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(54) Load Platform

(57) A load platform, especially intended for transporting barrels of circular plan, comprising a upper load surface (5) provided with a series of recesses (6) of circular contour which reproduce the resting surface of the base of said barrels, and in that the length of the sides of the load surface (5) is a multiple of the length of the sides of the base of crates for transporting beverage bottles. Ribs (13) defining lateral supports or stops against the sliding of said crates project from the load surface (5) in a position parallel and adjacent to its edges.

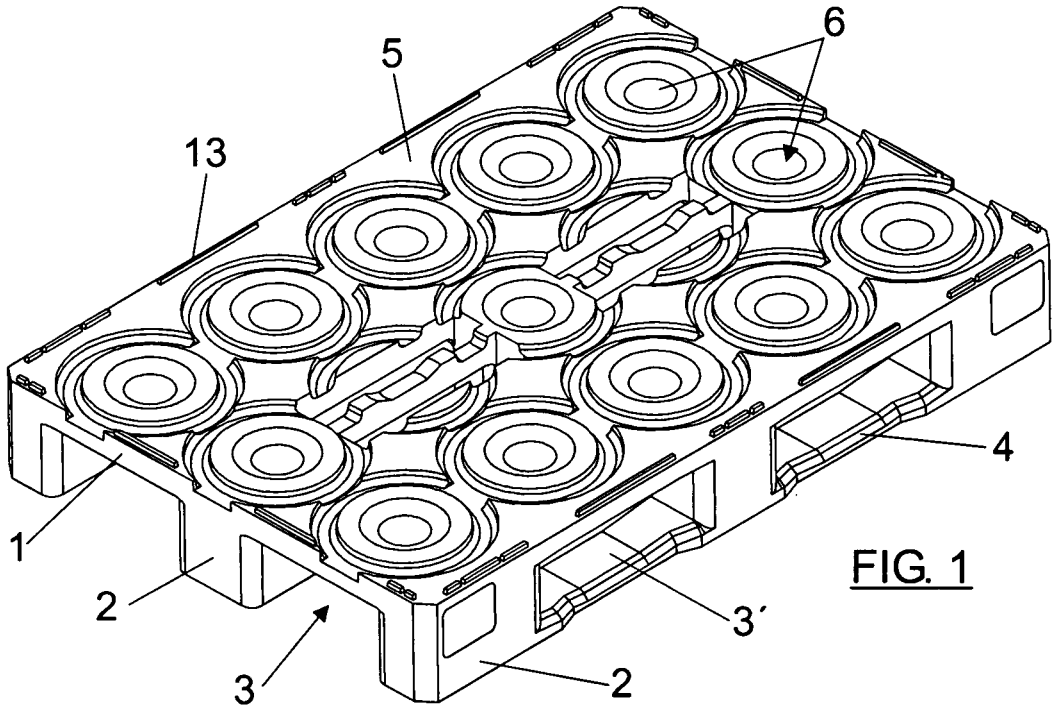

FIG. 1

EP 1 652 784 A1

Description

[0001] The present utility model refers to a load platform having an upper load surface, of preferably rectangular contour, and lower support elements between which spaces are determined through which the arms of a forklift or the like may be introduced.

[0002] The platform of the invention is made of plastic material, obtained by injection, and comprises a structure based on partitions and ribs which is upwardly closed by a continuous wall which will be the one defining the upper load surface.

[0003] Platforms of the type set forth are conceived to transport bodies of prismatic configuration which may be placed side by side and piled up. For example, this type of platforms is widely used in transporting crates of bottles of all types of beverages, especially soft drinks, beer, etc. In this activity and for the same type of beverages, containers in the shape of barrels of a metallic nature, with a great capacity, are used, and from which the drink is dispensed or distributed by means of a tap. The transport of these barrels is usually performed individually and not on load platforms, as would be desirable, given the limited stability that the barrels have on said load platforms due to the reduced dimensions of their resting base and the circular contour thereof.

[0004] The object of the present invention is to eliminate the problems set forth by means of a platform allowing transporting a certain number of barrels and having means assuring the stability thereof.

[0005] Another object of the invention is a platform which, besides from serving for the safe transport of barrels, allows transporting crates, placed side by side and piled up, and all this such that the load surface of the platform is used in all its extent both for transporting barrels and crates.

[0006] To comply with the first object set forth, the upper load surface of the platform of the invention has a series of recesses of circular contour which reproduce the outer resting surface of the base of the beverage-containing barrels. These recesses are formed on the support surface of the platform such that they are consecutively tangential to one another and are distributed in rows parallel to its sides, and all this such that the load surface is virtually occupied in all its extent by said recesses, which demands that the sides of the contour of the surface are approximately multiples of the diameter of the resting base of the barrels. The platform will thus allow transporting a certain number of barrels, which are placed in a vertical position and which are virtually tangential to one another.

[0007] The shapings that the platform has consist of recesses, without any element intended for ensuring the stability of the barrels projecting from the load surface. The platform thus has a flat load surface in which, according to another feature of the invention, the length of the sides of said surface is a multiple of the length of the sides of the crates used for transporting beverage bottles.

[0008] With the makeup set forth, the support surface of the load platform can be used virtually in its entirety both if barrels are transported and if crates are transported.

[0009] With the object of ensuring the stability of the barrels, the platform has, from the upper surface and in a position parallel and adjacent to its edges, ribs defining lateral supports or stops which will prevent the accidental sliding of the crates.

[0010] The recesses of circular contour ensuring the stability of the barrels include a central area, concave and of circular contour, which is configured to receive the resting of the central part of the bottom of the barrels, and around it a concentric channel on which the peripheral reinforcing ring of the bottom of said barrels rests.

[0011] As in the barrels used for the specified purpose, the outer surface of the bottom is slightly retracted with respect to the peripheral reinforcing ring of the bottom, in order for the resting on flat surfaces to be carried out through said ring and not the bottom of the barrel, the recessed central area on the platform will be of slightly less depth than the concentric annular channel, all this such that by placing a barrel on a recess, the resting thereon takes place through the reinforcing ring and partially through the bottom of the barrel, all this in order to achieve maximum stability.

[0012] On the other hand, in the platform of the invention, the ribs projecting from the upper load surface, parallel and close to the sides thereof and which are intended for ensuring the placement of the crates, also serve to ensure the piling up of platforms during their storage and transport.

[0013] The platform may also have on the load surface reliefs adjacent to the recesses, which will serve as barrel guiding and relating elements. For greater safety in the transport of the barrels, the platform may be completed with an upper cover, adaptable to the upper base of said barrels.

[0014] The features of the invention will be better understood with the following description, made with reference to the attached drawings, in which a non-limiting embodiment example is shown.

[0015] In the drawings:

Figure 1 shows a top perspective view of a load platform made up according to the invention.

Figure 2 shows a bottom perspective view of the same platform.

Figure 3 shows a top plan view of the platform of Figure 1.

Figure 4 shows a cross sectional view of the platform, taken according to section line IV-IV of Figure 3.

Figure 5 corresponds to detail A of Figure 4.

Figure 6 shows a perspective view similar to that of Figure 1, with the platform completely occupied by a set of barrels.

Figure 7 shows a view similar to that of Figure 5, showing the way of coupling and resting the bottom

of the barrels on the platform recesses.

Figure 8 shows a similar perspective view to that of Figure 6, with the platform completely occupied by a set of crates.

Figure 9 shows a view similar to that of Figure 7, showing the retaining system of the crates by the peripheral ribs of the platform.

Figure 10 shows a top perspective view of two piled platforms.

Figure 11 shows a view similar to that of Figure 1, showing a variant of implementation.

Figure 12 shows a view similar to that of Figure 6, including an upper retaining cover.

[0016] As can be seen in Figures 1 and 2, the platform of the invention comprises a panel 1, from the lower surface of which project support elements 2 between which spaces 3 and 3' are delimited, through which the arms of a forklift or the like may be introduced. The spaces 3' may be closed at the bottom by a section running between adjacent projections 2.

[0017] Both the panel 1 and the projections 2 present at the bottom a structure formed based on partitions and ribs, which is enclosed by a continuous upper wall 5 which will define the load surface of the platform. Said structure based on partitions and ribs can be seen in Figure 2. The contour of the platform will be preferably rectangular, although it could also be a square contour.

[0018] According to the invention, the load surface 5 has a series of recesses 6 of circular contour, consecutively tangential to one another and distributed in rows and columns parallel to the edges of said surface, as can best be seen in Figure 4, these recesses include a central area 7 of concave surface, and a concentric annular channel 8. These central area 7 and annular channel 8 reproduce the outer surface of the base of beverage-containing barrels 9, Figure 5.

[0019] The central area 7 of the recesses is shaped to receive the coupling and resting of the outer surface of the bottom 10 of the barrels, Figure 7, whereas the peripheral channel 8 is configured to receive the coupling and resting of the peripheral reinforcing ring 11 of the bottom of said barrels.

[0020] With this makeup, a set of barrels can be arranged in a vertical position and tangential to one another on the load surface 5 of the platform 1, as can be seen in Figure 9, all of them coupled on corresponding recesses 6, thus providing stability to this barrel arrangement on the load platform 1 in order to safely facilitate their transport thereon.

[0021] The length and width of the load surface will be multiples of the diameter of the recesses 6.

[0022] The shapings ensuring the stability of the barrels 8 consist of recesses, such that the load surface 5 is kept flat in order to allow correct support of crates 12, Figure 9, the length and width of the load surface 5 being a multiple of the length and width of the base of the crates 12, such that on each load platform a number of crates 12 may be arranged, placed side by side and occupying all of said surface, as can be seen in Figure 8.

[0023] In order to provide stability to the arrangement of this set of crates 12, the load surface 1 may have, in a parallel and adjacent position to the free edges, ribs 13 which, as can be seen in Figure 9, serve as a lateral stop or support of a peripheral recess or step 14 that the crates 12 have on their base. Furthermore, these ribs 13 may serve to ensure the piling up of some platforms on top of others, as shown in Figure 10.

[0024] In short, the invention allows having a platform on which both crates 12 of prismatic configuration and cylindrical barrels 9 may be transported with complete stability, making use of the entire load surface.

[0025] The platform of Figure 11 is of a general makeup coinciding with the platform described with reference to Figures 1 to 10, using the same reference numbers to designate coinciding elements, but including, with respect thereto, projections or reliefs 16 and 17 on the load surface located in a position adjacent to the recesses 6 and configured to guide the barrels 9 to their seat in said recesses 6 and to encircle them, once mounted on the platform. Guiding is achieved by the reliefs 16 and 17 being limited on the side adjacent to the recesses by conical surfaces 19 located in extension of the annular channel 8 of said recesses.

[0026] The existence of the reliefs 16 and 17 will allow greater safety in the stability of the barrels 9, although with such reliefs the platform will not be suitable for transporting crates.

[0027] Finally, in order to achieve greater safety in transporting and handling platforms with barrels, both in their embodiment of Figures 1 to 10 and in the embodiment of Figure 11, a cover 19 may be coupled on top of the set of barrels 9, Figure 12, provided on its inner surface with shapings adaptable to the upper base of the barrels. For example, of projecting portions 12 insertable in the upper ring 21, Figure 6, and longitudinal ribs 22 on which said rings outwardly rest. On the back of the cover, which is the surface seen in Figure 12, the ribs 22 and the projections 20 translate into corresponding recesses.

[0028] As can be seen in Figures 11 and 12, from the load surface of platform 1 may project projections or pivots 24 of a height greater than that of the projections or reliefs 16 and 17, which, when piling up the platforms, will be introduced through the cells of the support elements 2 of the corners of the platform located immediately above, thus providing greater piling stability of empty platforms in their storage and in their transport.

Claims

1. A load platform, especially intended for transporting circular plan beverage-containing barrels, comprising a upper load surface (5) of rectangular or square contour and lower support elements (2), **characterised in that** the upper load surface has a series of

recesses (6) of circular contour which reproduce the resting surface of the base of said barrels, the recesses of which are consecutively tangential to one another and are distributed in rows and columns parallel to its sides; and **in that** the length of the sides of said surface is a multiple of the length of the sides of the base of crates for transporting beverage bottles, with ribs (13) defining lateral supports or stops against the sliding of said crates projecting from said surface in a position parallel and adjacent to its edges.

2. A platform according to claim 1, **characterised in that** each said recess (6) comprises a concave central area (7), shaped to receive the resting of the central part of the bottom of the barrel, and around it a concentric channel (8) on which the reinforcing peripheral ring at the bottom of said barrels rests.

3. A platform according to claim 1, **characterised in that** reliefs (16) adjacent to the recesses, following the contour of said recesses, project from the upper load surface.

4. A platform according to claim 3, **characterised in that** the lateral surface of the projections (16) adjacent to the recesses is of conical configuration, of increasing diameter towards the free base.

5. A platform according to claims 1 and 3, **characterised in that** it further comprises a cover (19) provided on its inner surface with shapings (20-22) which can be coupled on the upper base of the barrels.

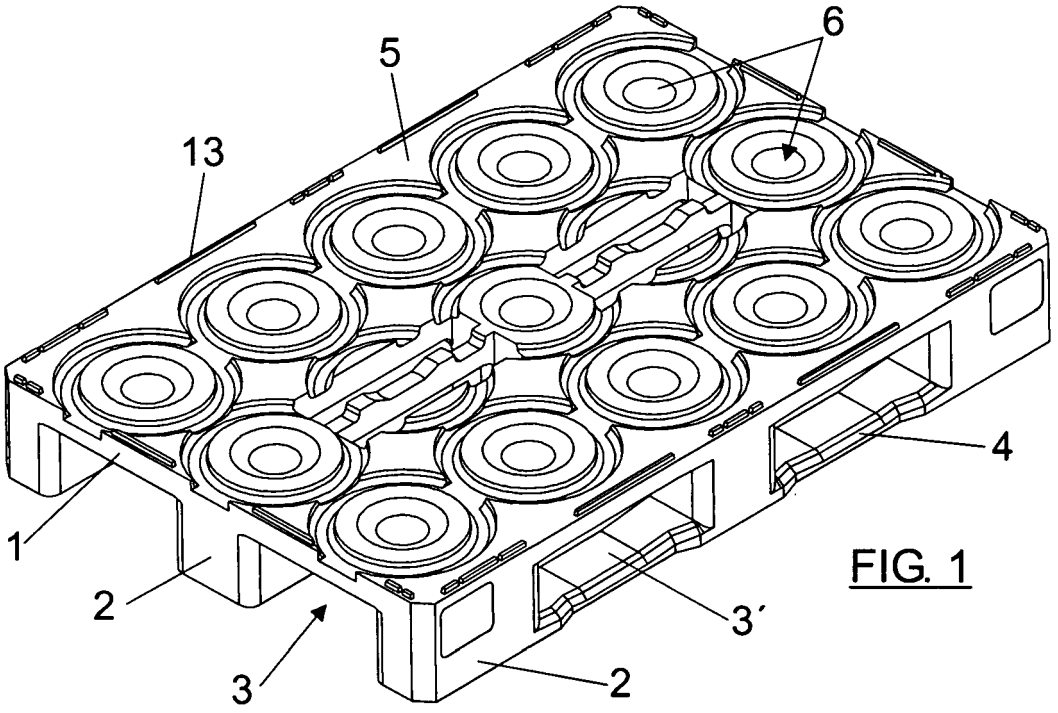

FIG. 1

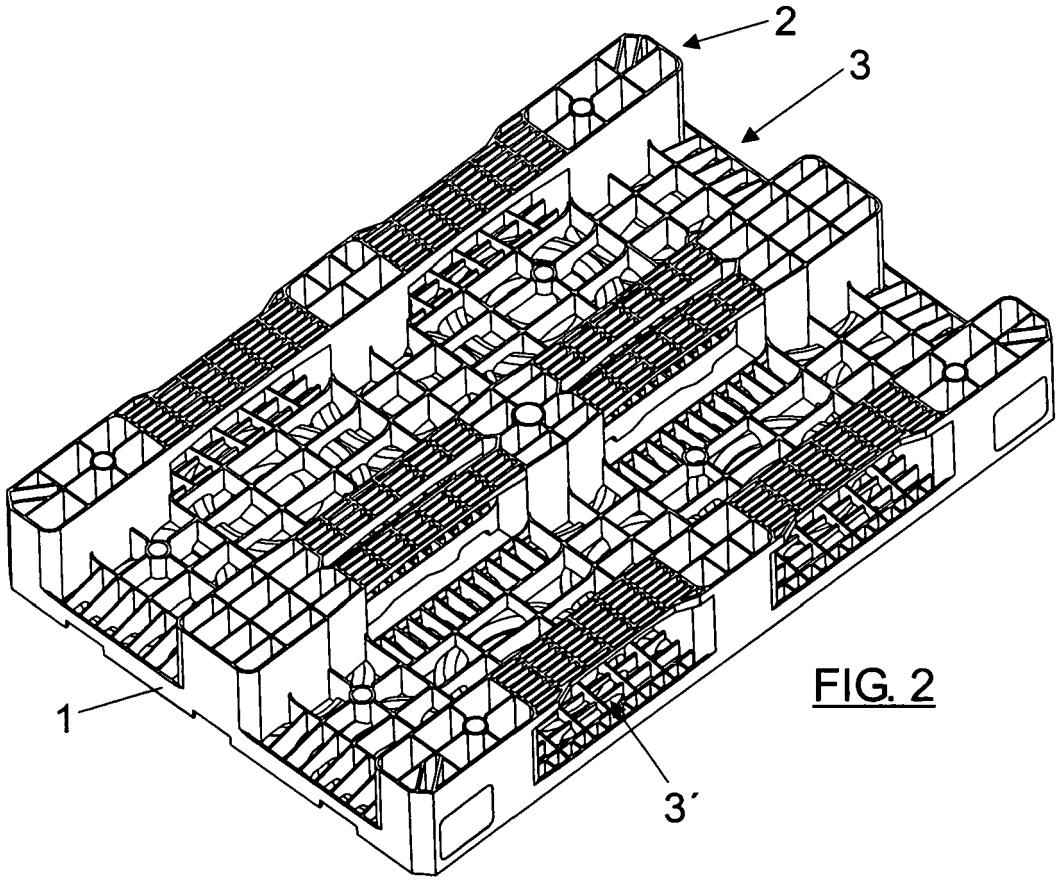

FIG. 2

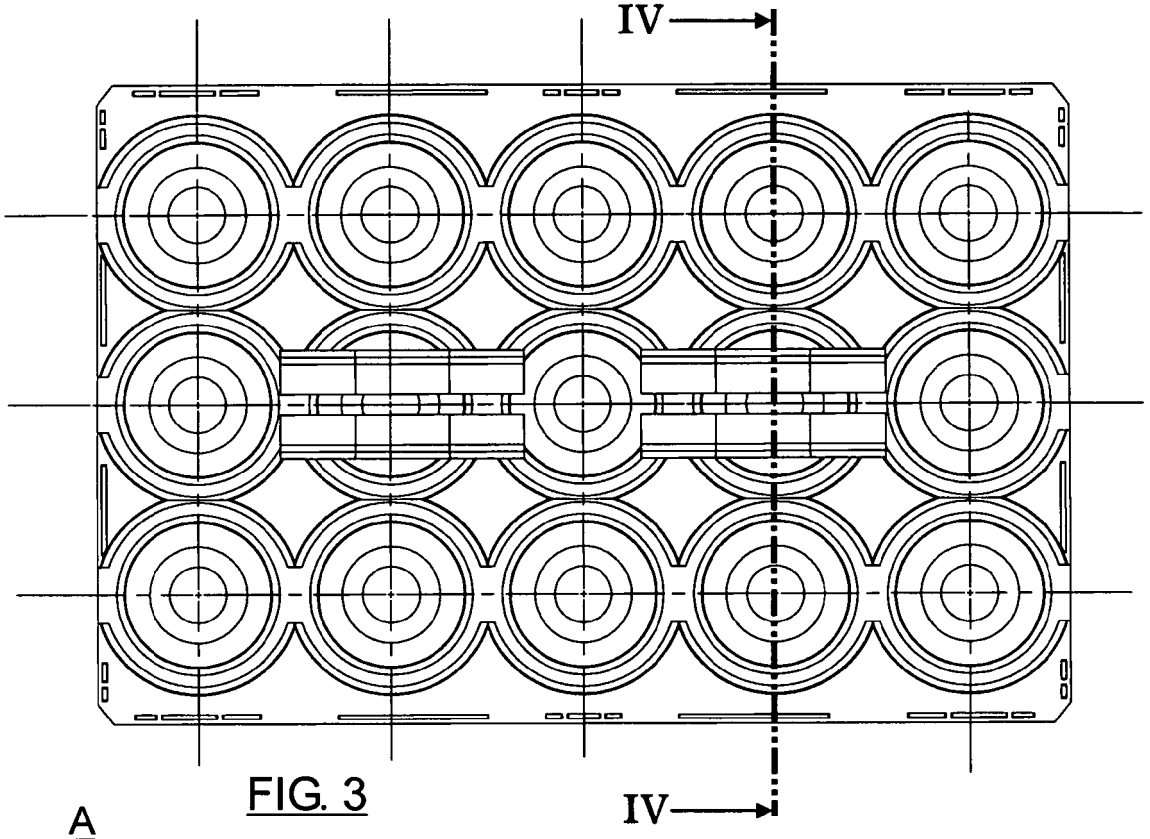

FIG. 3

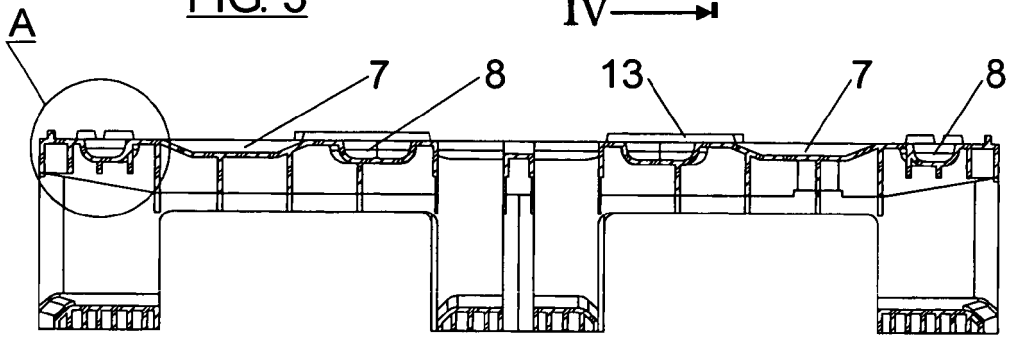

FIG. 4

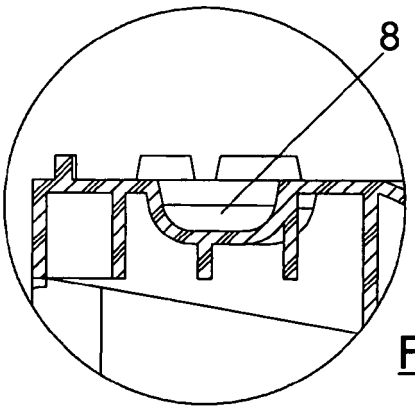

FIG. 5

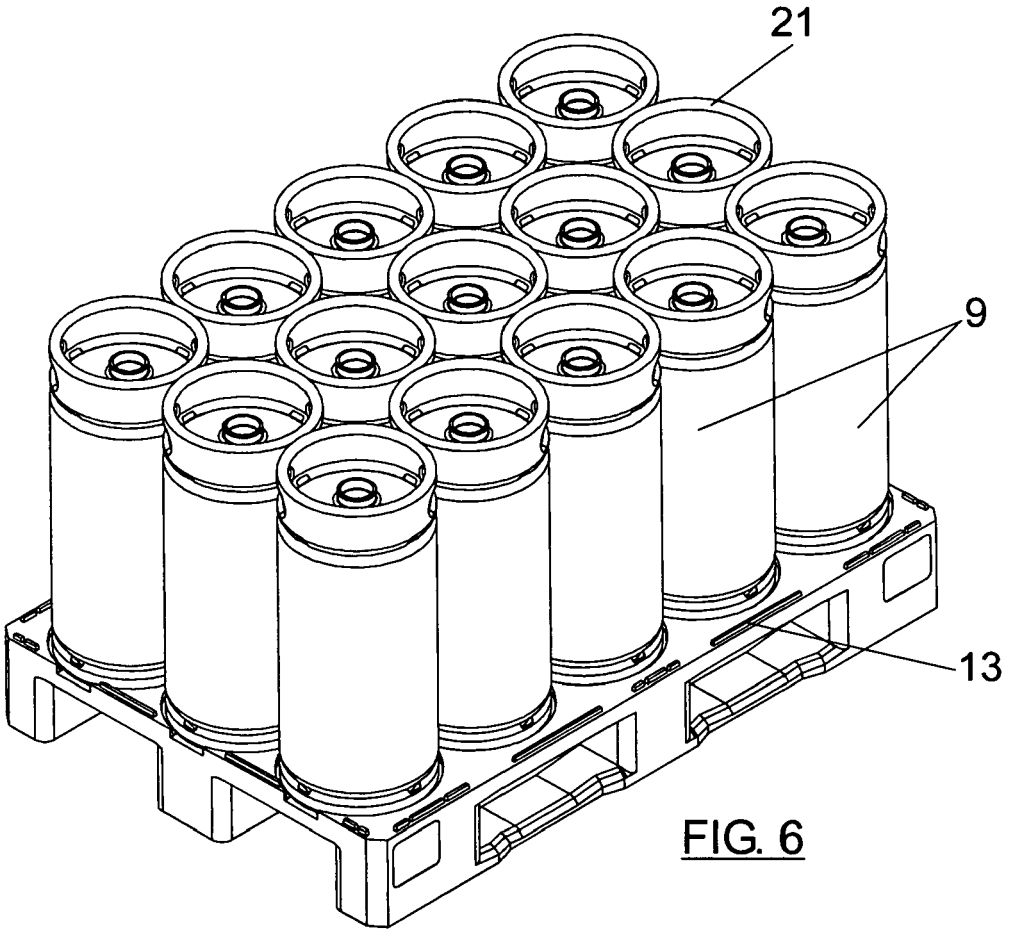

FIG. 6

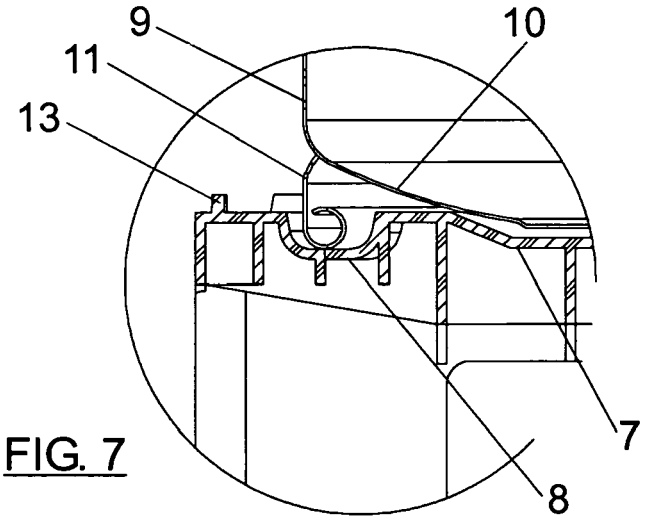

FIG. 7

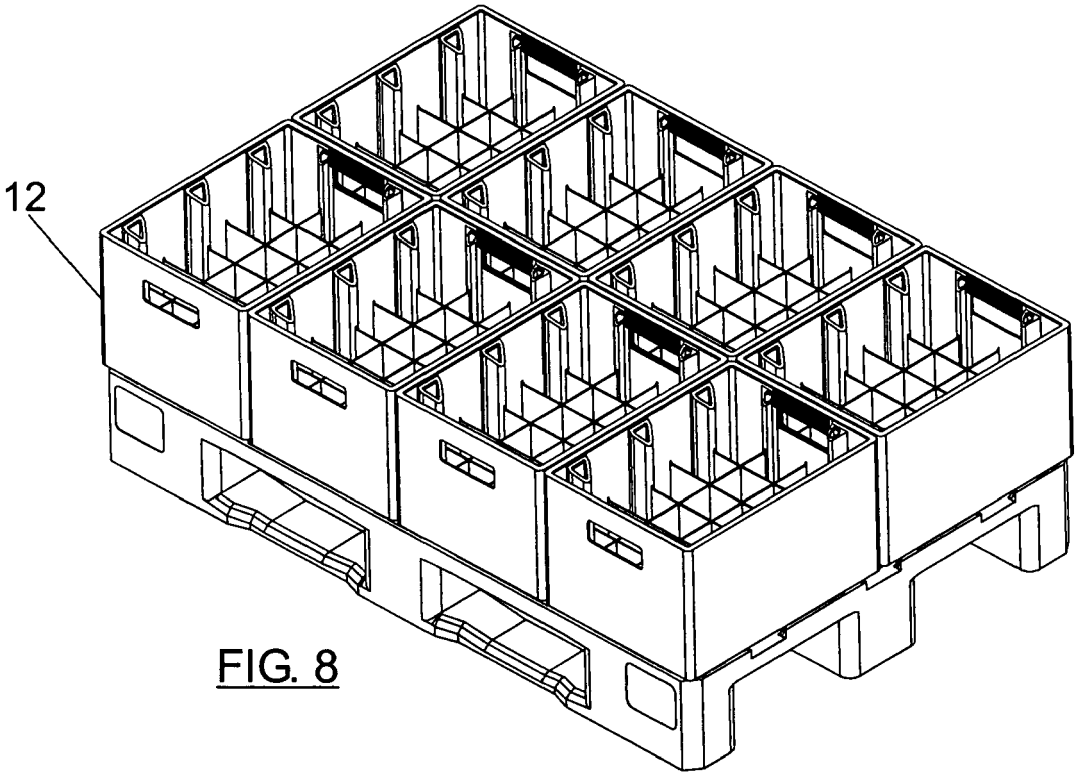

FIG. 8

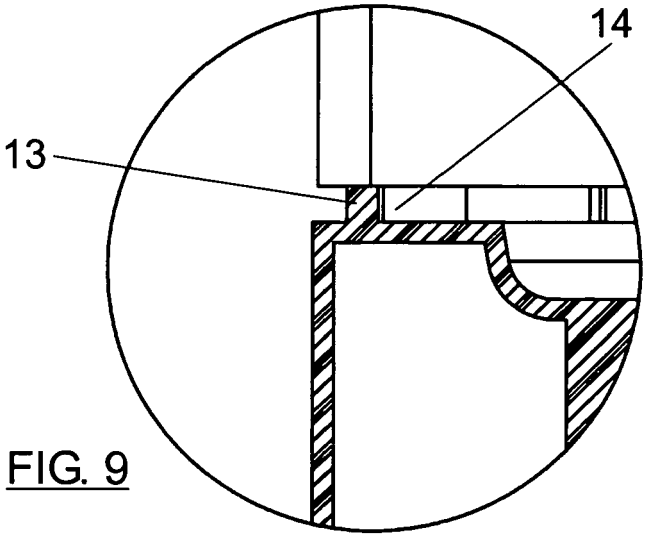

FIG. 9

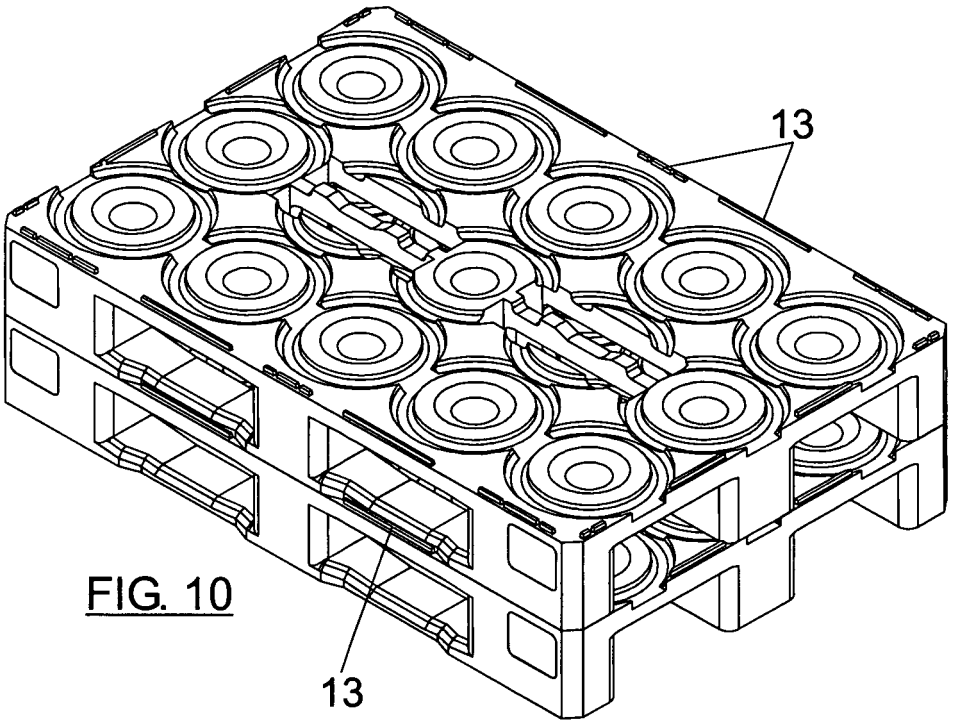

FIG. 10

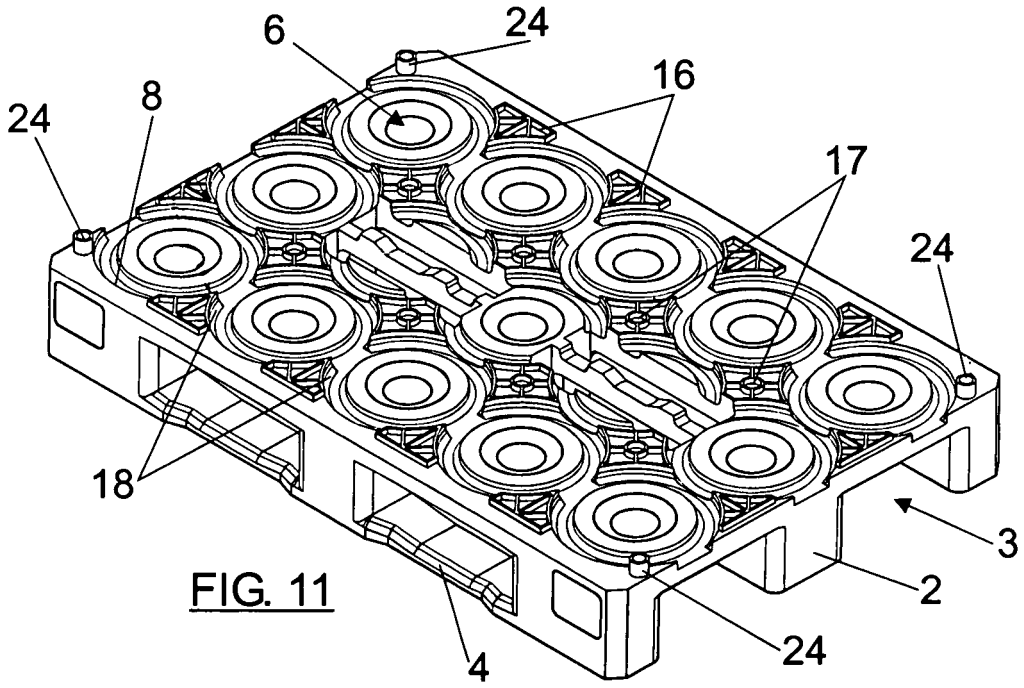

FIG. 11

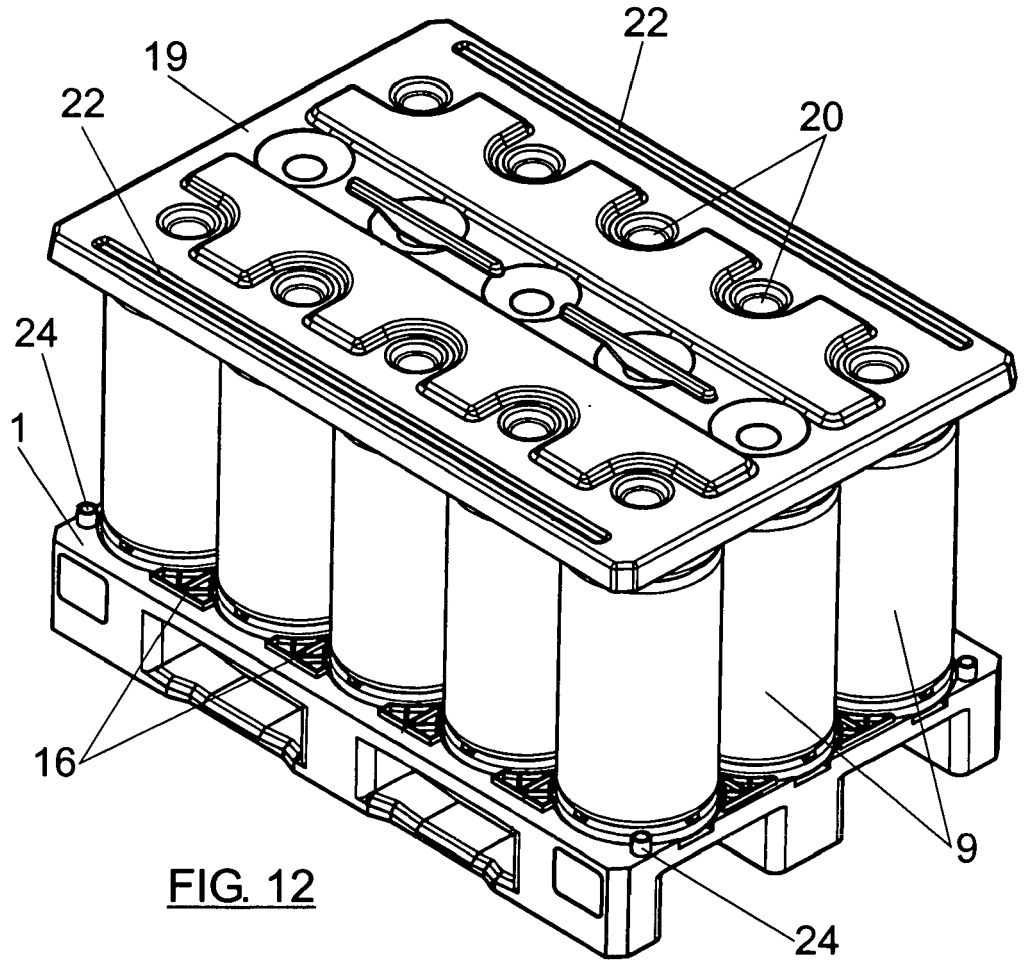

FIG. 12

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 05 38 0210

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	DE 101 57 417 A1 (REMAPLAN ANLAGENBAU GMBH) 5 June 2003 (2003-06-05) * paragraph [0035] - paragraph [0104] * * claim 47; figures 1-25 *	1-5	B65D19/44
A	US 4 615 443 A (DEFFNER ET AL) 7 October 1986 (1986-10-07) * column 3, line 63 - column 7, line 41 * * figures 1-9 *	1-5	
A	WO 00/58173 A (OYJ HARTWALL ABP; AIKIO, VEIJO) 5 October 2000 (2000-10-05) * page 4, line 16 - page 6, line 3 * * figures 1-5 *	1-5	
A	US 5 144 897 A (AVERY ET AL) 8 September 1992 (1992-09-08) * column 3, line 52 - column 6, line 18 * * figures 1-7 *	1-5	
A	AU 602 494 B2 (ALEXANDER, J.; ROWLAND, I.M) 18 October 1990 (1990-10-18) * page 6, line 20 - page 15, line 8 * * figures 1-13 *	1-5	TECHNICAL FIELDS SEARCHED (IPC) B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	12 January 2006	Fitterer, J

CATEGORY OF CITED DOCUMENTS

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