

[54] **MINIATURE GOLF COURSE**

[76] **Inventor:** Karl Lennart Wallin, Strandvagen
 59, Stockholm, Sweden

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[58] **Field of Search**..... 14/3; 52/122, 273, 126,
 52/585; 273/176 R, 176 G

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Primary Examiner—Nile C. Byers, Jr.

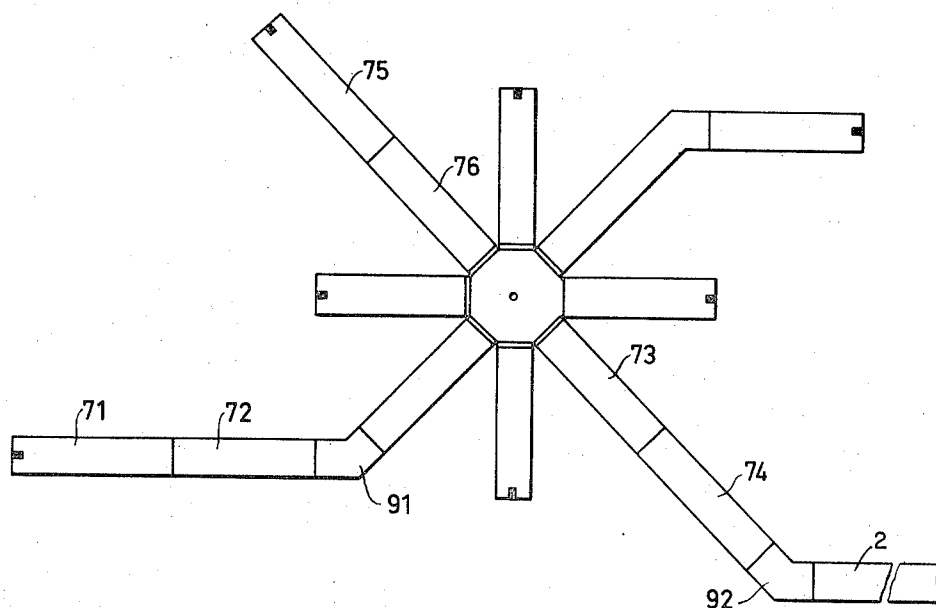
Attorney, Agent, or Firm—Sherman & Shalloway

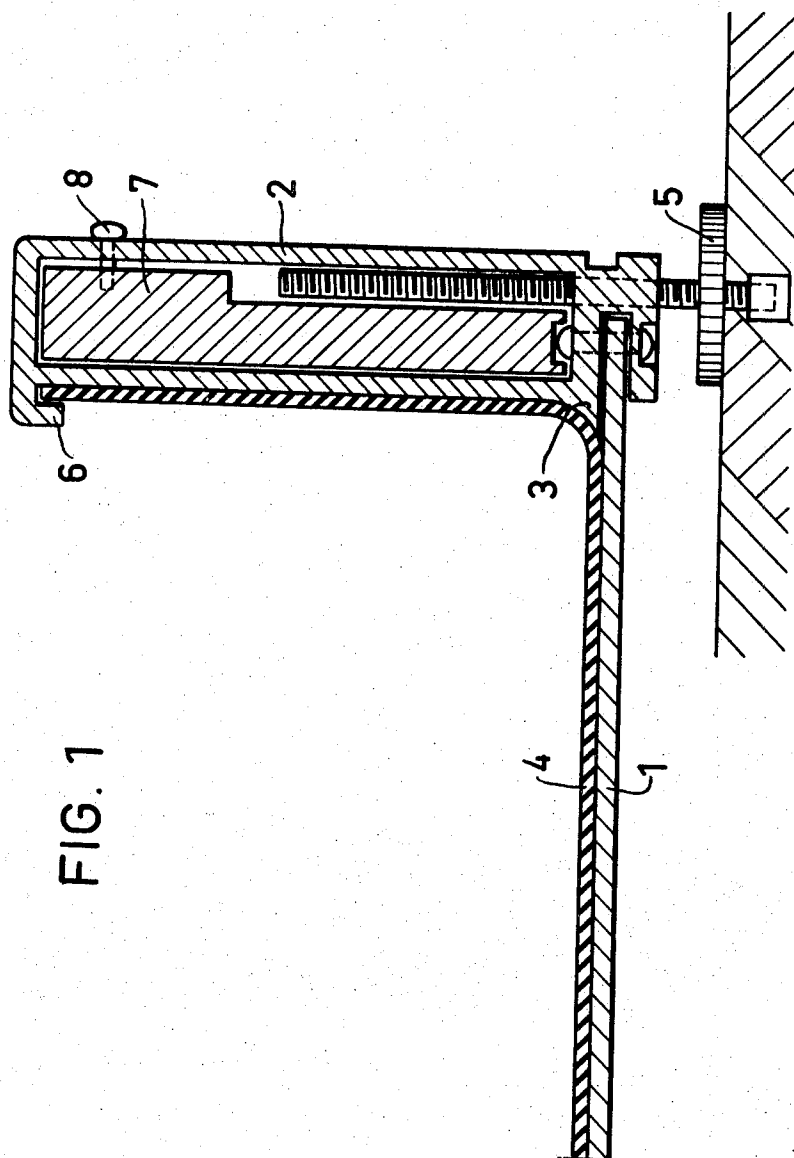
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ABSTRACT

A support for use for miniature golf courses, piers and bridges having two frame side members, a floor member, the two side members placed on either side of the floor member, the side members having a greater extension within the main load direction than in the lateral load direction which is perpendicular to the main load direction, each of these side members having a lip which forms a transition between the frame side member and the flooring member, and a synthetic carpeting material which covers the flooring member and the side of the side members closest to the flooring member, these side members being adapted to join with similar side members to form an elongated structure.

1 Claim, 9 Drawing Figures





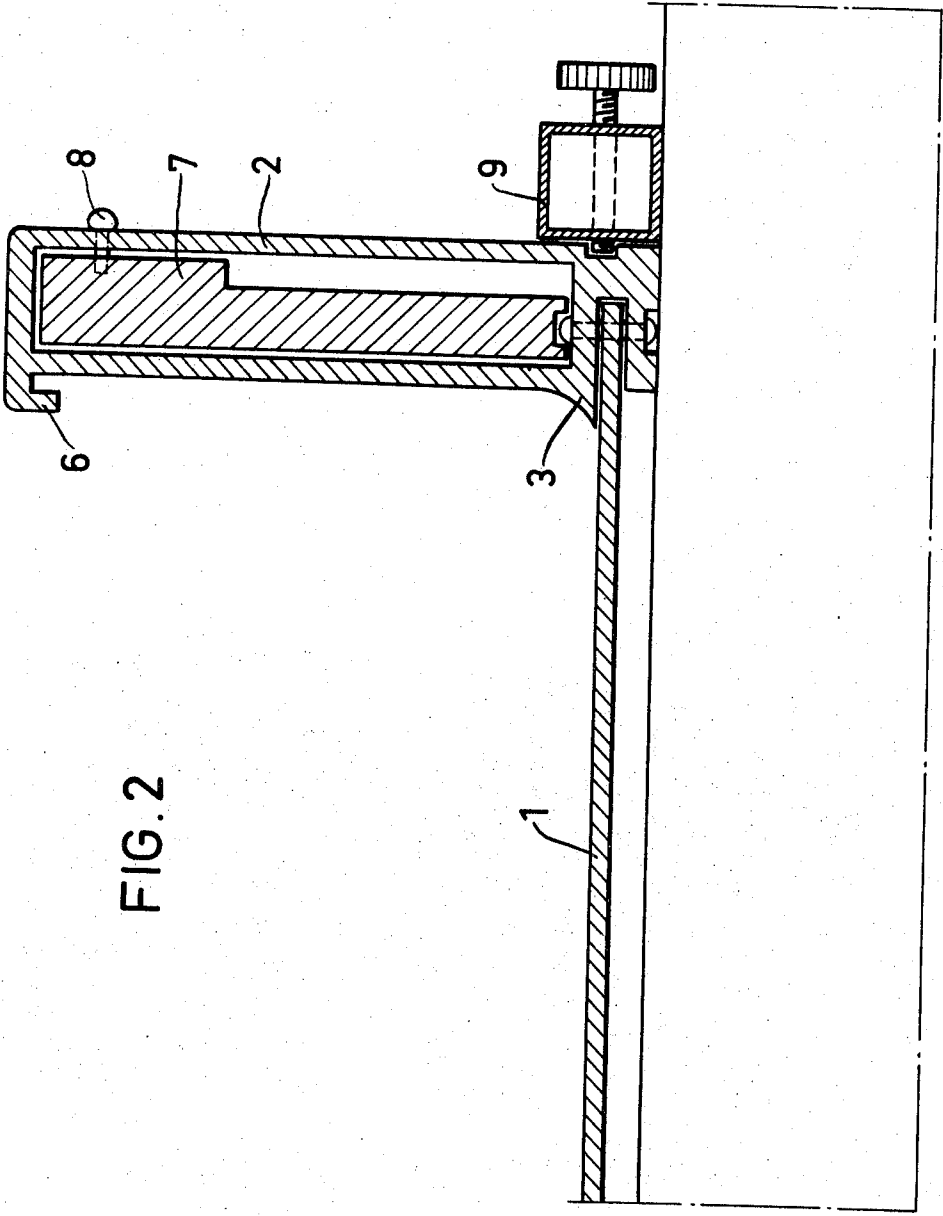


FIG. 2

FIG. 3

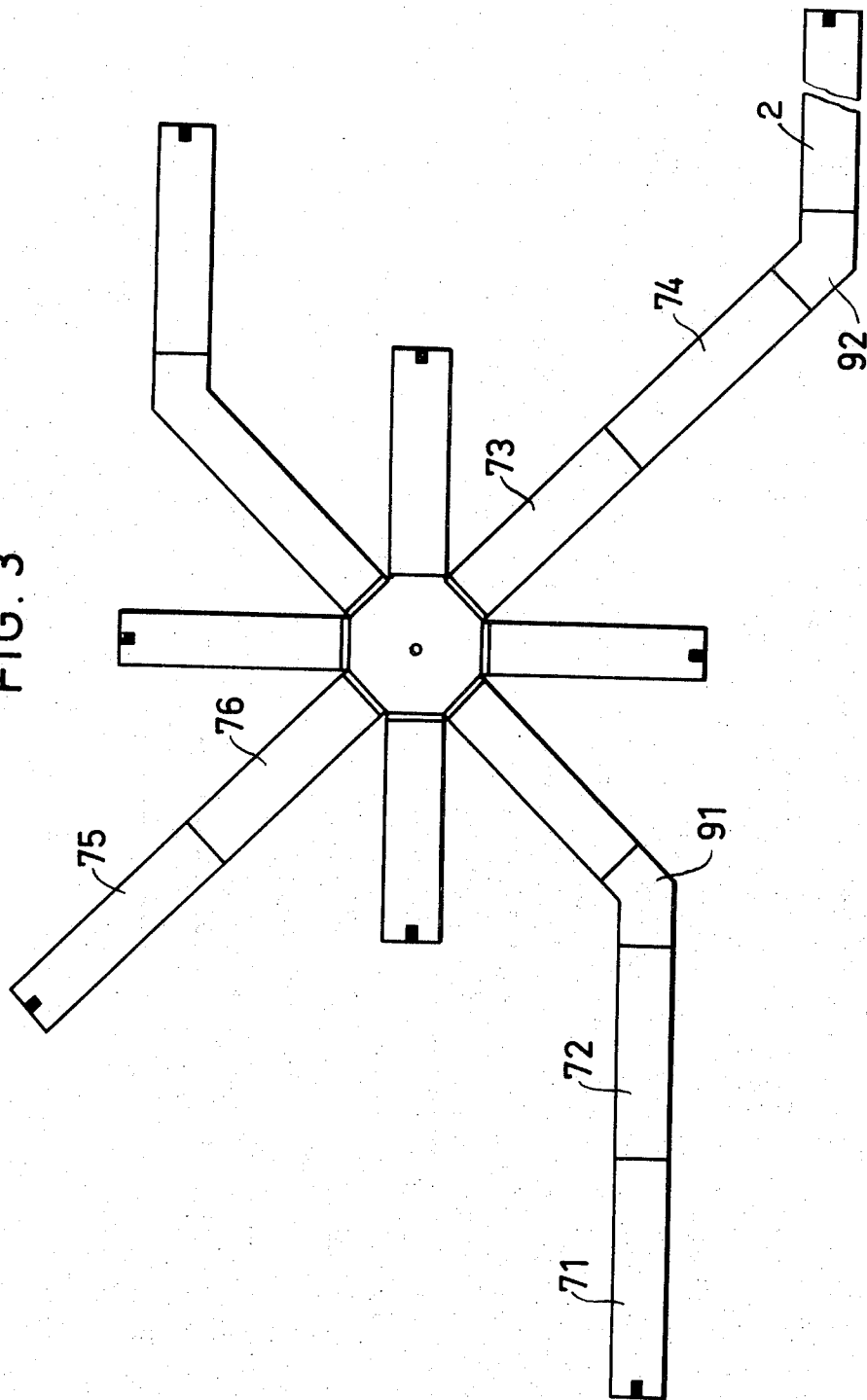


FIG. 4

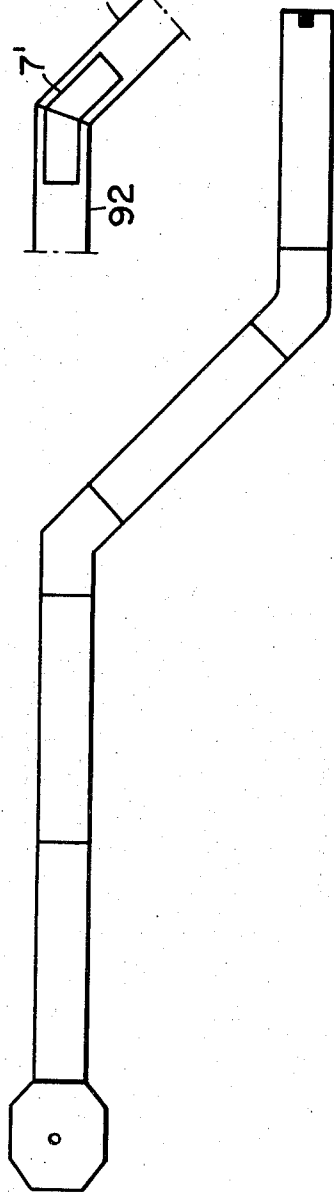


FIG. 5

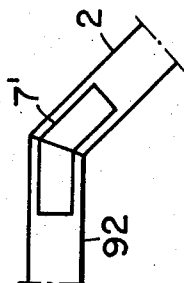


FIG. 6

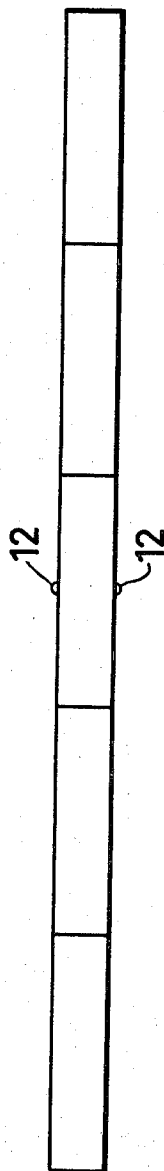
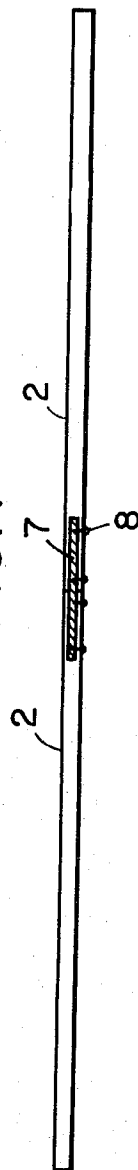
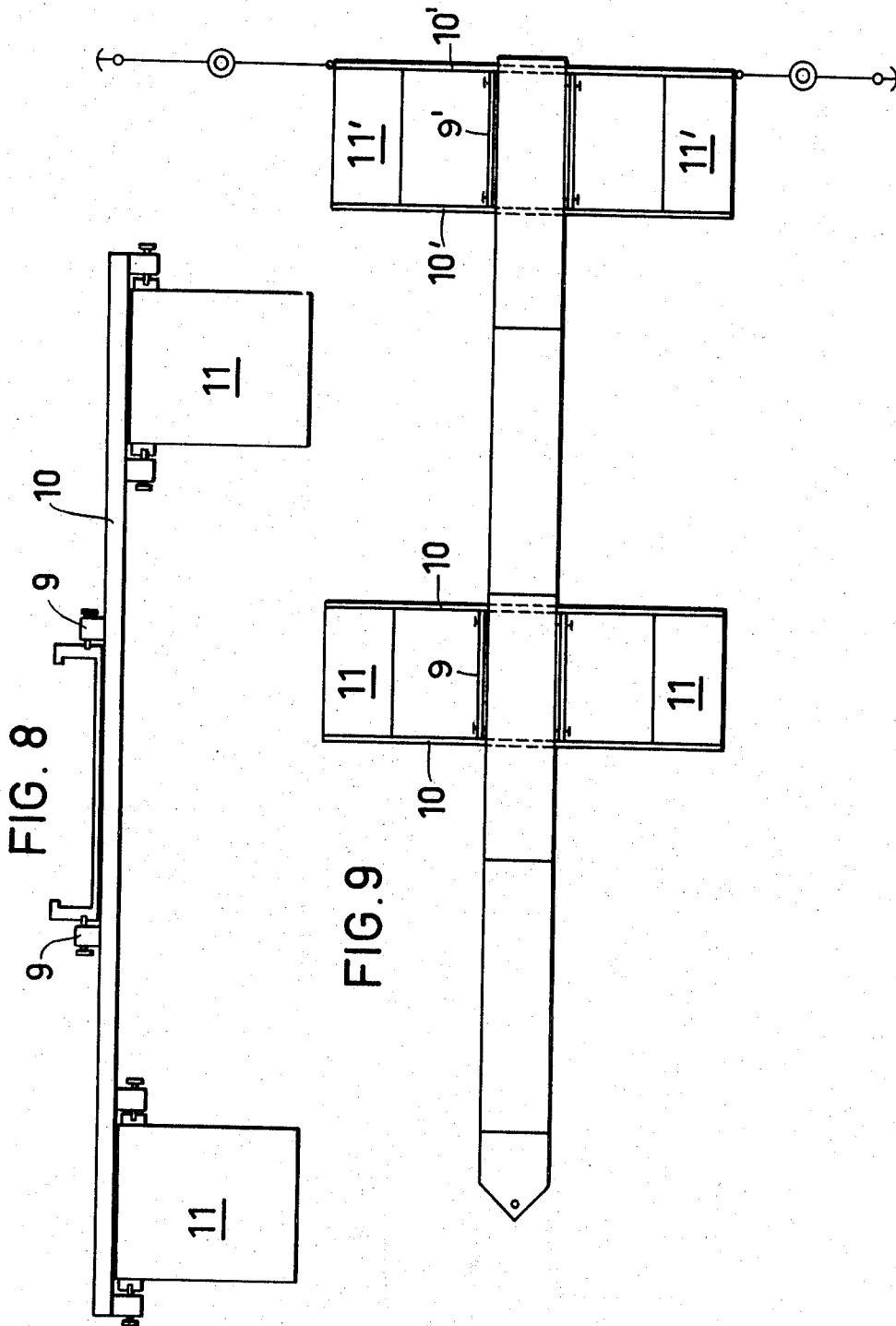


FIG. 7





MINIATURE GOLF COURSE

The present invention relates to a supporting construction for minigolf courses including piers and bridges.

As a rule, minigolf is played outdoors on grounds which are operated commercially. As the play has turned into a precision sport, it is necessary to produce a course which is quite plane and provides uniform friction for the golf ball. There must be no misalignment or fault in the course. In that case, the ball will roll in another direction than the player intends and, for skillful players, the game will in that case be completely uninteresting, since skill will no longer be as decisive as the players' knowledge about the relative inclinations and misalignments in the courses.

The material normally used for minigolf courses is coarse sand, wood, plates of the type Masonite, Eternite, etc., and cement or the like. As a rule such courses are anchored to the ground. Therefore the courses will be exposed to weather and wind and above all to warpage in the ground deriving from the seasons and variations of the weather. Due to the use of the above and other materials in minigolf courses it is not possible to give the courses the desired, absolute exactness even when they are newly made.

It has been aimed at giving piers and bridges such a construction that they can be formed by joining a plurality of supporting constructions of course members whose appearances are identical, on which it is pleasant to walk and which are enough stiff in the main load direction so that no noticeable sway will appear. Moreover, at piers and bridges, the construction must be light to reduce the size of the necessary supporting means and pontoons.

Furthermore, in all the abovementioned examples of use the construction must be covered with a material that can be reproduced, i.e., manufactured identically in a manufacturing process, and that the course members can be loaded to a desired degree without changing shape or appearance.

The present invention will solve the problems associated with a construction of the type mentioned in the introduction.

Some illustrative examples of the invention will be explained in connection with the enclosed drawings, where

FIG. 1 shows a section of half of a course member for minigolf courses;

FIG. 2 shows a section of half of a course member especially adapted to a pontoon pier;

FIG. 3 shows a minigolf course consisting of several course members according to the invention with a green in common;

FIG. 4 shows an example of a minigolf course consisting of several course members;

FIG. 5 is a side view which shows the composition of a corner joint of course members;

FIG. 6 shows an example of a pier;

FIG. 7 shows an example of the joint between two straight course members;

FIG. 8 shows a section of a pontoon pier; and

FIG. 9 shows the same pier as seen from above.

FIG. 1 shows a course member of the invention consisting of a deck 1, which in suitable manner is joined together by means of frame profiles 2 placed on both sides of same, which are hollow and have a greater

height than width so that their beam strength or main load direction will be in the direction of their height. On the sides facing the deck 1 the frame profiles 2 are provided with lips 3, which form a continuous transition between the surfaces of frame profiles 2 and the deck 1. The frame profiles 2 and the deck 1 are provided with a cover 4, preferably a close-fitted, wholly synthetical carpet, to give the course member a uniform cover and a suitable friction resistance and to provide the course member with a material that is not influenced by weather and wind. The frame profiles 2 are further each provided with a flap 6 covering the edge of the cover 4 and partly keeping it in position. In manufacture the cover 4 is glued to the deck 1 and the frame profiles 2. The material of the frame profiles and the deck is preferably aluminum, but also other materials are possible, such as plastic or plate. In the frame profiles 2 there are, moreover, threaded, vertically adjusting means 5, which consist of a plate 5 attached to a screw. With the aid of these vertically adjusting means 5 the course members can be aligned horizontally independently of the nature of the ground. joining parts 7' joining between oblique frame profiles are made in another way than the parts 7 for joining between straight course members. In joining of the straight course members a straight, stiff joining means 7 is inserted in the hollows in the frame profiles abutting each other (see, for instance, the course members 71 against 72, 73 against 74, 75 against 76 in FIG. 3). The joining means 7 is then fixed relative to the frame profile of the course members by for instance, introducing a stop means 8 through the frame profile and into the joining means 7. In this way a stiff transition is obtained between the frame profiles and, consequently, a completely stiff, coherent arrangement with a suitable number of course members. If required, straight course members 72, 74 are joined together in similar manner with angular course members 91 and 92 respectively. The oblique connection of those frame profiles is in principle apparent from FIG. 5 and a similar embodiment is used at the corners of the green.

The number of vertically adjusting means 5 necessary in a course member is dependent on the dimensions of the frame profiles and on the desired length of the course member as well as on the nature of the ground, since the vertical adjusting device is also a support for the course member, and preferably each course member is provided with a sufficient number of threaded holes into which vertically adjusting means 5 can be screwed in case of the most unfavourable load and ground conditions. In such cases when a vertically adjusting means 5 is also required exactly where the joining means is inserted between two course members, a relief or socket is arranged for the screw of the vertically adjusting device as is evident from FIG. 1, or the joining means is provided with a thread corresponding to said screw so that the vertically adjusting device can be screwed also into the joining means.

A suitable modification of the course member of FIG. 1 makes it also suitable as a bridge or a pier. In that case, no vertically adjusting device is necessary, but a fixation or mount 9 for the lateral positioning of each frame profile 2 (see FIG. 2). The course member rests on beam profiles 10, which at their ends carry float blocks or hulls 11. The course members are joined in the same way, as in the abovementioned golf courses, into stiff beam units and said joints are sup-

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ported at suitable distances from each other by means of additional beam profiles 10', 10' with carrying bodies 11', 11'. The outermost beam profile 10' in a pontoon bridge and the innermost beam profile are anchored in suitable manner. The above course members are preferably also provided with a close-fitted carpet, which is however not shown in FIG. 2.

FIG. 3 shows a suitable type of the minigolf course, which requires a relatively limited space, for instance for private use in a garden or the like. In this type of course each separate course, ends in the same green and, when a game is finished on a first course, a closing device in a following course is moved, to for instance, the course first played so that said following course will be open for play. Different types of courses, as is evident from FIG. 3, can thus be combined to one establishment and the number of courses is, in this case with a common green, only restricted to the number of sides of the green.

FIG. 6 shows how a beam or pier consisting of several course members according to the invention can be supported by means of supporting members 12 forced into the bottom. FIG. 7 shows an example of how the joining means 7 can be fixed between the frame profiles 2 of two course members.

By means of the invention, a course member for minigolf courses is obtained which is light, durable to the powers of the weather, easy to mount to different lengths and appearances, stiff, easily adaptable to different needs, cheap, lockable and vertically adjustable relative to a bedding of beams or the ground and above all reproducible.

I claim:

1. A miniature golf course including course members comprising in combination
 - a pair of hollow frame members positioned to form support beams on opposite sides of
 - a planar deck, said deck being supported by said frame members,
 - said frame members having a greater dimension in their main load bearing direction than their dimension in the lateral load-bearing direction perpen-

dicular to the main load direction, the greater dimension of said frame members being substantially perpendicular to the upper surface of said planar deck,

a continuous transition between said planar deck and the side of said frame members, said transition including a lip on each frame member having a curvate surface tangent to the planar deck and to the side of said frame member,

a cover of synthetic carpet secured on said deck and covering said lips and at least a portion of the side of said frame members,

the frame members each being provided with at least one vertical adjusting member positioned beneath its associated frame member and having an adjusting portion extending through the lower portion of the frame member and upwardly into the hollow portion thereof,

joining means for joining adjacent course members to each other, said joining means including a rigid joining member for insertion into the hollow portion of the frame member, said rigid joining member being shaped to substantially fill the internal cross-sectional area of the hollow portion of the frame member,

a recess in said rigid joining member for receiving said upwardly extending portion of the vertical adjusting member, and

said joining means including fastening means for locking each frame member to its associated rigid joining member.

The course members can be manufactured so that the course itself is given a width of for instance 50 or 80 cm and the length can for instance be between 1 and 5 m, preferably about 2 m. Several course members can be assembled into a minigolf course, as is for instance apparent from FIG. 4. In this type of course, corner parts and a "green" part are also required, in addition to the straight course parts described above. The corner parts are built in the same way as the straight course parts, while the angled

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