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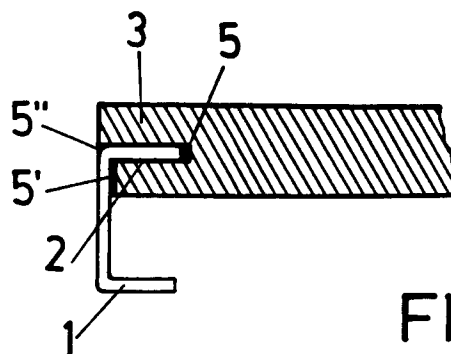
(11) Publication number:

0 663 165 A1

(12)

EUROPEAN PATENT APPLICATION(21) Application number: **94500003.2**(51) Int. Cl.⁶: **A47B 25/00**(22) Date of filing: **13.01.94**(43) Date of publication of application:
19.07.95 Bulletin 95/29(84) Designated Contracting States:
**AT BE CH DE DK ES FR GB GR IE IT LI NL PT
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C. Explanada, 8
E-28040 Madrid (ES)(54) **Table tennis board.**

(57) Made of an inert stratified material, light and with a polished rebound surface, incorporating perimetric profiles for side reinforcement, characterized by the incorporation of a recess (2) made on its lower side half and another central perimetric recess. The free edge of the profile (1) is finished forming a flange. An elastic adhesive (5) is poured inside the recess, in the side and in the contact points of the board and the outer edge of the profile. The board also incorporates a series of angular reinforcements and cross-sectional reinforcement profiles, bolted at their sides to the perimetric profiles. The vibrations caused on the profiles by the rebounds are eliminated by means of an elastic intermediate element.

**FIG.1****EP 0 663 165 A1**

OBJECT OF THE INVENTION

The invention which is the object of this report refers to a table tennis board formed by a thin and resistant laminate characterized because it incorporates a lower perimetric profile inside a perimetric recess while the other side is finished forming a frame.

This laminate board with frame incorporates crosssectional reinforcing beams on the long side of the rectangle formed by the board, equidistant from the relevant short edges of the lower side of the board and bolted to the profiles.

The finishing of the board is achieved by means of a traction-resistant, epoxy-type adhesive of an elastic structure.

BACKGROUND OF THE INVENTION

Table tennis is a common sport activity in many countries, especially those where due to their social habits and standard of living single family houses are usual dwellings and these table tennis boards can be found in the basements, garages and penthouses of these dwellings especially since book-type boards were invented.

The standard dimensions are 1370 x 1525 cm., and the basic requisites are strength, density, weather resistance including rain, ice or extreme low and high temperature, a minimum weight and other secondary requisites which are also important such manoeuvrability, indelible paint, net fixing means, storage of balls and racquets, etc.

Those boards which comply with some of the requisites are unable to comply with other requisites as in the case of floor-anchored concrete boards which when they incorporate an upper surface smooth and well maintained allows highly elastic rebounds.

Boards made of plastic laminate on aluminum and those lacquered are very cheap but they can be easily deformed due to impacts and require a reinforcement on their lower side.

On the other hand, only motor car manufacturers use the technology of a folded double laminated or lacquered plate and this technology is only being used by manufacturers of metallic furniture for kitchens and elevator cabinets.

A significant development is expected in this context through the manufacturing of sandwiches of a laminated symmetric figure with its edges orthogonal to the plate and incorporating laminated products such as high-density polyurethane. However, the manufacturing of recesses and the watertightness of the joints of such parts is still outstanding.

Other means have been developed to solve the problem of the rebounds using the conventional

formula of wood laminate with scarce resistance to the weather conditions and too heavy.

The problems posed by the board edges and vertices which require a special finishing should also be mentioned, as well as the problems arising from very thin laminates which force to bolt lower perimetric and cross-sectional supports using special screws carefully bolted one by one.

This bolting systems require a considerable and very skilled work due to the high risk of damaging the board if just one screw slightly pierces the upper side.

This problem has led to developments in which the profile, with its edges duly finished, is located at the lower edges of the board and both parts are joined by means of a highly resistant adhesive.

This adhesive has to be elastic to be able to absorb the eventual expansions of the board due to its exposure to the sunlight and the shadow at short intervals.

This formula has the aesthetic and practical inconvenience of the thickness of the assembly formed by the three layers: upper laminate, a thick layer of adhesive - for elasticity purposes - and a lower supporting and strengthening profile.

Apart from the above, it also requires a later stage of adhesive checking and finishing in those areas where it is not flushed with the edge of both outer profiles. It also has to be eliminated in those points where it is not accurately flushed with respect to such profiles, which represents an additional problem of time and final cleaning, apart from other aesthetic problems that, since they are perfectly known, will not be mentioned here.

One of the recent solutions given to that problem is the French invention patent EP 0362025 called: "Table tennis board" which described a folding board supported by a rigid metallic structure which forms a lower perimetric frame at least at the three outer sides of each section of the board. The board and the frame are joined by means of a two-side adhesive band.

DESCRIPTION OF THE INVENTION

The invention described herein is more elegant and practical. It consists of making a perimetric recess in the centre of the outer laminate of a height which enables to incorporate a profile sufficiently strong to meet the strength needs of the assembly which have been described above.

This profile is finished at its outer side by means of a flange which eliminates its sharp edges and by means of angular reinforcement at the vertices. The upper flanges are fixed in the recess which incorporates two side flanges with a hole at their ends to bolt the side profiles to these angular reinforcements.

The recess is made so that its height is the same as that of the profile and the angular reinforcement thus enabling them to fit in the recess. The outer side of the "U"-shaped profile core is coplanar to the side of the board and such core is embedded in a recess made on the lower side of the board.

The eventual differences of thickness between the recess and the profiles can be filled by means of an elastic, epoxy-type adhesive previously introduced inside the recess and which, at specific points, can fill the small imperfections of the board material caused when making the recess. The inner adhesive cord is reinforced by means of another perimetric one at the contact points of the lower perimeter of the board and the orthogonal plane of the profile core offering a finishing rounded by pressure and by the vicinity of the adhesive to the contact dihedron which in the case of angles is a trihedron.

To avoid vibrations during the game, the cross-sectional reinforcements - two for each half of the board - located near the short sides of the board have the shape of a rectangular section tube and are bolted to the sides - previously making a recess on the inner side of the "U" of the side reinforcement profile of the board to leave room to such profile. Such reinforcements should be previously fixed to the board by means of adhesive tape.

DESCRIPTION OF THE DRAWINGS

To complement this description and in an effort to better understand the main characteristics of the invention, a set of drawings is attached to this descriptive report forming an integral part of it and where, as an illustration and without limitation, the following has been represented:

Figure 1 shows a schematic section of the perimetric anchoring of the profile to the board.

Figure 2 shows a lower schematic view of the plan view of one half of the board showing a detail of the finishing of the joining of the cross-sectional profile to the upper board.

PREFERRED EXECUTION OF THE INVENTION

In the light of these figures, it can be noticed how the invention described herein is based on two stratified half boards, made of materials which are inert or have been inerted by means of different procedures. Such materials have to be light and with a polished rebound surface.

This outer laminate (3) has perimetric recesses (2), one on the lower side and another one approximately in the middle of its thickness, housing a "U"-shaped profile (1) finished on its free outer

side by means of a flange or any other finishing mean.

An elastic adhesive (5) has been previously poured inside the recess or in some part of it and is reinforced by means of another inner perimetric cord (5') on the contact point between the remaining lower part of the board and the profile.

The cross-sectional reinforcing tubular profiles (4) are bolted by conventional means to the side profiles and, to avoid vibrations, they are separated from the board by means of an intermediate insulating element.

A series of angular pieces (6) external to the metallic frame depicted by the profiles are fixed to its vertices as corner reinforcements and bolted using the holes made on the orthogonal outer flanges.

It is not the intention to describe further this invention since any expert on the subject will be able to understand it easily on the basis of the information provided to appreciate the scope of this invention and its advantages and to reproduce it.

It is understood that, provided that the essentials of this invention are not altered, any variations in the materials or in the shape, size and layout of the elements can be introduced.

The terms used in this description as well as their meaning should always be considered as non-limitative.

Claims

1. A stratified tennis table board, made of materials inert or inerted through different procedures, light and with a polished rebound surface, mounted on a wheeled or fixed supporting structure, with two half boards articulated at their sides incorporating side-reinforcing perimetric profiles, essentially characterized because its outer sides (3) have a recess (2) in its lower half and another perimetric central recess housing the end of "U"-shaped flange (1). Previously, an elastic adhesive (5) has been poured inside the recess as well as on the side (5') and in the contact point (5'') of the board and the outer edge of the profile. The board also incorporates a series of angular reinforcements (6) bolted by their end flanges to the profiles (1) and a series of cross-sectional reinforcement profiles (4) embedded and bolted to the same perimetric profiles (1). The vibrations caused by rebounds are eliminated by means of an intermediate elastic element (7).
2. A tennis table board, according to the first claim, where the profile is also embedded within the board recess but without using the inter-

nal adhesive.

3. A tennis table board, according to the previous claims, where the profile is also embedded without adhesive in the outer part of the perimeter of the board. 5
4. A tennis table board, according to the previous claims, characterized because no recess has been made on the lower half of the side of each half board and because the core of the "U"-shaped profile perimetrically embedded is not coplanar but protruding. 10
5. Tennis table board. 15

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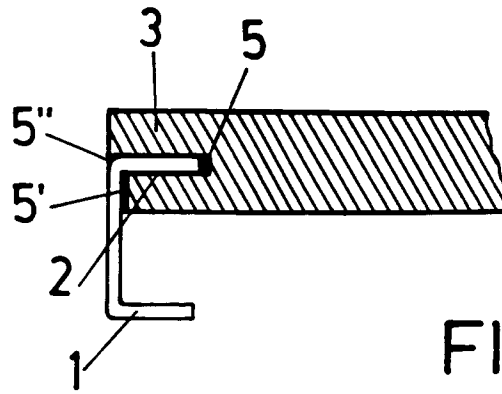


FIG. 1

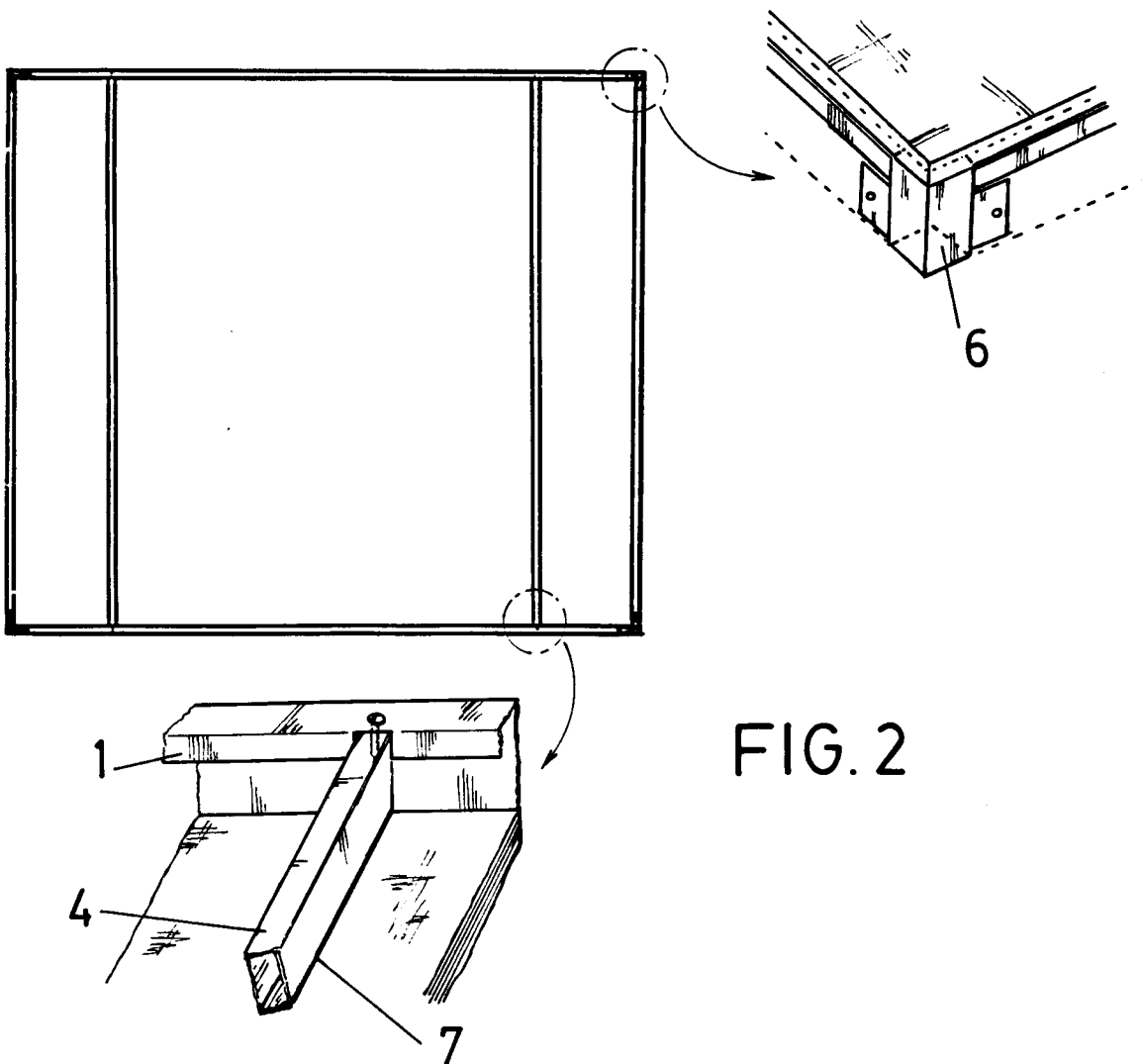


FIG. 2



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EUROPEAN SEARCH REPORT

Application Number
EP 94 50 0003

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)
X	DE-A-25 36 861 (NEUMANN) * the whole document * -----	1	A47B25/00
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			A47B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 24 June 1994	Examiner Noesen, R
CATEGORY OF CITED DOCUMENTS 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 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 & : member of the same patent family, corresponding document			