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### (54) PALLET FOR MOTORCYCLES

(57) The pallet is comprised of a board (2), releasably mounted on a frame (1), having appropriate dimensions so as to be received appropriately in the areas or spaces of transport trucks or ship holds. The board (2) has pairs of openings (7 and 8), the first openings being longitudinally oriented for the positioning of the rear wheel of the motorcycles, whereas the second openings are obliquely oriented for the positioning of the front

wheel, providing for sufficient stability without requiring additional holding elements. The openings (7 and 8) have a beveled edge (9) at its extreme zones in order to avoid damaging the wheels. The pallet is intended to transport motorcycles in trucks and/or ships, and to maintain said motorcycles stored in stable conditions and occupying a minimum space.

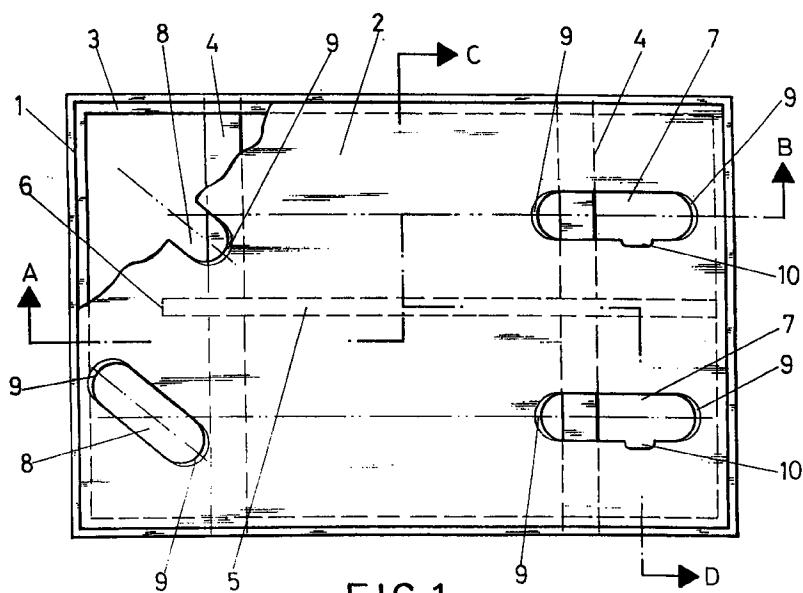


FIG.1

**Description****OBJECT OF THE INVENTION**

As stated in the title of this specification, the present invention refers to a pallet for motorcycles, which has been designed and embodied to constitute a means usable for storage of motorcycles as well as for the transport thereof.

The pallet is especially applicable in storage areas such as factories, warehouses, and even in places of business or stores, being equally useful to transport motorcycles, in trucks, as well as in ships, or other conventional means of transportation.

**BACKGROUND OF THE INVENTION**

The transport and storage of motorcycles are normally done in the so-called "Marchante" (Walking) manner. This method consists of walking the motorcycle in its direction of operation by an operator who pushes it by its handlebars until it is placed next to another motorcycle, either on the floor of a truck or of a warehouse.

Some cases in which three motorcycles are placed on a platform, which is handled by means of trucks, are also known. For this reason, this could be called a pallet.

Now then, even with the existence of some types of pallets, one that individually supports a motorcycle and being made of aluminum has a prohibitive cost, can be cited as a more advanced one. On the other hand, the above mentioned pallet for three motorcycles, with an iron structure, turns out to be too heavy, too costly and has a series of problems or inconveniences such as rusting, difficult handling, etc., although the problem of rusting can be solved by using steel, which obviously makes the product more expensive.

On the other hand, presently known pallets have pairs of windows placed longitudinally and placed at an appropriate distance, so that the wheels of the motorcycles may remain positioned in the same.

Now then, conventional pallets of the referred type, aside from the mentioned inconveniences, endure other no less important inconveniences, such as misuse of the dimensions of the pallet, as well as in the arrangement of the motorcycles, since as the windows for placement of the wheels are aligned longitudinally, the handlebars remain in a crosswise position, for which reason it is necessary to leave a considerable distance between the windows of one motorcycle with regard to the contiguous motorcycle, so that the handlebars of the motorcycles do not obstruct each other once the motorcycles themselves are placed in the pallet.

In some occasions the windows of one motorcycle remain misaligned with respect to the windows for the continuous motorcycle, which obviously requires the pallet to be longer.

On the other hand, for stabilization and fastening of

the motorcycles some tie rods or suitable means on the basis of which the motorcycle itself is immobilized are needed, so that during transport or handling of the pallets loaded with motorcycles, the motorcycles do not run the risk of falling over.

Finally, due to the present concept of pallets, loading and unloading, and in short, the handling of pallets with motorcycles, several operators and periods of time which are considered as long, are required.

**DESCRIPTION OF THE INVENTION**

The object of the invention is none other than that to solve all the above mentioned inconveniences and problems, for which purpose a series of innovations and improvements of conventional pallets have been conceived. On the one hand, a pallet which on the one hand turns out to be economic to manufacture, lightweight, easy to handle by hand when it is not loaded with motorcycles, is obtained. Besides, motorcycles manage to remain perfectly stable in the pallet without the need of additional holding elements.

In this sense, the pallet of the invention has as a first novel characteristic, the fact of being made entirely out of wood, having a perimetric frame and corresponding rigidizing crossbars and longitudinal bars, a frame which is provided with a perimetric internal recess to support the corresponding board, which is also made out of wood, although it is made of a material called "DM". This board has pairs of windows for wheels of the motorcycle, with the particularity that one of the windows is oblique for positioning of the front wheel and so that the handlebars remain turned with regard to the longitudinal axis, which prevents the handlebars of two contiguous motorcycles from obstructing each other.

The openings or windows for placement and support of the wheels of the motorcycle have a beveled edge in their ends, for the purpose of preventing sharp edges, since the wheels rest precisely in these beveled edges, besides with the particularity that such windows or openings have a lateral notch, either in the ones corresponding to the rear wheels, or else in the windows and in the ones corresponding to the front wheels, to serve as the location for the corresponding brake mechanisms and to prevent them from knocking against the board, which could damage them in the event that such notches did not exist for placement thereof.

By means of the pallet of the invention, it is achieved that with a single frame different boards may be placed, or what amounts to the same thing, boards for different types of motorcycles, since in some cases the board will have two pairs of windows or openings for positioning two motorcycles and in other cases it may have three pairs of windows or openings to place three motorcycles of another type, always with the same frame and with some standard measurements of the pallet unit, measurements which result to be ideal for adaptation thereof to the width of transport trucks, as

well as for the hollows corresponding to ship holds.

On the other hand, the inclined orientation of the windows or openings corresponding to the front wheels of the motorcycles, gives rise to perfect stabilization of the motorcycles, without requiring tie rods or other holding means of the motorcycles for this purpose.

#### BRIEF DESCRIPTION OF THE DRAWINGS

In order to complete the description that is going to be made hereinafter and for the purpose of providing a better understanding of the characteristics of the invention, a set of drawings on the basis of which the innovations and advantages of the pallet made in accordance with the object of the invention will be more easily understood, accompanies the present specification.

Figure 1 is a top plan view of the pallet made entirely out of wood in accordance with the object of the invention, showing one of the corners of the board itself cut so that one can see the perimetric internal recess or step that forms the frame in order to precisely support the perimetric contour of the board.

Figure 2 is a section view taken on line A-B of the previous figure.

Figure 3 shows another section view, in this case taken on line C-D of figure 1.

Figure 4 shows a plan view of a board for two motorcycles, in which the four windows or openings have a notch for the placement of the corresponding brake mechanisms with some types of motorcycles have for this purpose.

Figure 5 shows another plan view of a board like the one of the previous figure, in this case with three pairs of windows or openings provided for three motorcycles of another type.

#### DESCRIPTION OF THE PREFERRED EMBODIMENT

In view of the commented figures, one can see how the pallet of the invention is formed as of a rectangular wooden frame (1) and a panel or board (2) placed horizontally and releasably mounted with regard to the frame (1), the frame having a perimetric internal step or recess (3) in which precisely the contour of the cited board (2) rests.

The dimensions of the pallet comprised of these two parts, are suitable so that their length as well as their width adapt perfectly to the width of transport trucks, as well as to ship holds, thus achieving maximum use of the space in these cited means of transport.

Frame (1) includes some bottom crossbars (4) so that the pallet unit remains raised up with regard to the floor and permits insertion of the corresponding fork of an elevating truck for handling the pallet.

Besides, it includes a longitudinal bar (5), which is preferably interrupted before the end considered as the front end, defining an end (6) of the same which remains removed with regard to the front transversal

side of the frame (1), as clearly shown in figure 1.

As to the board (2), the same has pairs of openings (7 and 8), the latter considered as the rear ones and the latter considered as the front ones, in such a way that opening (7) of each pair is made longitudinally, while the opening (8) is made obliquely, all in such a way that in these two openings (7 and 8) the wheels of a motorcycle will remain perfectly positioned and supported, the motorcycle remaining stably stored without the need of additional holding or fastening elements of the same, when the pallet is loaded with motorcycles stacked in a warehouse, as well as when the pallet is loaded with motorcycles in transport trucks or other conventional means.

In any case, the openings (7 and 8) have in their ends a beveled edge (9) that is going to define in each case the support surface for the wheel itself of the motorcycle, also having in the side area a notch (10) that only exists in the openings (7) for positioning of the rear wheels of the motorcycle, as shown in figure 1, or else these notches (10) made in the rear openings (7) as well as in the front ones (8), logically depending on the type of motorcycle, since these notches (10) are provided so that the brake mechanism of the motorcycle remains located in them, and logically depending on the type of motorcycle, the brake mechanisms will be located and, therefore, in some cases notches (10) are required and in others they will not be necessary.

In figure 4 one can see a board (2) in which the front openings (8) also have the cited notches (10), even in this case they differ from those provided for in figure 1, as a result of the board (2) being provided for the positioning of a different type of motorcycle than that which would be accepted by the board of figure 1.

On its part, figure 5 shows another board (2) with the same dimensions as the boards represented in figures 1 and 4, but in this case they have three pairs of openings (7 and 8), narrower than those of figures 1 and 4, since in this case, on the board (2) of figure 5 three motorcycles, whose wheels will be considerably narrower, can be placed.

#### Claims

45. 1. Pallet for motorcycles, being of the type that is constituted by means of a frame (1) and a board (2) mounted on the frame and having pairs of windows or openings (7 and 8) for the positioning of the rear and front wheels of a motorcycle, essentially characterized in that the frame (1) as well as the board (2) are made of wood and the openings or windows (8) for the front wheels remain in an oblique arrangement with regard to the longitudinal axis of the board itself (2), so that the front wheel of the motorcycle and with it the handlebars thereof remain obliquely oriented with the maximum utilization of the width of the board itself and of the space of the means of transport; it being provided for that

the openings (7 and 8) have in their ends a beveled edge (9) defining a support surface of the front and rear parts of the wheels themselves.

2. Pallet for motorcycles, according to claim 1, characterized in that the frame (1) has a perimetric internal recess (3) to support the perimetric contour of the board (2), allowing assembly and disassembly of different types of boards with regard to a single frame (1). 5
3. Pallet for motorcycles, according to claim 1, characterized in that the frame (1) has corresponding bottom crossbars (4) separating the support of the pallet unit from the floor, in order to allow the passing of the fork of a loading truck for handling the pallet. 10
4. Pallet for motorcycles, according to claim 1, characterized in that it includes a longitudinal bar (5) whose front end (6) remains separated from the transversal front side of the frame (1) to allow assembly of a board (2) having a middle and front opening (8). 15
5. Pallet for motorcycles, according to claim 1, characterized in that the board (2) has two pairs of characterized in that the board (2) has two pairs of openings or windows (7 and 8) for storage and transport of a pair of motorcycles. 20
6. Pallet for motorcycles, according to claim 1, characterized in that the board (2) has three pairs of openings or windows (7 and 8) for storage and transport of three motorcycles. 25
7. Pallet for motorcycles, according to the above claims, characterized in that the openings (7 and 8) are capable of having, in some cases, lateral notches (10) for placement of the brake mechanisms that in certain types of motorcycles remain located at the height of the openings themselves (7 and 8). 30

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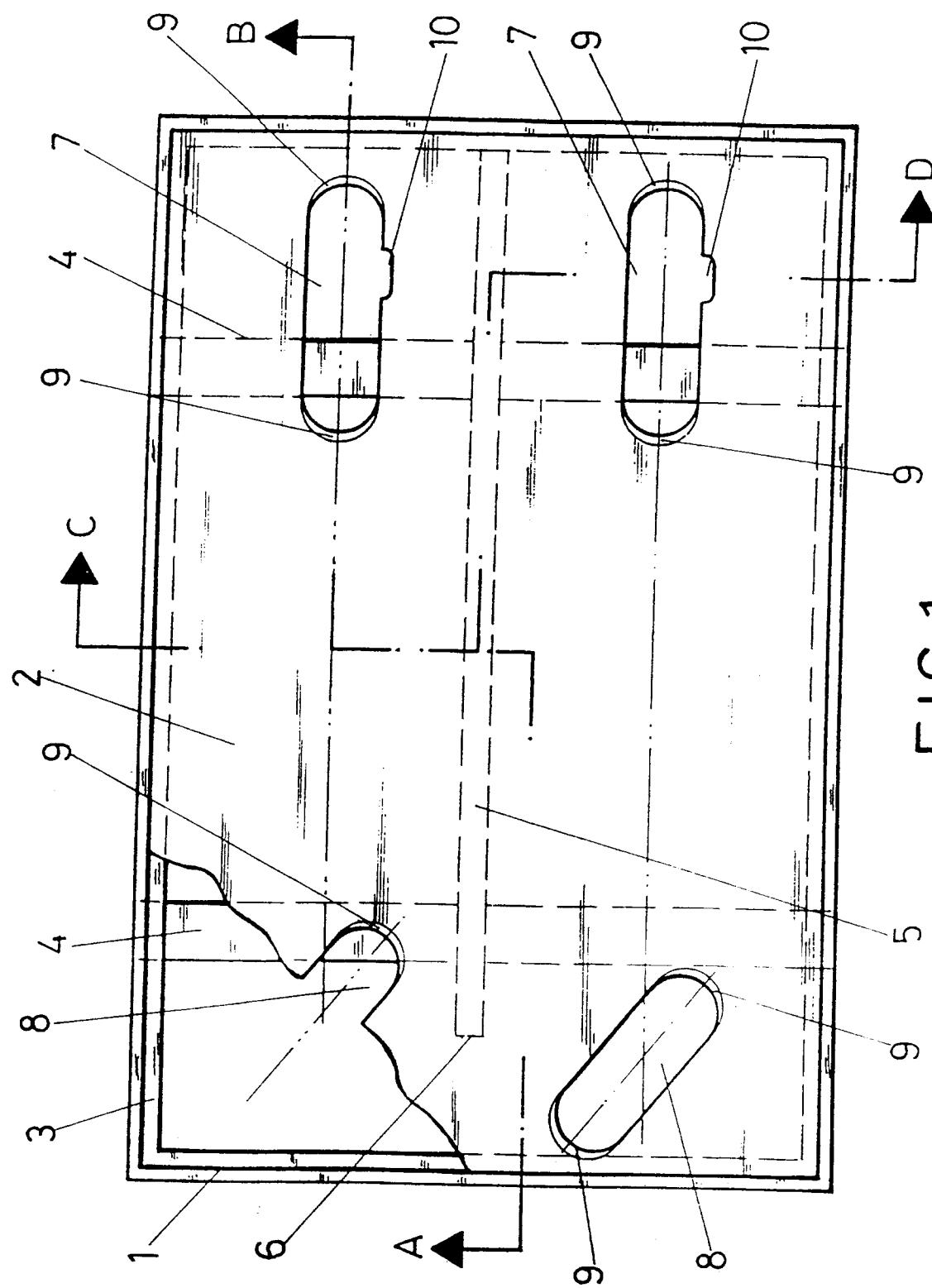


FIG. 1

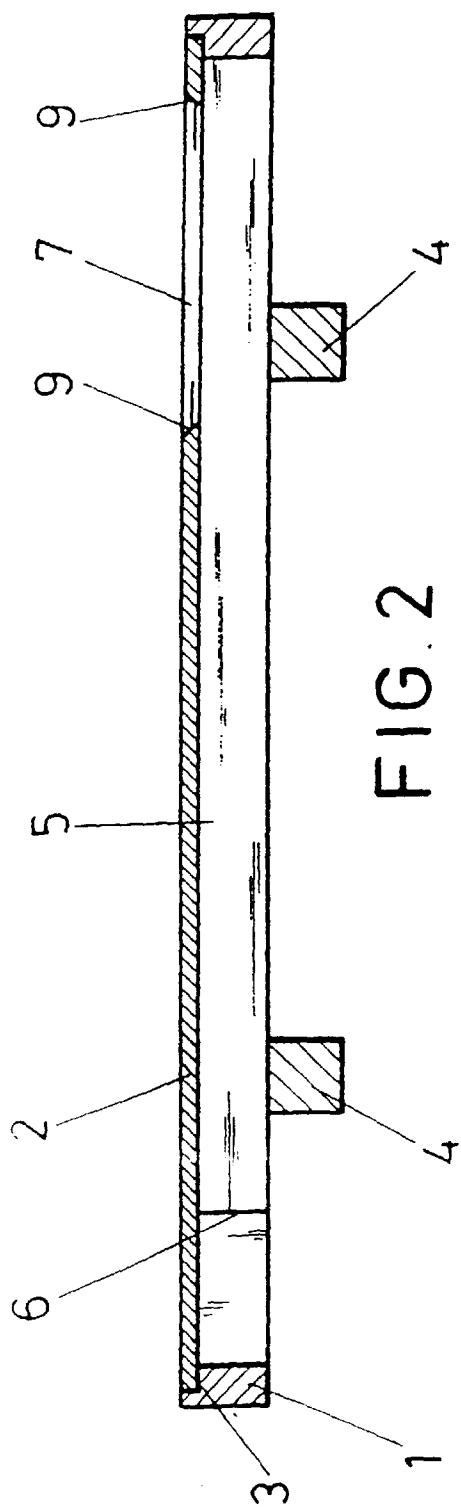


FIG. 2  
A - B

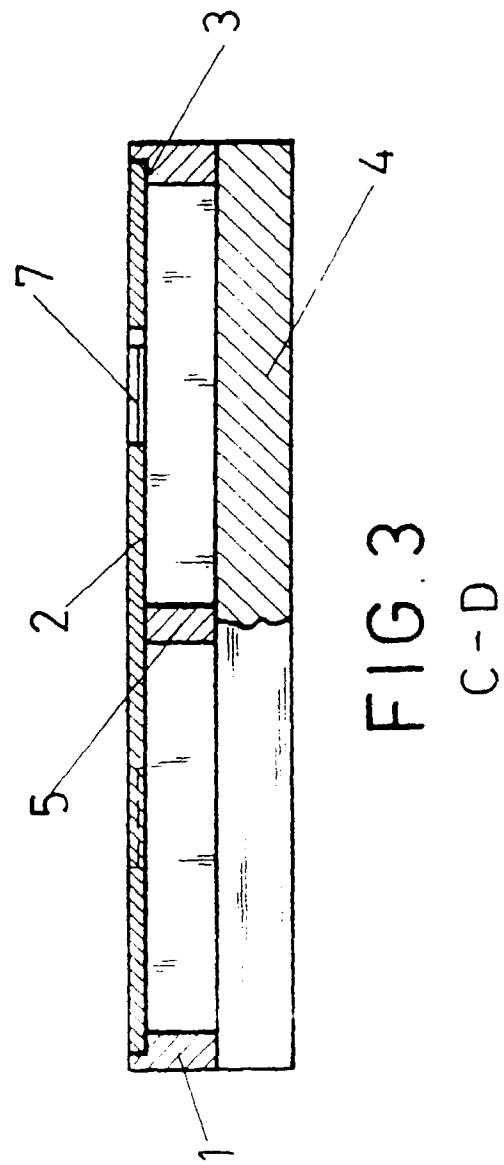
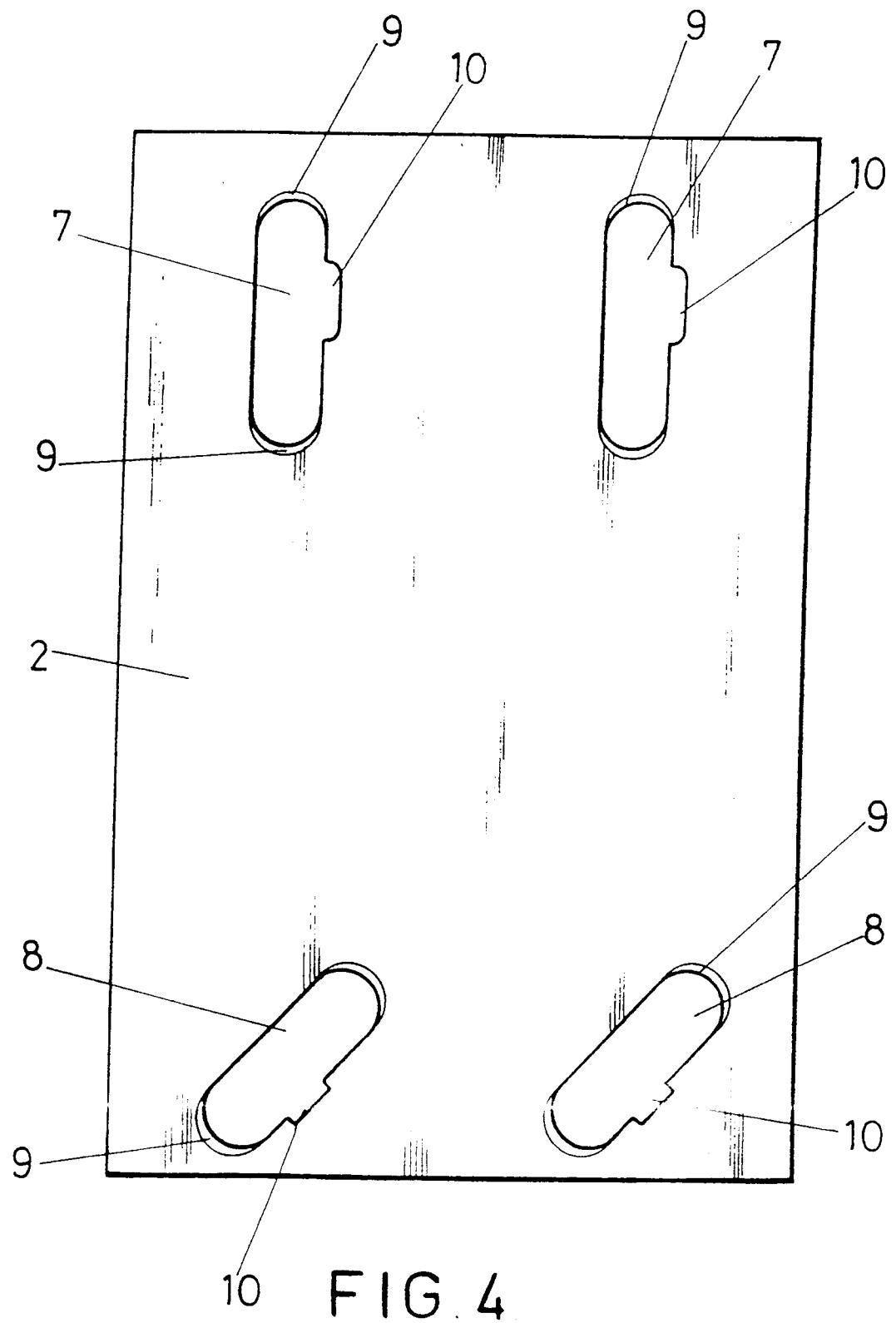
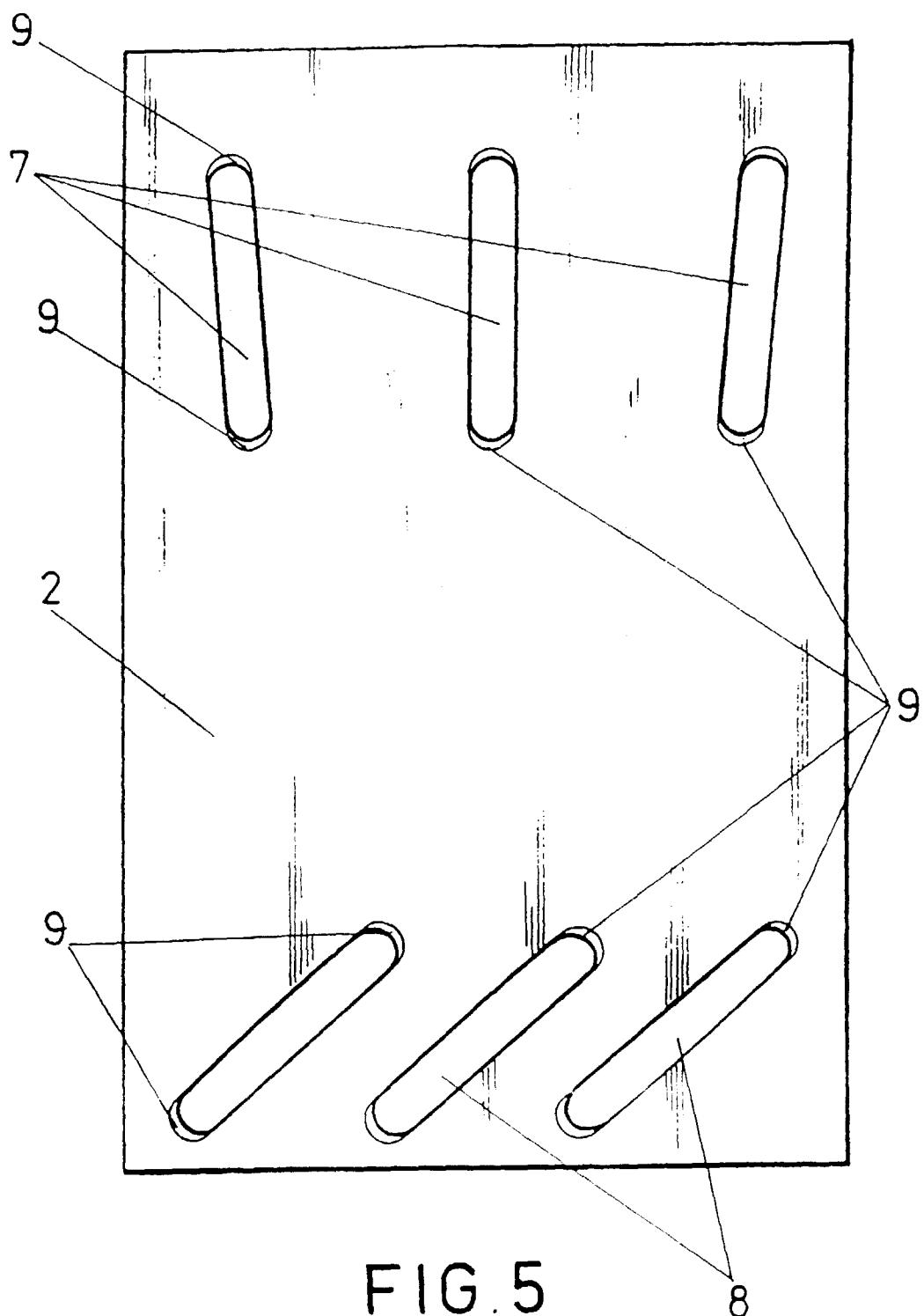


FIG. 3  
C - D





## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/ES 97/00206

## A. CLASSIFICATION OF SUBJECT MATTER

IPC<sup>6</sup>: B65D 19/31, B65D 85/68

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC<sup>6</sup>: B65D 19/31, 19/44, 85/68, 19/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, WPI, CIBEPAT, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 718454-A (MULLER), 20 June 1996 (20.06.96) drawings, abstract	1,5
A	FR 2321433-A (SOCIETE SODIO), 18 March 1977 (18.03.77) the whole document	1-3,5,6

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

13 November 1997 (13.11.97)

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