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(54) **Luminous basket backboard**

(57) A luminous basket backboard includes first and second boards made of light-transmitting acrylic material. The first board is provided on a front surface thereof a shooting rectangle and the second board has a surface that is roughened. Light reflectors are respectively arranged along edges of the first and second boards and contain therein light sources. The light reflectors forms

through holes and the first and second boards are provided with mounting holes corresponding to the through holes of the light reflectors to receive extension of bolts therethrough to fix the light reflectors, the first board and the second board together.

**EP 1 955 741 A1**

## Description

### BACKGROUND OF THE INVENTION

#### (a) Technical Field of the Invention

**[0001]** The present invention relates to a luminous basket backboard, and in particular to a basket backboard for basketball games, which emits lights and which is made of acrylic material.

#### (b) Description of the Prior Art

**[0002]** Basketball has been one of the most popular games around the world. To play a basketball game, a basket ball court, which has quite an area, is needed and this imposes certain constraints to further popularization of the game. However, for entertainment and exercise purposes, the basketball can be played with a simple backboard mounted to for example a wall with a very limited area for movement of the players. Thus, to suit the need of such home playing basketball games, various basket backboards of different styles are available in the market.

**[0003]** In early years, as shown in Figure 1 of the attached drawings, a basket backboard for basketball game, which is generally designated at 1, is made of wood having a surface on which white coating is formed. An outer frame 11 is provided along edges of the wooden board and a rectangle 12 that is of red color is provided at a central area of the wooden board. Such a backboard 1 can be manufactured with very low costs and is thus widely used all over the world. However, such a conventional basket backboard suffers certain problems, including at least:

(1) The conventional basket backboard is made of wood, which after a long term use, is subject to wear and warpage or deformation and further, the wooden backboard is subject to thermal expansion as being exposed to varying surrounding temperature, leading to cracking and thus damage.

(2) The conventional basket backboard is made of wood, which is a material of relatively low hardness and density so that large noises are generated when a basketball hits the backboard.

(3) The conventional basket backboard is of a changeless and monotonous style, providing no fantastic visual effect.

**[0004]** Thus, it is desired to have a basket backboard that overcomes the above drawbacks of the conventional basket backboards.

### SUMMARY OF THE INVENTION

**[0005]** The primary purpose of the present invention is to provide a basket backboard that eliminates the draw-

backs of the conventional wooden backboards that the backboard is subject to deformation caused by thermal expansion, being easily to damage, generating large noise upon hit by a basketball, and being monotonous and providing no appealing visual effect.

**[0006]** To solve these problems, the present invention provide a luminous basket backboard, which comprises a first board, a second board, light sources, and light reflectors, wherein the first and second boards are made of light-transmitting acrylic material and the first board is provided with a shooting rectangle and mounting holes distributed along a circumference thereof; the second board is surface roughened and is also provided with mounting holes distributed along a circumference thereof; the light sources are arranged inside the light reflectors and the light reflectors are fixed by threaded fasteners so as to fix the light sources to circumferential side edges of the first and second boards.

**[0007]** The effectiveness of the present invention is that the basket backboard is not subject to deformation caused by varying temperature for the first and second boards are made of acrylic materials and since the acrylic material has relatively high density and hardness, as compared to wood, the backboard of the present invention generates less noise as being hit by a basketball, thereby effectively reducing the noise of playing basketball. Further, due to the light sources and the light reflectors mounted to the circumference of the backboard, the backboard demonstrates lighting effect when in use, thereby enhancing product appealing and marketability of the basket backboard.

**[0008]** The foregoing object and summary provide only a brief introduction to the present invention. To fully appreciate these and other objects of the present invention as well as the invention itself, all of which will become apparent to those skilled in the art, the following detailed description of the invention and the claims should be read in conjunction with the accompanying drawings. Throughout the specification and drawings identical reference numerals refer to identical or similar parts.

**[0009]** Many other advantages and features of the present invention will become manifest to those versed in the art upon making reference to the detailed description and the accompanying sheets of drawings in which a preferred structural embodiment incorporating the principles of the present invention is shown by way of illustrative example.

### BRIEF DESCRIPTION OF THE DRAWINGS

#### [0010]

Figure 1 is a perspective view of a conventional wooden basket backboard for basketball game;

Figure 2 is an exploded view of a basket backboard constructed in accordance with the present invention;

Figure 3 is a cross-sectional view of the basket back-

board of the present invention; and

Figure 4 is a perspective view showing a basket for basketball game, which includes a basket backboard in accordance with the present invention.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

**[0011]** The following descriptions are of exemplary embodiments only, and are not intended to limit the scope, applicability or configuration of the invention in any way. Rather, the following description provides a convenient illustration for implementing exemplary embodiments of the invention. Various changes to the described embodiments may be made in the function and arrangement of the elements described without departing from the scope of the invention as set forth in the appended claims.

**[0012]** With reference to the drawings and in particular to Figure 2, which shows a basket backboard constructed in accordance with the present invention, generally designated with reference numeral 2, the basket backboard 2 comprises a first board 21, a second board 22, a plurality of light sources 23, and a plurality of light reflectors 24.

**[0013]** The first board 21 is made of light-transmitting acrylic material. The first board 21 has a front surface having a central area on which a shooting rectangle 211 is provided. The first board 21 also forms a plurality of mounting holes 212 on the surface. The shooting rectangle 211 can be provided by forming a rectangular frame like groove (not labeled) in the surface of the first board 21 and attaching color stickers (such as cutting sheet) into the groove.

**[0014]** The second board 22 is made of light-transmitting acrylic material. The second board 22 has a surface that is substantially roughened. The second board 22 has a circumferential marginal area in which mounting holes 221 corresponding to the holes 212 of the first board 21 are defined.

**[0015]** The light sources 23 are arranged along circumferential side edges of the first and second boards 21, 22. The light sources 23 can be for example cold cathode fluorescent lamps and light-emitting diode based lighting devices.

**[0016]** The light reflectors 24 are channel-like members having an open to receive and thus enclosing light sources 23. The light reflectors 24 form through holes 241 corresponding to the mounting holes 212, 221 of the first and second boards 21, 22. The light reflectors 24 are made of light reflective material or contains at least a light reflective material coated on an inside surface thereof to form a reflective coating.

**[0017]** Also referring to Figure 3, to assemble, the first and second boards 21, 22 are positioned to surface-abut against each other. And the light sources 23 are arranged along the circumferential side edges of the first and second boards 21, 22. The channel-like light reflectors 24

are then partially fit over the side edges of the first and second boards 21, 22 to enclose and cover the light sources 23 and the circumferential marginal areas of the first and second boards 21, 22. Finally, bolts or threaded fasteners S are fit through the through holes 241 of the light reflector 24 and the corresponding mounting holes 212, 221 of the first and second boards 21, 22 to secure the light reflectors 24 and the first and second boards 21, 22 together and to fix the light sources 23 along the side edges of the first and second boards 21, 22.

**[0018]** Also referring to Figure 4, in practical use of the backboard 2, a rim 3 is mounted to a lower edge of the backboard 2. Electrical power is supplied to the light sources 23. The light-transmittance of the first and second boards 21, 22 guides light emitted by the light sources 23 through the boards 21, 22. Due to the roughened surface of the second board 22, the light transmitting through can be made uniform. Further, in the practical use of the backboard 2, the light sources 23 can be formed of light emitting elements that emit lights of different colors, such light-emitting diodes of different colors, so that the backboard 2 may show different colors and variations.

**[0019]** The effectiveness of the present invention is that the first and second boards 21, 22 are made of acrylic material and are thus less subject to deformation caused by temperature variation. The backboard 2 generates less noise when the backboard 2 is hit by a basketball, and this is because that acrylic material that makes the first and second boards 21, 22 has a high density and hardness as compared to the conventional wooden backboard, and also has a low acoustic transmissibility, which effectively reduces the sound generated by being hit by the basketball. In addition, with the light sources 23 and the light reflectors 24 arranged along edges of the backboard 2, the backboard 2 shows a versatile lighting effect in a practical use and this enhances the product appealing and marketability of the backboard 2.

**[0020]** Although the present invention has been described with reference to the preferred embodiment thereof, it is apparent to those skilled in the art that a variety of modifications and changes may be made without departing from the scope of the present invention which is intended to be defined by the appended claims.

**[0021]** It will be understood that each of the elements described above, or two or more together may also find a useful application in other types of methods differing from the type described above.

**[0022]** While certain novel features of this invention have been shown and described and are pointed out in the annexed claim, it is not intended to be limited to the details above, since it will be understood that various omissions, modifications, substitutions and changes in the forms and details of the device illustrated and in its operation can be made by those skilled in the art without departing in any way from the spirit of the present invention.

## Claims

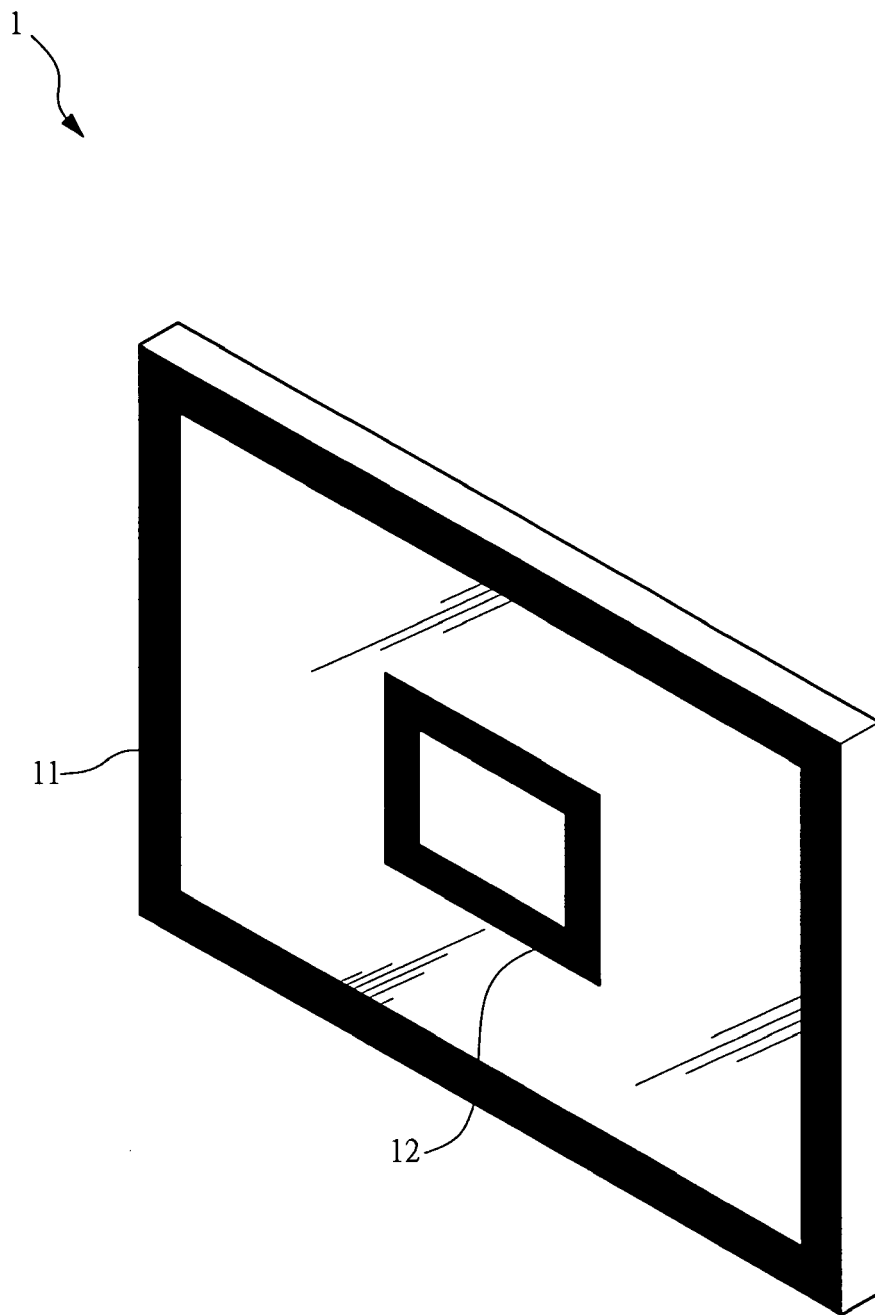
1. A luminous basket backboard, comprising:
  - a first board made of light-transmitting acrylic material and having a shooting rectangle and a plurality of mounting holes; 5
  - a second board made of light-transmitting acrylic material and having a surface that is roughened and a plurality of mounting defined in a circumferential marginal area and corresponding to the mounting holes of the first board; 10
  - a plurality of light reflectors containing therein light sources and forming a plurality of through holes, the light reflectors being arranged along side edges of the first and second boards and enclosing the light sources and the side edges of the first and second boards; 15
  - fasteners extending through the through holes of the light reflectors and the mounting holes of the first and second boards to fix the light reflectors, the first board and the second board together. 20
2. The luminous basket backboard as claimed in Claim 1, wherein the first board has a front surface in which a groove is formed. 25
3. The luminous basket backboard as claimed in Claim 1, wherein the light sources comprise cold cathode fluorescent lamps. 30
4. The luminous basket backboard as claimed in Claim 1, wherein the light sources comprise light-emitting diodes. 35

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*PRIOR ART*

FIG.1

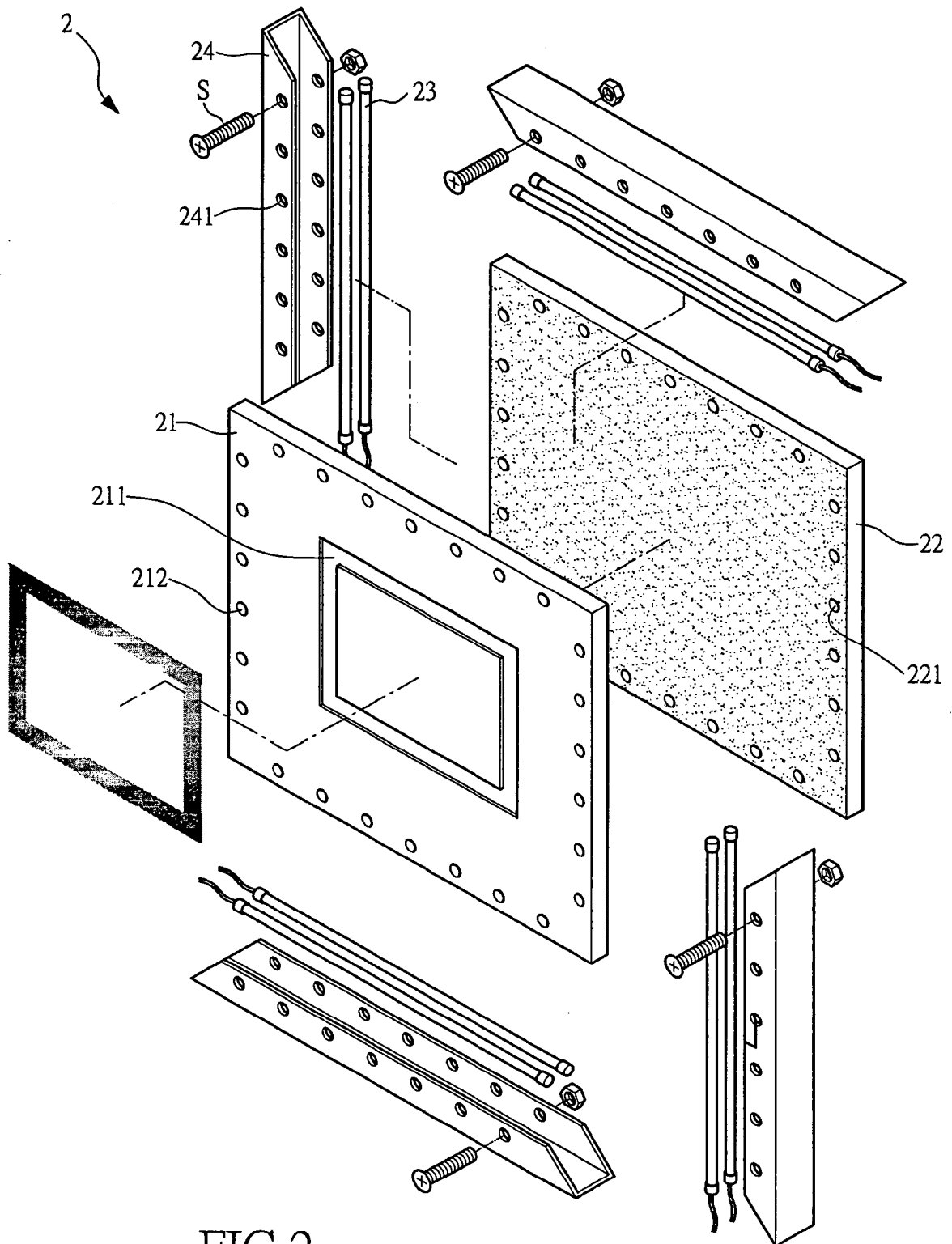


FIG.2

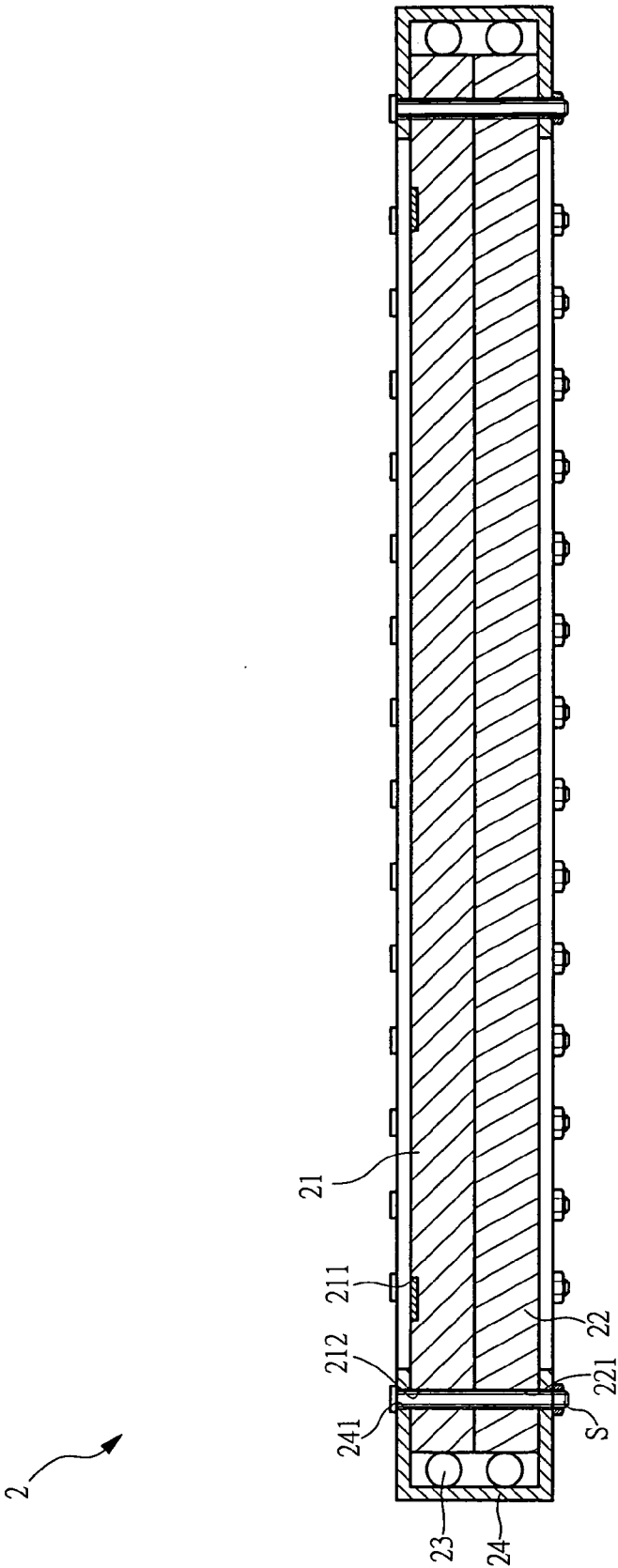


FIG.3

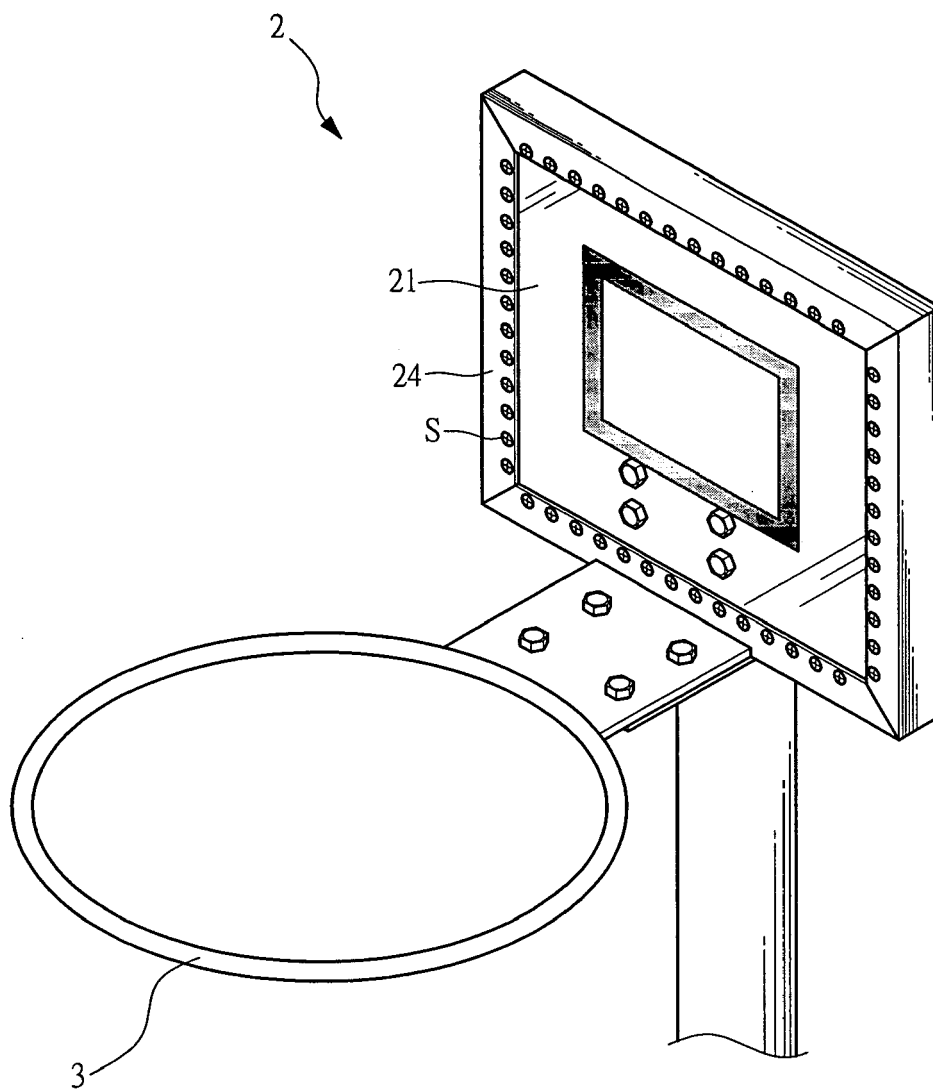


FIG.4





European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 07 01 6084

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2001/040803 A1 (BRANSON WILLIAM A [US]) 15 November 2001 (2001-11-15) * paragraphs [0008] - [0010], [0034] - [0038]; figures *	1-4	INV. A63B63/08
A	US 5 711 727 A (EDGE ANDRE L [US] ET AL) 27 January 1998 (1998-01-27) * column 3, lines 3-64; figures *	1-4	
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A	US 2002/049102 A1 (TAYLOR CARL [US]) 25 April 2002 (2002-04-25) * figures *	1-4	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			A63B
Place of search		Date of completion of the search	Examiner
Munich		4 July 2008	Teissier, Sara
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

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EPO FORM 1503 03.82 (P04/C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 07 01 6084

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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04-07-2008

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