced intervals on the inner walls of said channels,
   (c) a synthetic turf fabric extending over the upper edges of said channels with extended portions connected to said securing elements,
   (d) cross-bar supports extending at spaced intervals between the walls of said channels, and
   (e) a channel cover having a turf fabric strip on its upper surface corresponding to the turf fabric extending over said channels, said turf supported by a rigid member in contact with said cross-bar supports.

2. The apparatus of claim 1 in which the channel members are removably attached to a foundation and supported by a pair of guide rails.

3. The apparatus of claim 1 in which the channel members extend outwardly at their upper edge to provide a flat area for supporting a layer of synthetic turf.

4. The apparatus of claim 3 in which the upper edge of the channel members and the channel bar occupy a common horizontal plane.

5. The apparatus of claim 1 in which the channel cover is composed of a channel bar having a layer of resilient material secured to said channel bar for supporting a strip of synthetic turf.

6. The apparatus of claim 5 in which said synthetic turf extends beyond the edges of the channel bar.

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JACOB L. NACKENOFF, Primary Examiner.

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