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(54) Games table

(57) A games table comprising a playing surface supported by a beam structure (2) which is mounted on a support structure (1). The beam structure (2) is comprised of at least two transverse beams (11) and at least one longitudinal beam (12). The or each longitudinal beam (12) is attached at each end to a transverse beam (11). The beam structure (2) has at least four points at which it is mounted on the support structure (1). Each mounting allows the height of the beam structure (2) to be adjusted relative to the support structure (1).

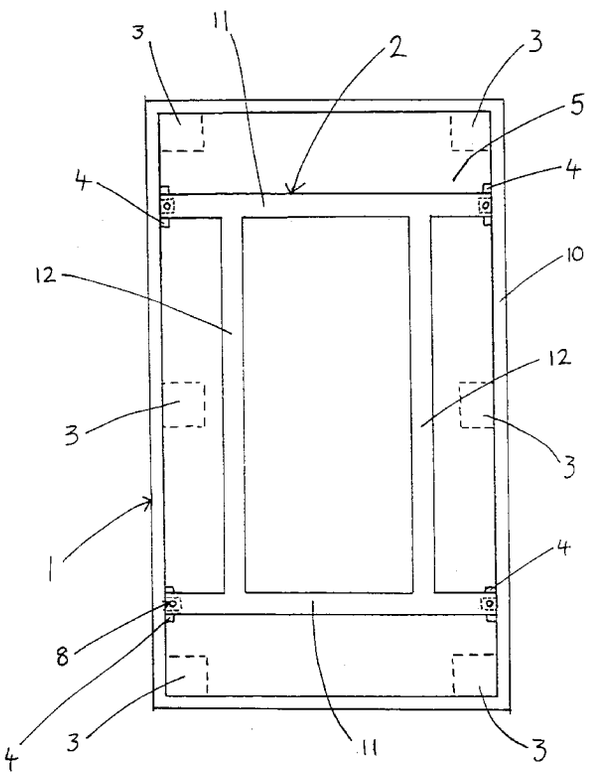

FIG 1

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Description

Field of the Invention

The invention relates to a levelling system for a games table, in particular a table for playing pool, snooker or billiards. (See GB 2284544A)

Background of the Invention

A games table for the playing of pool, snooker or billiards comprises a flat playing surface, usually of slate, which is maintained at a suitable playing height by a support structure. The support structure normally includes a table frame and a base defining a box located under the playing surface and containing the ball handling mechanisms; and a number of legs and feet for maintaining the box and the playing surface at the correct height.

In such a games table, it is extremely important that the playing surface is truly horizontal, even if the ground that the table stands upon is not entirely level. Prior art games tables have in general been levelled by making adjustments in the area where the legs join the feet. The feet may be attached to the legs by a screw-threaded connection such that twisting the feet relative to the legs results in the alteration of the height of the playing surface relative to the feet and therefore to the ground.

The above system is cumbersome and it is difficult to make fine adjustments to the level of the playing surface.

The Invention

According to one aspect of the invention there is provided: a games table comprising: a playing surface supported by a beam structure; the beam structure being mounted on a support structure; wherein: the beam structure comprises at least two transverse beams and at least one longitudinal beam attached substantially at its ends to the transverse beams; and the beam structure is mounted at at least four points on the support structure, each mounting allowing adjustment of the height of the beam structure relative to the support structure at that point.

Thus, there are at least four points at which the height of the beam structure may be adjusted to level the playing surface. The presence of at least two transverse beams and at least one longitudinal beam ensures that the whole playing surface is supported so that it does not sag significantly. The beam structure forms a planar mounting for the playing surface, regardless of the adjustments made to its height at each mounting. Thus, the playing surface cannot be put under stress by adjustments to the mountings which would tend to distort the playing surface out of its planar shape. This prevents any damage to the playing surface which would normally be slate.

The words "tranverse" and "longitudinal" are used as a convenience to refer to sets of beams which are substantially perpendicular to one another. They do not imply that the longitudinal beams are parallel to the longitudinal axis of a games table, or imply any limitation as to the relative lengths of the beams. However, whatever the shape of the games table, it is preferred that the longitudinal beams are parallel to its longer sides.

With a traditionally shaped rectangular games table, preferably the transverse beams are parallel to the short sides of the table, and the longitudinal beam or beams are parallel to the long sides of the table. In this case the beam structure is mounted on the support structure at the ends of the transverse beams. If there are two transverse beams, a transverse beam should preferably be located around a quarter table length from each end of the games table. The longitudinal beam or beams are preferably approximately evenly spaced across the width of the table.

Preferably there are two transverse beams and two longitudinal beams. However, more beams may be provided, for example to support a relatively large games table, and more than four adjustable mountings may be provided for supporting the beam structure.

Each adjustable mounting may include two parts, the first part being mounted on the support structure and the second part engaging the beam structure. The height of the first part relative to the second part may be adjusted for example by connecting the two parts together with a grub screw.

The support structure would normally include legs mounting a box containing pool table ball handling mechanisms, this box being located under the playing surface. The adjustable mountings may be supported at least partly on the base of the box to give more stability.

The Drawings

Figure 1 is a schematic plan view of a pool table according to the invention, with the slate removed;

Figure 2 is a schematic view from inside of a corner of a pool table, showing a support for a beam structure according to the invention;

Figures 3a and 3b are schematic cross-sectional views of a mechanism for altering the height of the beam structure.

Referring to Figure 1 a pool table according to the invention includes a support structure 1 on which is mounted a beam structure 2 for supporting a playing surface (not shown). The support structure includes a table frame 10 and table base 5 which define a box containing the ball handling mechanisms (not shown). The table frame 10 and table base 5 are supported on six legs

3. The beam structure 2 comprises two transverse beams 11 and two longitudinal beams 12. The longitudinal beams 12 are connected at their ends to the transverse beams 11. Each end of each transverse beam 11

is mounted on the table frame 10 and base 5 in such a way that controlled vertical movement of the end of the beam relative to the table frame and base is possible.

Figure 2 shows an inside corner of the table frame 10. A beam support 4 is fixed with screws to the table frame 10 and to a base of the table 5. The beam support 4 supports an end of one of the transverse beams 11. Figures 3a and 3b show the way in which the transverse beam 11 is supported on the beam support 4.

The transverse beam 11 is of inverted U shape in cross-section and its end can fit snugly over the top 6 of the beam support 4 as shown in Figure 3b. Each end of each transverse beam includes an internally threaded nut 7 into which a grub screw 8 fits. The lower end of the grub screw sits in a hole 9 in the top 6 of the beam support 4. The grub screw can rotate freely in the hole 9 which is not internally threaded. As can be seen in Figures 3a and 3b, rotation of the grub screw in a clockwise direction with an Allen key draws the end of the transverse beam 11 upwards relative to the beam support 4. Rotation of the grub screw in the opposite direction allows the end of the transverse beam 11 to move downwards relative to the beam support 4 until it eventually rests snugly on and over the top 6 of the beam support 4.

Thus controlled vertical adjustment of each end of each transverse beam 11 can be effected independently. This allows the orientation of the beam structure 2 to be adjusted very precisely until it is exactly horizontal, enabling the playing surface also to be horizontal.

Claims

1. A games table comprising:

   a playing surface supported by a beam structure (2) mounted on a support structure (1) and comprising at least two transverse beams (11) and at least one longitudinal beam (12);

   CHARACTERIZED IN THAT:

   at least one longitudinal beam (12) is attached substantially at its ends to the transverse beams (11), and;

   the beam structure (2) is mounted at at least four points on the support structure (1), each mounting allowing adjustment of the height of the beam structure (2) relative to the support structure (1) at that point.

2. A games table according claim 1, wherein the or each longitudinal beam (12) is substantially perpendicular to the transverse beams (11).

3. A games table according claim 1 or claim 2, wherein the or each longitudinal beam (12) is substantially parallel to the longitudinal axis of the support structure (1).

4. A games table according to any preceding claim, wherein the or each longitudinal beam (12) is evenly spaced across the width of the table.

5. A games table according to any preceding claim, wherein an adjustable mounting is provided at the end of each transverse beam (11).

6. A games table according to any preceding claim, wherein each mounting is comprised of two parts, the first part (4) being fixed to the support structure (1) and the second part (7) engaging the beam structure (2).

7. A games table according to claim 6, wherein each mounting comprises, a grub screw (8) which is threaded through a nut in the beam structure (2) and sits in a hole (9) in the top (6) of a beam support (4) which is fixed to the support structure (1).

8. A games table according to any preceding claim, wherein the support structure (1) comprises a box, located under the playing surface, to which legs are mounted and within which a ball handling mechanism is housed.

9. A games table according to claim 8, wherein the adjustable mountings are supported at least partly by the base of the box.

10. A games table according to any preceding claim, comprising two transverse beams (11) which are located approximately a quarter table length from each end of the table.

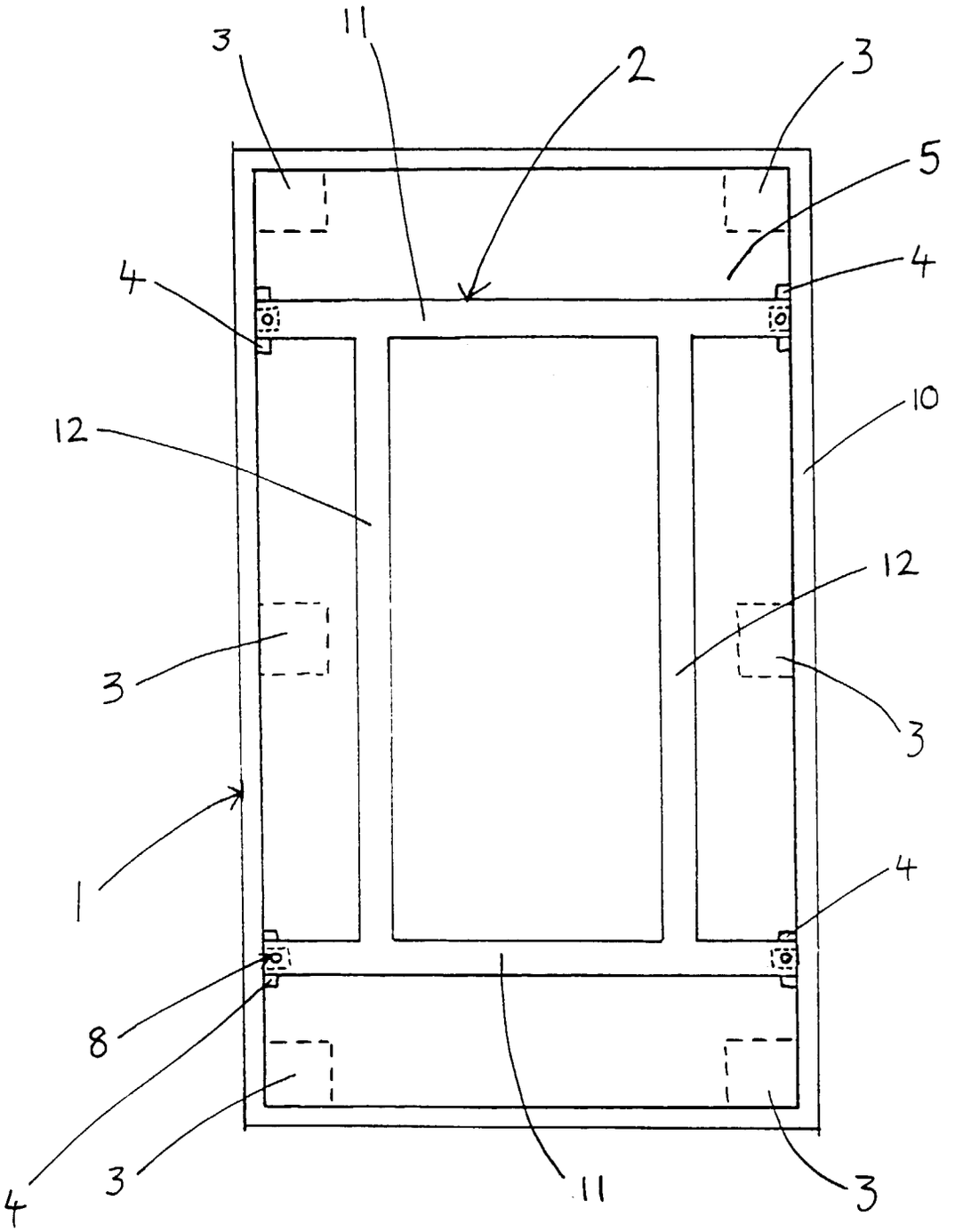

FIG 1

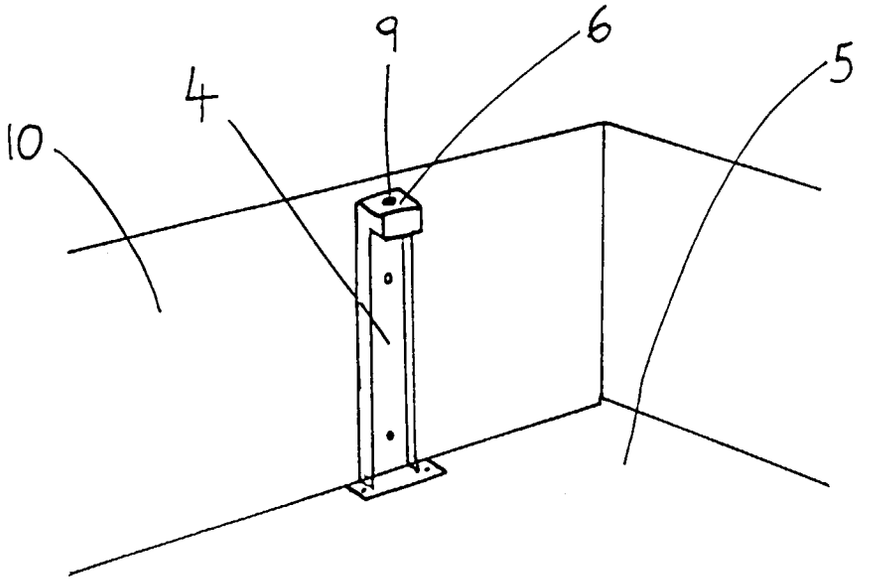

FIG 2

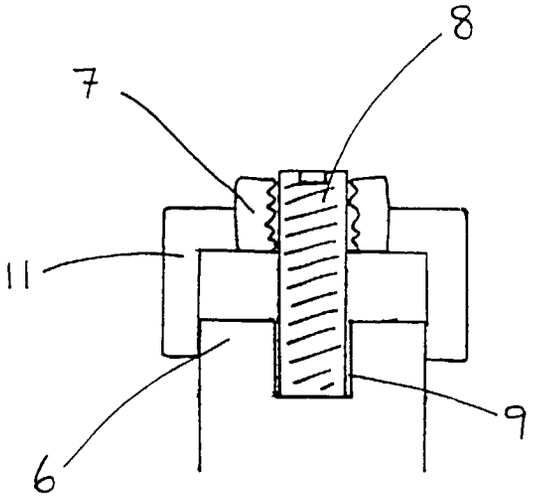

FIG 3A

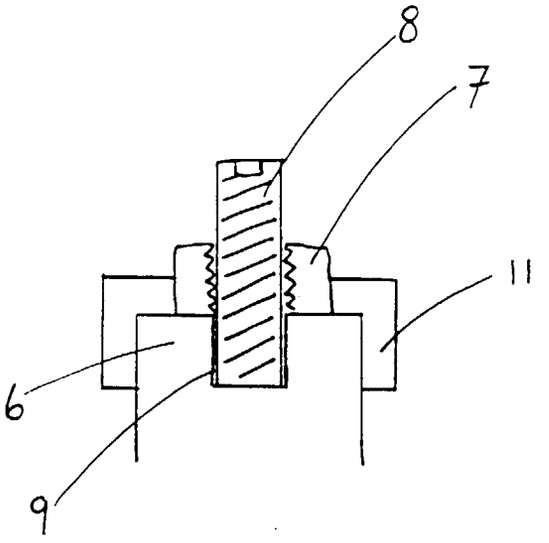

FIG 3B

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EUROPEAN SEARCH REPORT

Application Number
EP 98 30 0356

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Y	FR 550 508 A (VAN LAERE) * the whole document *	1-7,10	A63D15/00
Y	FR 1 090 557 A (GLINEUR) * page 1, column D, line 9 - line 37; figures *	1-7,10	
A	FR 801 607 A (ABOUCAYA) * page 3, line 18 - line 48; figure 5 *	7	
A	FR 2 594 703 A (POSE INGENIERIE DIFFUSION) * page 2, line 29 - line 34 * * page 3, line 21 - line 23 * * page 4, line 1 - line 3; figure 2 *	8	
A,D	GB 2 284 544 A (HAZEL GROVE MUSIC CO LTD ;ELMAREY LTD (GB); HAZEL GROVE (GB)) * abstract; figures *	1	

TECHNICAL FIELDS SEARCHED (Int.Cl.6)

A63D
A47B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	27 April 1998	Baert, F

CATEGORY OF CITED DOCUMENTS

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