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Verpackungsanordnung

Arrangement d'emballage

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Description

Technical Field

[0001] The present invention relates to a packaging arrangement for storing components and comprising at least one tray according to the preamble of claim 1, and a collapsible packaging system according to claim 16 utilizing the packaging arrangement.

Description of Prior Art

[0002] Packaging systems comprising trays for holding and securing and/or setting/aligning various components or items packed together in layers have been known in a number of variants, e.g. in the electronic field.

[0003] A pallet for transport of items in the form of bobbins is disclosed in US-A-4 580 680. The pallet comprises a bottom part and a cover/lid part, the parts having corresponding configurations. Several pallets filled with items may be superimposed, i.e. placed on each other in stacks and stacks, wherein the components are load carrying. The sides of the bottom part and the lid part facing the components are provided with projections to be received by recesses in the components. A detachable/loose partition is provided between the bottom part and the lid part to protect the components.

[0004] Prior art packaging systems often utilize parts made of different materials, e.g. a wooden pallet as a bottom part with an upper lid and side walls made of cardboard or carton.

[0005] Prior art packaging systems have several disadvantages. They do not provide a sufficient mechanical protection for the packed/wrapped items. Moreover, prior art packaging systems are also cumbersome and heavy to handle after unloading of items requiring a lot of space during packing, transport, unloading, and returning them as returnable empties, thereby requiring too much resources in terms of volume and life cycle. The recycling of prior art packaging systems is also very complicated because the pallets, the lid, and the side walls often are made of different materials requiring different handling methods and different ways of recycling. These materials are also non-conductive, which is a great disadvantage, especially for electronic components. These types of materials are also very easy to damage creating debris and/or dust during handling, and are also sensitive for moisture or water, i.e. they are often permeable for water, whereby any stored items and the packaging system itself may be water-damaged, or even destroyed.

Summary of the Invention

[0006] An object of the present invention is to provide a solution to the above mentioned problems by presenting an improved packaging arrangement.

[0007] According to the invention, this object is achieved by a packaging system and arrangement of the

type stated by way of introduction, which have the features that appear from claim 1, preferred embodiments being defined in the appended claims 2- .

[0008] By the improved packaging arrangement of the invention and preferred embodiments of the invention, several advantages are obtained. Each of the stored components is at least partly provided with an individual mechanical protection enhancing the securing and holding of the components in place and the repeatability when handled. Both manual and automated handling of the components is simplified since the tray/-s set, hold, stay, and/or orientate the components making the packaging system and arrangement very user-friendly. The rejection rate of valuable components that often are sensitive to static electricity and easily damaged may be eliminated or at least decreased since the arrangement may protect against electrical impulses. Access to the components on the tray/-s placed accessible at the top of a tray or a stack of trays is also improved since at least one of the tray embodiments do not have high sides obstructing access. The trays in one embodiment relieve loads/forces/impacts from the components and protect them against damages. The components are also securely held and positioned. This also eliminates the risk of damages on the components due to the physical proximity of other components or wrapping material, equipment for handling, or gripping appliances, even if handled carelessly.

[0009] The packaging system and arrangement according to the invention enable an extraordinarily effective transport system with a high efficiency in use of available volume, i.e. the system maximizes the packaging density when erected and filled with items and also when the system is emptied/cleared of items and empty, and collapsed system units are returned, and minimizes the required amount of packaging material, the weight, and costs for packaging material.

[0010] Another advantage is that one packaging arrangement embodiment uses nestable trays that further improve the resource efficiency in terms of used volume and life cycle. Hence, the stackable and/or nestable trays are space-saving when storing and/or returning empty trays requiring even less storage and transport space.

[0011] Moreover, the packaging system and arrangement eliminates/limits the development of dust and any dirtying/soiling of the components and the associated area where the components are loaded/unloaded.

[0012] Furthermore, at least one embodiment of the packaging arrangement is at least partly made of plastic and therefore impermeable to moisture/water, i.e. do not absorb moisture/water, and/or also resistant to solvents, whereby a high structural strength in moist/damp environments is achieved.

Brief Description of the Drawings

[0013] The present invention will now be described in more detail with reference to the enclosed drawings, in which:

Fig 1 is a perspective view of a packaging system ,
 Fig 2 is a perspective cut-away view of the packaging
 system in fig 1,
 Fig 3 is a perspective cut-away view of the packaging
 system in fig 2 according to another embodiment ,
 Fig 4 is an exploded view of the packaging system
 in fig 1 and 2 with parts removed for clarity reasons,
 Fig 5 is a perspective view of the packaging system
 in figs 1-4 in a collapsed state,
 Fig 6 is a perspective view of inner parts enclosed
 by the packaging system in fig 3,
 Fig 7 is a perspective view of inner parts enclosed
 by the packaging system in fig 2, and
 Fig 8 is a schematical top plan view in section showing
 the casing-like parts of the packaging system in
 figs 1-3.

Detailed Description of the Invention

[0014] Figs 1-5 and 8 illustrate a collapsible packaging
 system or concept 10 comprising at least one packaging
 arrangement 100, 200 according to one embodiment of
 the invention (shown in Figs 6 and 7). The packaging
 arrangement 100, 200 comprises at least one pair of trays
 101, 102, 103, 104, 203, 204 adapted to hold, stay, set,
 and/or orientate at least one component and/or a number
 of components 105, 205 (see fig 6) for storing and/or
 transport by means of the packaging system 10, and for
 providing individual mechanical protection at least partially
 for the component by means of load/force take-up,
 i.e. the tray absorbs/dampens/reduces/distributes loads
 and forces due to impacts, impulses from hits/blows during
 handling of the packaging system 10. As used herein,
 the term "load" refers to essentially vertical loads from
 above, or more particularly the weight of a stack above.

[0015] Preferably, the trays 101, 102, 103, 104, 203,
 204 according to the invention are stackable but may
 also be nestable. The trays in one embodiment are stack-
 able and/or nestable with components 105, 205 when
 loaded with components having a suitable configuration
 for achieving this. The trays in another embodiment are
 stackable and/or nestable without components 105, 205.
 The trays provide individual mechanical protection for
 each component, fully or partially. The trays may also be
 non-nestable in themselves. The trays may be used only
 as inserts, spacers, shims, interlayers, or fillers between
 layers of components. The trays could also be provided
 with means, e.g. retractable yokes or brackets, making
 the trays stackable when pulled-out/extracted and nest-
 able when pulled-in/retracted.

[0016] The stackable and/or nestable trays 101, 102,
 103, 104, 203, 204 in one embodiment of the packaging
 system 10 are adapted to be stackable in a first state in
 which at least two adjacent trays have the same orien-
 tation in relation to each other and nestable in a second
 state in which one of the trays, e.g. the lower one, is kept
 in its first orientation while the other tray, e.g. the upper
 one, is turned, e.g. 180° in relation to the first tray, and

then placed on the same for nesting/mating.

[0017] A first embodiment of the packaging system 10
 comprises at least two detachable and mating parts, i.e. at least one bottom part 223 in the
 form of a pallet and at least one tray 101, 102, 103, 104,
 203, 204 placed on a loading surface 224 of the pallet
 223. A second embodiment of the packaging system 10
 comprises at least three detachable and mating parts,
 i.e. the pallet 223, at least one tray 101, 102, 103, 104,
 203, 204, and at least one top part 221 in the form of a
 lid/cover. A third embodiment of the packaging system
 10 comprises at least four detachable and mating parts,
 i.e. the pallet 223, at least one tray 101, 102, 103, 104,
 203, 204, the lid 221, and at least one side wall 207. The
 side wall 207 is preferably split in two parts and upright/
 erected in a first state (see figs 1-3) for detachably con-
 necting the pallet 223 to the lid 221 when the packaging
 system 10 is erected, and may optionally be removed or
 laid down (not shown) between the pallet 223 and the lid
 221 in a second state inside an enclosure formed by the
 packaging system when collapsing it into a returnable
 empty (see fig 4-5).

[0018] The side wall 207 is foldable from its upright
 state into its lying-down state so that it fits inside the vol-
 ume enclosed/defined by the pallet 223 and the lid 221
 by being foldable/bendable along at least one fold or fold-
 ing 110 extending vertically alongside the side wall 207,
 i.e. perpendicularly to the loading surface 224 of the pallet
 223 when the side wall is upright (see fig 2) mating with
 the pallet and/or the lid. This means that, if the height of
 the packaging system 10 and the side wall 207 when
 erected is greater than the width of the pallet 223, the
 side wall can nevertheless be bent/folded into a size that
 fits inside the contour of the loading surface or volume
 for the pallet 223 by configuring the side wall 207 with
 one or more folds 110, so that it for example has a cross-
 section similar to a Z when folded.

[0019] The packaging system 10 may instead of a di-
 vided side wall 207 be provided with an entire/whole/
 unbroken side wall 207, i.e. a non-divided side wall, a
 side wall being divided in more than two parts, or a side
 wall being divided perpendicularly to the shown vertical
 folds 110, i.e. horizontally. The side wall 207 may be pro-
 vided with openings (not shown) being optionally covered
 by openable and/or lockable doors or hatches (not
 shown) for access to the interior of the packaging system
 10. These doors may be detachable.

[0020] The number of folds 110 to be used depend on
 the height, the width, and the length of the packaging
 system 10. The side walls 207 may be provided with one
 or more folds 110 extending essentially in parallel with
 the loading surface of the pallet 223, i.e. in the horizontal
 direction, if the height of the packaging system 10 is
 greater than the length of the pallet 223.

[0021] The pallet 223 and the lid 221 are configured
 for mating with the upright side wall 207 in the erected
 state and for mating with each other when the side wall
 is removed, or laid down folded and enclosed in the space

between the pallet and the lid.

[0022] Fig 8 shows that the side wall 207 is divided into two sections 208 fitting with end edges into grooves around the periphery of the loading surface on the upper side of the pallet 223 and corresponding grooves (not shown) on the lower surface of the lid 221 facing the pallet. In this embodiment, each side wall section 208 is provided with three folds 110 extending vertically in fig 2. Two of the folds 110 primarily form two of the corners of the packaging system 10 while the third fold 110 is primarily used when folding the side wall 207. The two side wall sections 208 are symmetrical (in fig 8 only the folds 110 forming the four corners of the packaging system 10 are shown). The side wall sections 208 have overlapping or superimposing portions 206 adjacent two of the corners where the wall sections 208 are detachably joined together by means of hook-and-loop fastening means in the form of Velcro® fastening. The side wall sections 208 may also be detachably joined by any other suitable means, for example snap connections or push-/press buttons.

[0023] The packaging arrangement 100 is shown in figs 2, and 5-7 as one tray or a pair of trays 101, 102, 103, 104, 203, 204 for clarity reasons but may be a stack made up of more than two sandwiched trays.

[0024] Fig 6 shows one embodiment of the packaging arrangement 100 according to the invention. The packaging arrangement 100 comprises a first upper tray 101 and a second lower tray 103. The trays 101, 103 are provided with at least one structure/pattern 109, in this case, structures/patterns 109 in the form of at least one depression and/or projection 109 that securely/steadily and accurately stay/hold and set one or more components 105. The structures 109 are configured in a suitable way for holding and setting components 105, 205 with corresponding configurations, e.g. to hold and set one or more differently shaped components, at least partially, e.g. components having at least partially non-uniform shapes.

[0025] The trays 101, 103 shown in fig 6 may be configured with or without a ferrule, collar, or a flange 111 extending upwards and/or downwards similar to a skirt for at least partially enclosing each component 105, 205 for protecting the components from external effects or damage, e.g. dust, moisture/humidity, or mechanical influence, and providing strength, especially structural strength, structure and stability to the trays 101, 103. This collar 111 may in some cases be sufficient for protecting the components, whereby the need for the side wall 207 is eliminated.

[0026] The trays 101, 103 in fig 6 with components 105 can be stacked/piled/superimposed. The load supported by the packaging system/arrangement 10, 100 when stacking the trays 101, 103 is according to the invention carried at least partly by the components 105, and at least partly by the tray collars 111 and/or the tray structures 109, or may be carried mutually/jointly by the collars 111 and the components 105. The load may also only or

at least partly be carried by the entire tray or trays 101, 103, i.e. the whole surface/structure forming the tray, e.g. as totally flat inserts/shims/sheets/plates.

[0027] The trays 101, 103 shown in fig 6 are preferably configured so that their upper sides position/place, orientate, protect, and, where appropriate, lock, preferably, the lower/bottom part of a component 105, e.g. a lower edge of the component, while the lower sides of the trays are locked/secured, preferably, against the upper part, e.g. an upper edge, of the underlying, i.e. the subjacent component/-s 105.

[0028] Moreover, the trays 101, 103 shown in fig 6 with their component holding structures 109 are nestable, i.e. the trays without any components 105 can be nested.

[0029] A second embodiment of the packaging arrangement 100, 200 is shown in fig 2. This second packaging arrangement 200 comprises at least one tray 203, preferably more than one tray (only one tray is shown for clarity reasons), having structures 209 in the form of depressions and/or projections 209. The structures 209 are designed to hold and set one or more components 205 in the same way as the structures 109 described earlier.

[0030] The packaging arrangement 200 in fig 2 is also provided with the wrapping side wall 207 and the lid 221 that provide additional protection of the trays 203 and the components 205 enabling further stacking of packaging arrangements 200 on top of each other. The packaging arrangement 200 is placed on a pallet 223 for easy handling thereof.

[0031] In fig 7, another embodiment of the packaging arrangement 100, 200 is shown with two layers/trays 101, 102, 103, 104, 203, 204, one upper tray 101, 103, 203 and one lower layer/tray 102, 104, 204 being either a separate loose layer or tray, a layer/tray detachably connected to the underside of the upper tray by means of Velcro®- or snap fastening, an integrated lower layer or section of the upper tray, or a layer/tray 102, 104, 204 permanently glued or fused to the underside and/or the upper side of the upper tray 101, 103, 203. Both the bottom and the top tray of a stack of trays may be provided with this adjoining layer/tray 102, 104, 204.

[0032] This lower tray 102, 104, 204 shown in fig 7 is at least partially compactible, compressible, or resilient for creating a dampening effect that eliminates or at least decreases any loads/jolts/impacts on the components 105, 205 when handling the packaging system/arrangement 10, 100. The lower tray 102, 104, 204 shown in fig 7 may be made of foamed, expanded, cellular, or aerated plastic, or a suitable type of rubber, or any other suitable material fulfilling the demands.

[0033] The compressible tray 102, 104, 204 shown in fig 7 can also be used as an optional filling up, if the height of the stack of components 105, 205 and trays 101, 103, 203 in the packaging system 10 is too low and a free space is created between the upper surface of the top tray and the underside of the lid 221 when put on top of the side walls 207, by laying one or more trays 102, 104, 204 in this free space or sandwiching additional trays in

the stack tray until this free space is filled up. The compressible trays 102, 104, 204 can also be used for "overfilling", i.e. stacking the trays at a height extending/protruding over the side wall 207 and then pressing the lid 221 on top of the stack, compressing the compressible trays 102, 104, 204 when strapping, i.e. tying the packaging system 10 creating an additional force that enhances the securing and locking of the pallet 223, the lid 221, the side walls 207, 208, the components 105, 205, and the trays 101, 102, 103, 104, 203, 204 in relation to each other, and minimizing any free space inside the packaging system 10.

[0034] Furthermore, the compressible tray 102, 104, 204 shown in fig 7 when used as a separate overfilling or filling up item does not have to be shaped as a tray or a flat/even sheet/plate, it may instead be shaped as a bag/sack filled with a gas, e.g. air, a fluid, e.g. a gel, beans, styrofoam pellets, or foam, or any other suitable form fulfilling the purpose.

[0035] In the collapsible packaging system/arrangement 10, 100 200 all of its parts, i.e. the pallet 223, the lid 221, the side walls 207, and the trays 101, 102, 103, 104, 203, 204 are preferably made of a suitable plastic material with sufficient durability. Optionally, at least one of the parts, 101, 102, 103, 104, 203, 204, 207, 221, 223 or, preferably all of the parts forming the packaging system 10 are made of a conductive and/or dissipative, sufficiently durable, and preferably recyclable material for protecting and/or shielding the components 105, 205 from electric pulses if the components are sensitive for static electricity.

[0036] The trays 101, 102, 103, 104, 203, 204 also provide possibilities for traceability of components 105, 205 and control of logistics and materials flow because the trays can carry information about the components, e.g. as engraved text, labels or RFID-tags. This is advantageous when a component is designed in such a way or has features that make it unsuitable or impossible for the component itself to carry/bring the information.

[0037] Furthermore, the trays 101, 102, 103, 104, 203, 204 also prevent, or at least render theft and manipulation of the components 105, 205 more difficult. The protection may be enhanced by various types of locking and sealing devices connected to the trays. The entire packaging system 10 may also be equipped with locking and sealing devices for the lid 221, the side wall 207, and/or the pallet 223.

[0038] Moreover, the trays 101, 102, 103, 104, 203, 204 create a stable/sturdy packaging unit 100, 200 when stacked/nested that does not require any additional protection in itself but is rigid and stable enough to be provided with for example stretch film where the process of stretching the film may involve strong, or even heavy lateral/transverse forces/loads. This film also adds to the strength of the packaging unit 100, 200, and may be tightly attached/welded to at least one tray making vacuum packaging possible.

[0039] A stretch or shrink film forms an enhanced pro-

tection against for example contamination, soiling, moisture, and, depending on the choice of material, possibly against electrical impulses. The stretch/shrink film also provide some additional protection against theft and manipulation of the components 105, 205.

[0040] The stretch/shrink film also enables further improved traceability and control of logistics and materials flow because the film may carry information about the packaging system/arrangement 10, 100, 200 as a whole optimizing the amount of information providing control of more components 105, 205. This outer wrapping may also provide more comprehensive and detailed information about the content of the packaging unit since larger surfaces become available for application of for example labels.

[0041] Embodiments of the packaging system/arrangement 10, 100, 200 having outer protection, e.g. stretch/shrink film or walls 207, 208 and/or lids 221, are very advantageous in that the outer protection can be removed at the arrival or preparation position, and that the components 105, 205 and/or the trays 101, 102, 103, 104, 203, 204 entering a production area always are clean and dry, which is a great advantage for the users.

[0042] Moreover, the trays 101, 102, 103, 104, 203, 204, especially the compactible trays 102, 104, 204 are means for load take-up, and may, as explained earlier, be wholly or partially compressible by being provided with a compactible section that is integrated with the tray, the lid 221 and/or the pallet 223, detachably connected to one or more sides of the tray, e.g. the underside and/or the upperside in contact with the components, or detachably connected to the lid 221 and/or the pallet 223.

Claims

1. A packaging arrangement (100, 200) for storing at least one component (105, 205 of non-uniform shape, comprising at least one pair of trays, each tray (101, 102, 103, 104, 203, 204) holding, setting and orientating the component and providing individual mechanical protection for at least parts of the component, each tray being a means (101, 102, 103, 104, 203, 204) for load take-up, wherein each tray (101, 102, 103, 104, 203, 204) is configured so that load is at least partially carried by the component and at least partially by the tray and said each tray (101, 102, 103, 104, 203, 204) is provided with at least one depression or at least one projection (109, 209), which at least partially enclose the component (105, 205), said at least one depression or projection having a non-uniform shape, corresponding to the non-uniform shape of the component, holding, setting and orientating the component, wherein the trays (101, 102, 103, 104, 203, 204) are stackable, and wherein the trays (101, 103, 203) are at least partially made of a dissipative and/or conductive material for protecting the component (105, 205) from

electric pulses.

2. A packaging arrangement (100, 200) according to claim 1, wherein the at least one pair of trays (101, 102, 103, 104, 203, 204) are nestable.
3. A packaging arrangement (100, 200) according to claim 1 or 2, wherein at least one tray (101, 103, 203) is at least partially compactible.
4. A packaging arrangement (100, 200) according to claim 1 or 2, wherein the means (102, 104, 204) for load take-up is at least partially compactible.
5. A packaging arrangement (100, 200) according to claim 3, wherein the tray (101, 103, 203) comprises a compactible section (102, 104, 204).
6. A packaging arrangement (100, 200) according to claim 5, wherein the compactible section (101, 102, 103, 104, 203, 204) is made of foamed, expanded, cellular, or aerated plastic, or rubber.
7. A packaging arrangement (100, 200) according to any of the preceding claims, wherein at least one tray (101, 102, 103, 104, 203, 204) is provided with a skirt-like peripheral edge.

Patentansprüche

1. Verpackungsanordnung (100, 200) zum Aufbewahren von zumindest einer Komponente (105, 205) mit uneinheitlicher Form, umfassend zumindest ein Paar Ablagen, wobei jede Ablage (101, 102, 103, 104, 203, 204) die Komponente hält, einstellt und ausrichtet und individuellen mechanischen Schutz für zumindest Teile der Komponente vorsieht, wobei jede Ablage ein Mittel (101, 102, 103, 104, 203, 204) zur Lastaufnahme ist, wobei jede Ablage (101, 102, 103, 104, 203, 204) derart konfiguriert ist, dass Last zumindest teilweise von der Komponente und zumindest teilweise von der Ablage getragen ist, und jede Ablage (101, 102, 103, 104, 203, 204) mit zumindest einer Vertiefung oder zumindest einem Vorsprung (109, 209) versehen ist, die die Komponente (105, 205) zumindest teilweise einschließen, wobei die/der zumindest eine Vertiefung oder Vorsprung eine uneinheitliche Form aufweisen, die der uneinheitlichen Form der Komponente entspricht und die Komponente hält, einstellt und ausrichtet, wobei die Ablagen (101, 102, 103, 104, 203, 204) stapelbar sind, und wobei die Ablagen (101, 103, 203) zumindest teilweise aus einem ableitendem und/oder leitfähigem Material zum Schützen der Komponente (105, 205) vor elektrischen Impulsen hergestellt sind.

2. Verpackungsanordnung (100, 200) nach Anspruch 1, wobei das zumindest eine Paar Ablagen (101, 102, 103, 104, 203, 204) ineinander schachtelbar ist.
3. Verpackungsanordnung (100, 200) nach einem der Ansprüche 1 oder 2, wobei zumindest eine Ablage (101, 103, 203) zumindest teilweise verdichtbar ist.
4. Verpackungsanordnung (100, 200) nach einem der Ansprüche 1 oder 2, wobei das Mittel (102, 104, 204) zur Lastaufnahme zumindest teilweise verdichtbar ist.
5. Verpackungsanordnung (100, 200) nach Anspruch 3, wobei die Ablage (101, 103, 203) einen verdichtbaren Teilabschnitt (102, 104, 204) umfasst.
6. Verpackungsanordnung (100, 200) nach Anspruch 5, wobei der verdichtbare Teilabschnitt (101, 102, 103, 104, 203, 204) aus geschäumtem, expandiertem, zellulärem oder durchlüftetem Kunststoff oder Kautschuk hergestellt ist.
7. Verpackungsanordnung (100, 200) nach einem der vorhergehenden Ansprüche, wobei die zumindest eine Ablage (101, 102, 103, 104, 203, 204) mit einer schurartigen Umfangskante versehen ist.

Revendications

1. Système d'emballage (100, 200) pour le stockage d'au moins un composant (105, 205) de forme irrégulière, comprenant au moins une paire de plateaux, chaque plateau (101, 102, 103, 104, 203, 204) permettant de maintenir, d'ajuster et d'orienter le composant, et fournissant une protection mécanique individuelle pour au moins certaines parties du composant, chaque plateau étant un moyen (101, 102, 103, 104, 203, 204) pour la réception de charges, dans lequel chaque plateau (101, 102, 103, 104, 203, 204) est configuré de manière à ce que la charge soit portée au moins partiellement par le composant et au moins partiellement par le plateau, et chacun desdits plateaux (101, 102, 103, 104, 203, 204) est doté d'au moins un creux ou d'au moins une saillie (109, 209) entourant au moins partiellement le composant (105, 205), ledit au moins un creux ou ladite au moins une saillie présentant une forme irrégulière, correspondant à la forme du composant, tout en maintenant, ajustant et orientant le composant, dans lequel les plateaux (101, 102, 103, 104, 203, 204) peuvent être empilés, et dans lequel les plateaux (101, 103, 203) sont au moins partiellement constitués d'un matériau dissipatif et/ou conducteur, pour protéger le composant (105, 205) des impulsions électriques.

2. Système d'emballage (100, 200) selon la revendication 1, dans lequel au moins une paire de plateaux (101, 102, 103, 104, 203, 204) peuvent être emboîtés.
- 5
3. Système d'emballage (100, 200) selon la revendication 1 ou 2, dans lequel au moins un plateau (101, 103, 203) peut être au moins partiellement compacté.
- 10
4. Système d'emballage (100, 200) selon la revendication 1 ou 2, dans lequel le moyen (102, 104, 204) pour la réception d'une charge peut être au moins partiellement compacté.
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5. Système d'emballage (100, 200) selon la revendication 3, dans lequel le plateau (101, 103, 203) comprend une section apte à être compactée (102, 104, 204).
- 20
6. Système d'emballage (100, 200) selon la revendication 5, dans lequel la section apte à être compactée (101, 102, 103, 104, 203, 204) est constituée de plastique mousse, expansé, cellulaire ou aéré, ou de caoutchouc.
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7. Système d'emballage (100, 200) selon l'une quelconque des revendications précédentes, dans lequel au moins un plateau (101, 102, 103, 104, 203, 204) est pourvu d'un bord périphérique semblable à une jupe.
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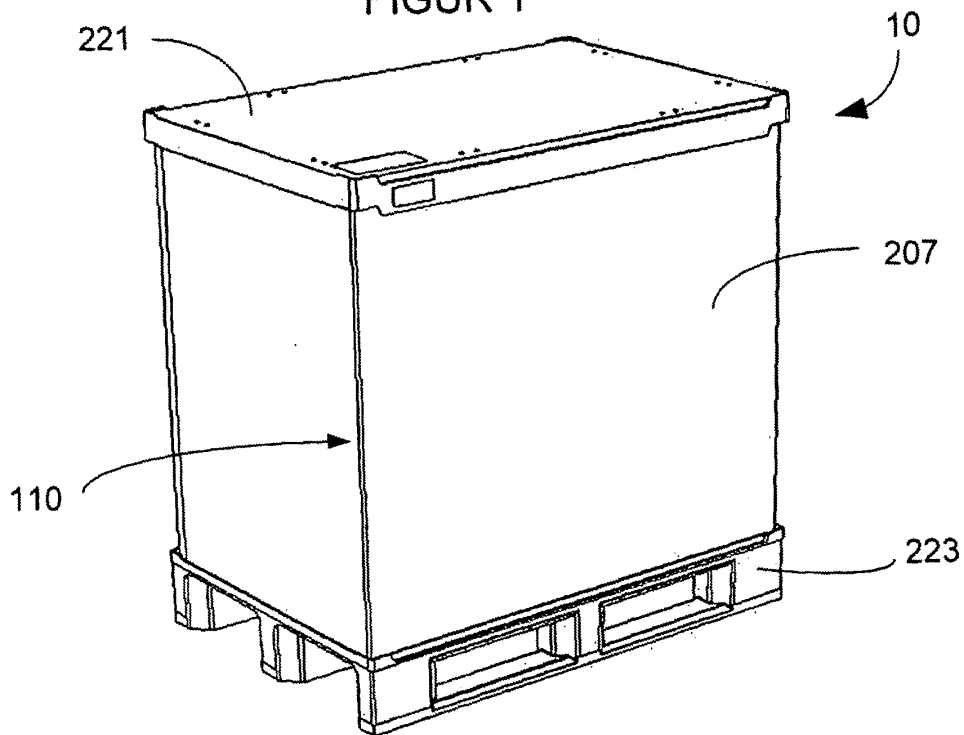
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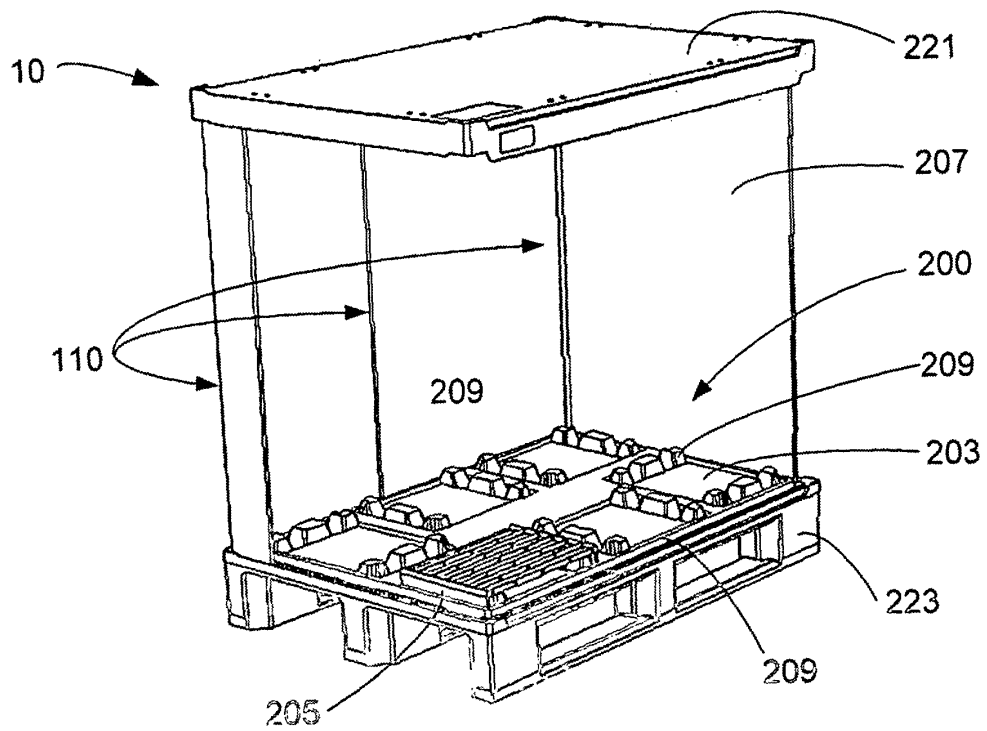
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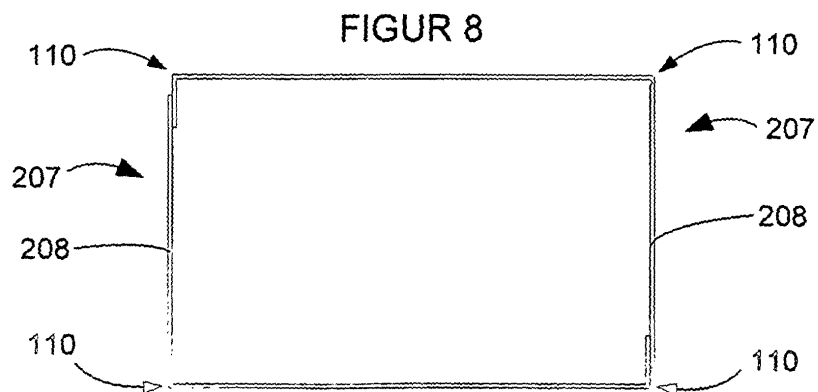
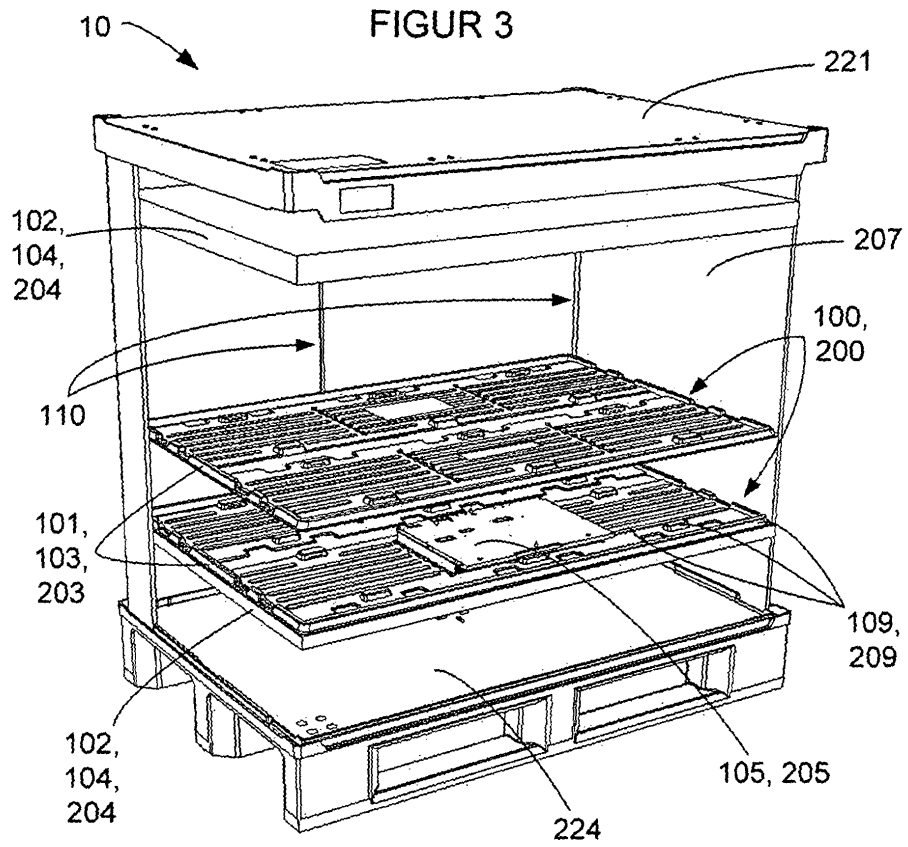
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FIGUR 1

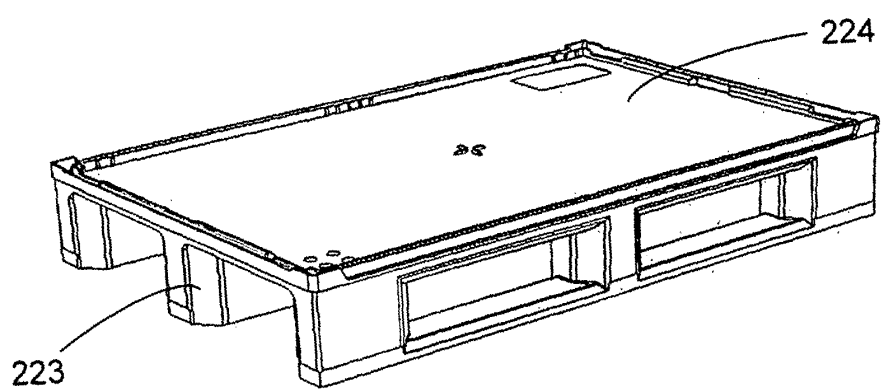
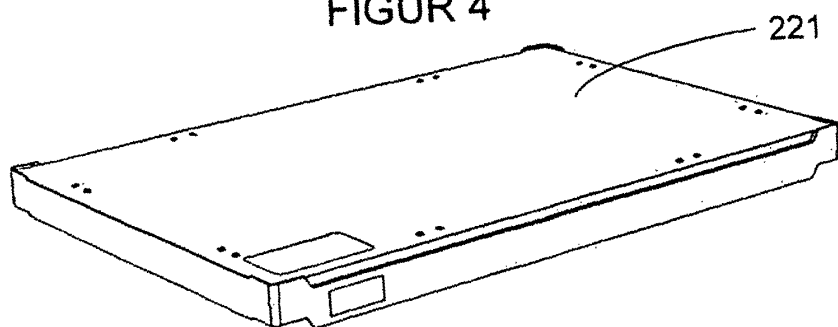


FIGUR 2

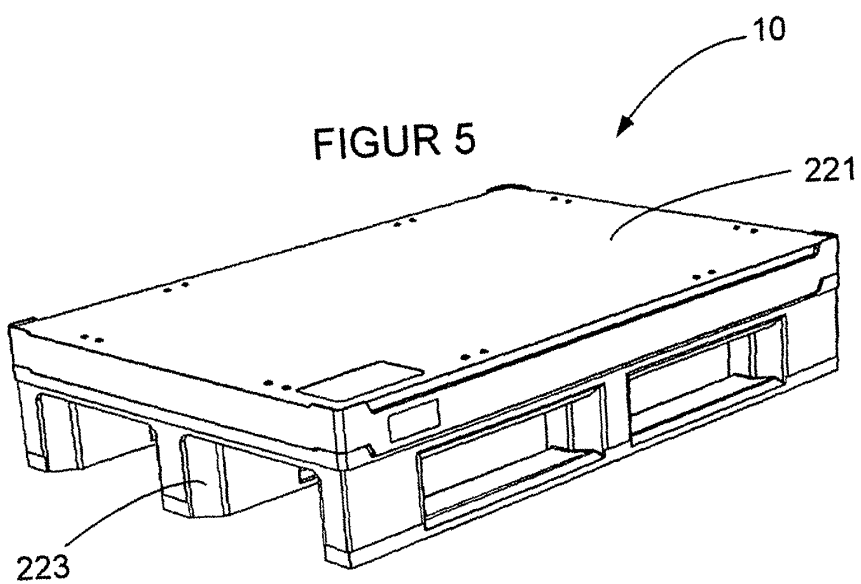


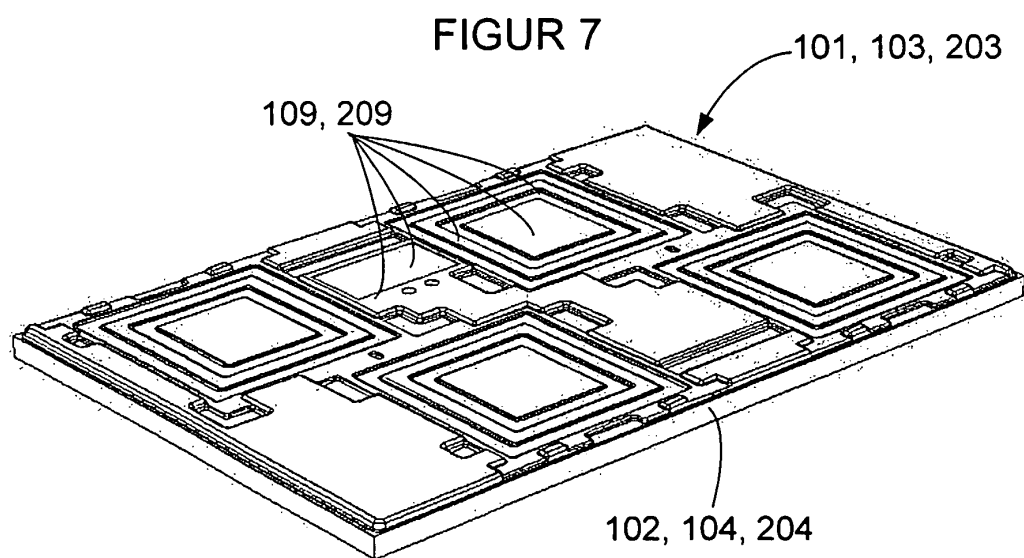
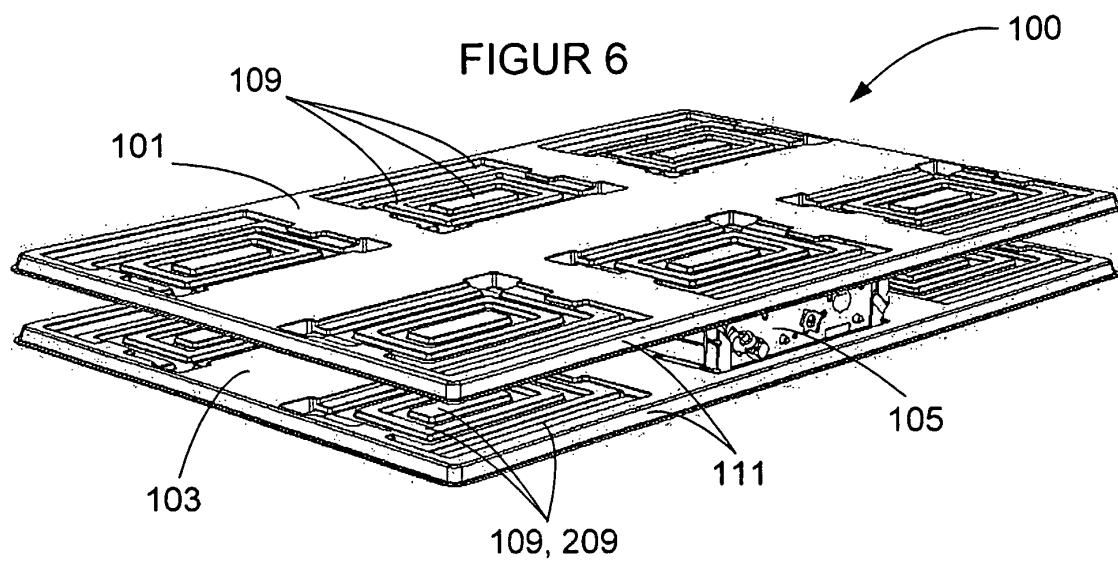


FIGUR 4



FIGUR 5





REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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