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(54) **Container with a lid and a means for securing the lid to the base of the container**

(57) The invention is about a container including a base (10), a sleeve (20), a lid (30), the lid being provided with an attachment means for securing the lid (30) to the

container when the container is open, the invention is characterized in that said attachment means connects the lid (30) to the base (10) of the container.

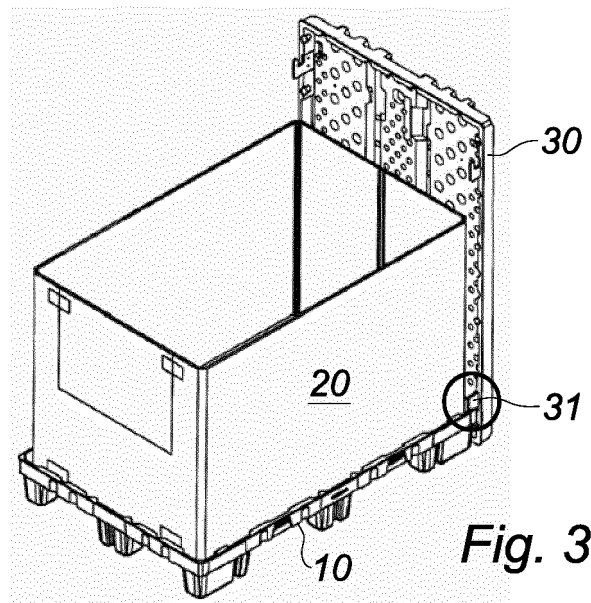


Fig. 3

Description

Field of the Invention

[0001] The invention relates to the field of packaging objects, objects may be large or heavy, in containers or boxes having a base, a sleeve perpendicular to the base and a lid on the sleeve. It relates more particularly to the field of containers associated with pallets and designated pallet boxes which the sleeve is removable and foldable for an empty transport of the container.

State of the art

[0002] Are used for transporting goods containers combined with a support forming pallet, the whole being arranged to make loading, unloading, and handling by lifting equipment, both easy and safe.

[0003] These containers are usually made of a durable material, such as a thermoplastic material with forming by molding, which allows prolonged use.

[0004] A known example of pallet box consists of a base, forming a pallet, a sleeve and a lid. The pallet comprises a tray supported by vertical plots which are secured by being molded, allowing the passage of the arms or forks of a lifting device. The plots are often interconnected by parallel soles providing load distribution on the floor while reinforcing plots.

[0005] The base is shaped so as to receive and block the sleeve; the means for retaining the sleeve on the base is, for example, a groove along the periphery of the tray in which the lower edge of the sleeve is received.

[0006] The sleeve is formed of several plates hinged together. For example, it may be an alveolar plastic plate, folded along axes parallel to each other. It rests on the pallet by an edge either directly or via a base plate which itself rests on the pallet. The sleeve after erecting in the deployed position, defines a cylindrical volume with a polygonal section, a generally rectangular parallelepiped, whose contour is matched to that of the pallet. The sleeve can be disassembled, folded along their fold axes, and laid out flat so as to be placed on the pallet occupying a reduced volume for transport or storage of the assembly when it is empty.

[0007] The lid is shaped so as to be placed on the sleeve when the latter is deployed and erected on the base or pallet. The lid closes the container. According to the prior art, the arrangement and shape of the lid also enable it to form, together with the base resting on the pallet or the pallet itself, a container for the sleeve once it has been folded, and placed on the pallet.

[0008] Containers, especially pallet boxes, used to transport bulky and heavy loads are bulky. We are always looking to provide improvements which might make them more convenient use.

[0009] The present applicant has developed an improved pallet box, described in EP 2,193,998. This container, whether or not forming a pallet box, is made of a

plastics material which has been molded, for example by the technique of thermoforming dual skin. The container has a lid or cover which areas support for the soles or pads pallets that are put on stacking include an anti-slip means of elastomeric material. The container also comprises a sleeve with releasable latch means at the base and / or lid for inviolability. The container has other features described in the patent.

[0010] Another pallet box described in patent application FR 12 57 278 of 26 July 2012 comprises a sleeve attached to the pallet by means of straps.

[0011] Also known EP 2537769 which relates to an attachment means of the lid on the sleeve of the container when it is open

[0012] This applicant has set an objective to further improve this type of container in particular pallet box.

Object of the invention

[0013] This objective is achieved with a container comprising a base, a sleeve and a lid, the lid being arranged to cover the sleeve and being provided with an attachment means for securing the lid to the container when said lid is not on the sleeve, i.e. the container is open. This container according to the invention is **characterized in that** said attachment means connects the lid to the base.

[0014] The attachment means is preferably a hook placed on the lid. This hook engages with the base, preferably a rim of the base, so that the lid stands in the upright position relative to the base. This rim is in particular in the shape of a low wall.

[0015] Preferably, the attachment means is arranged such that the lid bears on the floor when it is hung to the base. This arrangement allows the charge to be transferred to the ground which reduces stress on the base.

[0016] The lid preferably comprises a pair of hooks arranged in parallel along two opposite edges and, more particularly, the lid includes a second pair of hooks opposite to the first pair.

[0017] The elements constituting the hooks can be metallic or plastic. They may also form an integral part of the lid which is then preferably mono-bloc.

[0018] The solution of the invention allows the operator to save time in the folding and unfolding of the container. The lid slides sideways and is hung to the base, which is generally a pallet, by upstanding relative thereto.

[0019] The solution of the invention also saves floor space, on the one hand because the lid is nearby, on the edge of the base and on the other hand, especially in the environment around and around container because it avoids the deposition of the cover on the ground or in other locations around the container.

[0020] When the container is a pallet box, the base of the container is a panel laid on a pallet or the base is a pallet that rests on feet-like pads on the floor. The hooks are arranged along an edge of the lid at a distance from the transverse edge which is adjacent to at most the

height of the feet of the pallet. Preferably, this distance allows the lid resting on the ground as mentioned above. However, it is within the scope of the invention to suspend the lid to the base without support on the floor if the pallet is strong enough to support the lid.

[0021] The solution of the invention thus makes an important ergonomic and physical gain for the operator because it limits the number of operations with the use as a guide of the edge of the pallet and the top of the sleeve.

[0022] According to another characteristic, the base is a pallet with a tray and feet, said feet being attached to the tray, both being made in one piece of molded plastic. The tray has cavities corresponding to the feet. A wall of small height forms a rim periphery for keeping the sleeve in position on the base plate. Where appropriate housing for the hook or hooks of the attachment means is then constructed as a recess in the wall forming the rim, allowing the hook to hang along this wall. These housings are made on the small side of the container but also on the long side of the container. According to another characteristic, the sleeve is removable and foldable on the base. Thus, during the operation of folding the container, after the sleeve has been folded, it is easy to return the lid horizontally above the sleeve and pallet.

[0023] According to a particular embodiment, the attachment means of the lid at the base also includes a wedge member of the lid to the sleeve. The wedging member is, for example, in the case of a hook with a face facing the sleeve, a boss or protrusion provided on said face of the hook. This boss cooperates with a stop arranged on the sleeve, for holding the lid on the sleeve.

[0024] A lid with four hooks for hanging has the additional advantage of being easily clamped to the pallet in folded mode. The hooks are used to locate, place and stabilize the lid on the palette when the sleeve is folded and placed on the platform of the pallet.

[0025] According to another embodiment the attachment means comprises at least one hook arranged on the base e.g. the tray of the pallet, a receiving means of the hooks being arranged on the lid.

[0026] The invention also relates to the use of the container. It comprises for the open position of the container, the placement of the lid along the sleeve resting on the base, the attachment means connecting the lid to the base.

Brief description of the figures

[0027] An embodiment of the invention will now be described in more detail, by way of nonlimiting example, with reference to the accompanying drawings in which:

- Figure 1 shows a box pallet isometric view;
- Figure 2 is a sectional view taken along the direction of the MM container in Figure 1;
- Figure 3 is a plan view of the container in Figure 1, the lid is placed on the side of the pallet and is attached to the rim

- Figure 4 shows the same view as in Figure 3, the sleeve of the container having been removed;
- Figure 5 shows the details of the attachment of the lid to the pallet area;
- Figure 6 shows the position of the lid attached to the pallet along the long side;
- Figure 7 is an exploded view of the pallet box in Figure 1, the sleeve was folded and laid flat on the pallet for transport empty;
- Figure 8 and 9 show an alternative embodiment with a locking member of the lid.

Detailed description of an embodiment of the invention

[0028] Shown in Figure 1 a pallet box 1 to which the invention applies. The container includes a base 10, a sleeve 20 and a lid 30. The base is, in this example, a pallet made by molding a thermoplastic material according to the technique of double wall thermoforming. The pallet comprises a rectangular tray 13 with a plurality of pads 11 forming the feet of the pallet. A wall 15 of small height, forming a rim, extends along the periphery of the tray and arranged inside a groove in which the lower edge of the sleeve is accommodated. The lid 30 also includes a peripheral rim 35 forming a groove in which the upper edge of the sleeve is accommodated when the lid closes the container.

[0029] The lid 30, as shown in Figures 3, 4 and 5 includes a pair of hooks 31 and 32 along the side edges, here inside and against the wall 35. These form a hook for hanging the lid to the pallet 10, along the edge thereof. These hooks comprise a portion bent relative to the panel of the lid, forming an attachment means of the lid to the pallet 10, by hanging on the rim thereof. As the rim 15 has a certain thickness because of its function of maintaining the sleeve, housings 15a in shape of recesses are provided in the thickness thereof. These housings 15a allow the sliding of the curved parts of the hooks 31 and 32 along the vertical rim 15. Advantageously, the hooks 31 and 32 are arranged at a distance from the transverse edge 35 of the lid so that when hanged in place on the rim 15, the lid comes to bear on the floor. Thus the load is taken up by the ground and not the rim 15. However, if the material is strong enough, the cover can remain suspended by the attachment means.

[0030] The lid may include a single pair of hooks 31, 32 or a second pair as seen in the figures, for more convenient use.

[0031] It is possible to have the lid along any side of the base or tray of the pallet, it suffices to provide appropriate housing in the rim 15 if necessary. In Figure 6 the lid is disposed along a long side of the pallet.

[0032] Finally 15b housing hooks are provided along the long sides of the rim 15 in order to adjust the lid on the base 10 when the sleeve is laid flat on the tray 13 inside the rim 15. This ensures an effective setting of the lid on the pallet for transport and storage of empty pallet

box. Figure 7 shows an exploded view of how to adjust the hooks 31 and 32 in the housing 15b formed in the thickness of the rim 15.

[0033] We note that additional means may be provided for locking the lid on the palette.

[0034] According to an alternative embodiment, shown in Figure 8, the hooks 31' having an inwardly facing surface of the lid include a boss 31'b on this face. The sleeve includes a cavity forming a recess 20a for accommodating the boss 31'b. When the lid is placed on the sleeve, the hook 31 is guided along the adjacent panel of the sleeve until the boss is received in the cavity 20a. This arrangement forms a further means to lock the lid in place in the closed position. Such a locking means or holding member is preferably also provided between the lid and the base or tray of the pallet.

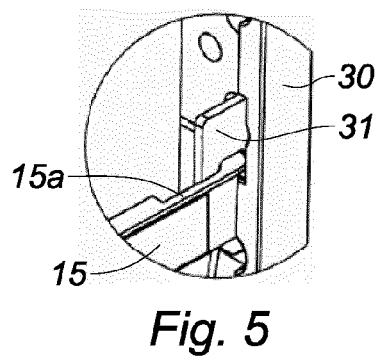
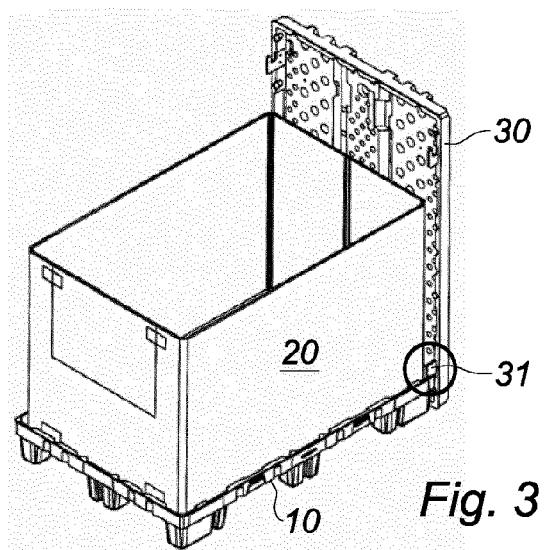
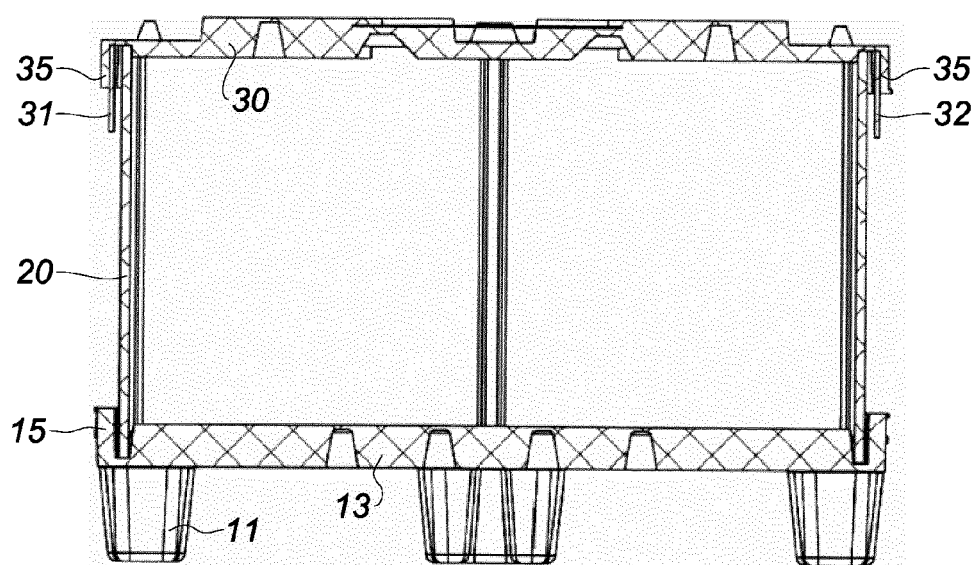
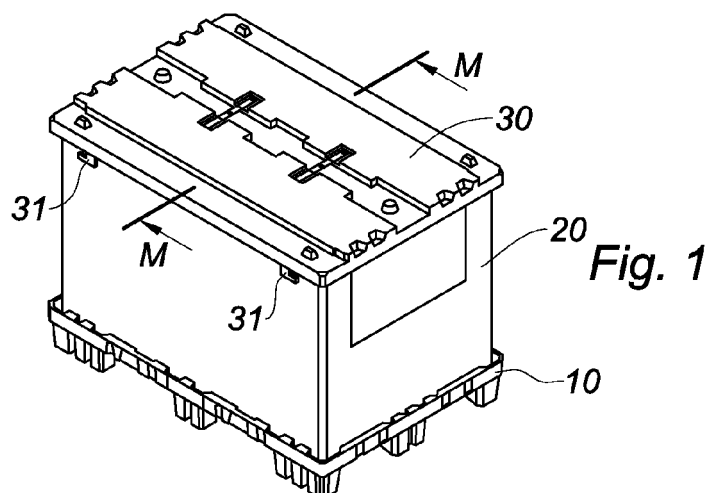
[0035] The invention is not limited to this embodiment as shown. The hooks can be provided on the base with a receiving means of the hooks on the lid. A single hook may also be sufficient. Other equivalent means within the scope of the art are included in the invention.

Claims

1. A container comprising a base (10), a sleeve (20) and a lid (30), said lid being arranged to cover the sleeve and being provided with an attachment means for securing the lid to the container when said lid is not on the sleeve, **characterized in that** said attachment means connects the lid (30) to the base (10) of the container.
2. A container according to claim 1 wherein said attachment means comprises at least one hook (31, 32) arranged on the lid (30).
3. A container according to claim 2 having a base with a rim, in which said hook cooperates with said rim so that the lid is in upright position in relation to the base when suspended by the hook at the base.
4. A container according to one of claims 1 to 3 in which said attachment means is arranged on the lid such that the lid (30) bears on the ground when it is suspended to the base (10) by the attachment means.
5. A container according to the preceding claim, wherein the lid includes a pair of hooks (31, 32) arranged in parallel, along two opposite edges of the lid.
6. A container according to the preceding claim, wherein the lid (30) comprises a second pair of hooks opposite to the first pair.
7. A container according to one of claims 2 to 6, wherein the base (10) of the container forms a pallet with a tray and feet (11) resting on the floor, the hooks being

arranged on the lid at a distance from one transverse edge of the lid, corresponding to the height of the feet of the pallet.

8. A container according to the preceding claim which comprises a pallet of a single molded plastic material with a wall (15) at the periphery of the tray of the pallet, housings (15a, 15b) for the hook or hooks being provided in the wall (15).
9. A container according to one of the preceding claims, wherein the sleeve (20) is removable and foldable to lay flat on the container.
10. A container according to one of the preceding claims, wherein the attachment means of the lid to the base includes a holding member to the sleeve.
11. Container according to the preceding claim, wherein the attachment means comprises a hook with a side facing the sleeve, and said holding member is a projection arranged on said face of said hook.
12. Container according to claim 1 wherein said attachment means comprises at least one hook (31, 32) arranged on the base, a receiving means of the hooks being arranged on the lid.
13. Use of the container according to one of the preceding claims comprising in the open position of the container, suspending the lid to the base by means of said attachment means connecting the lid to the base.



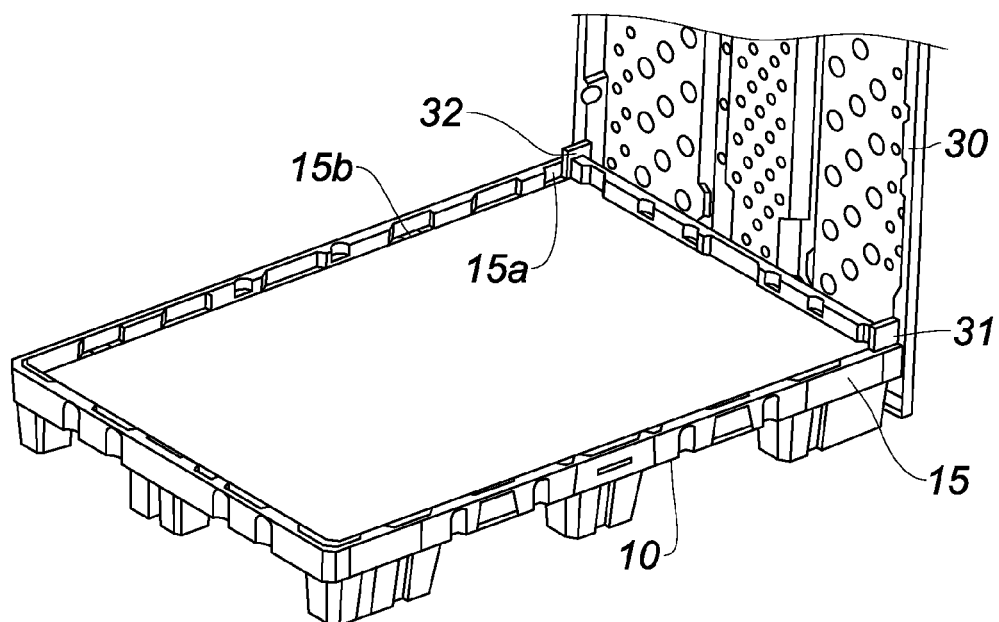


Fig. 4

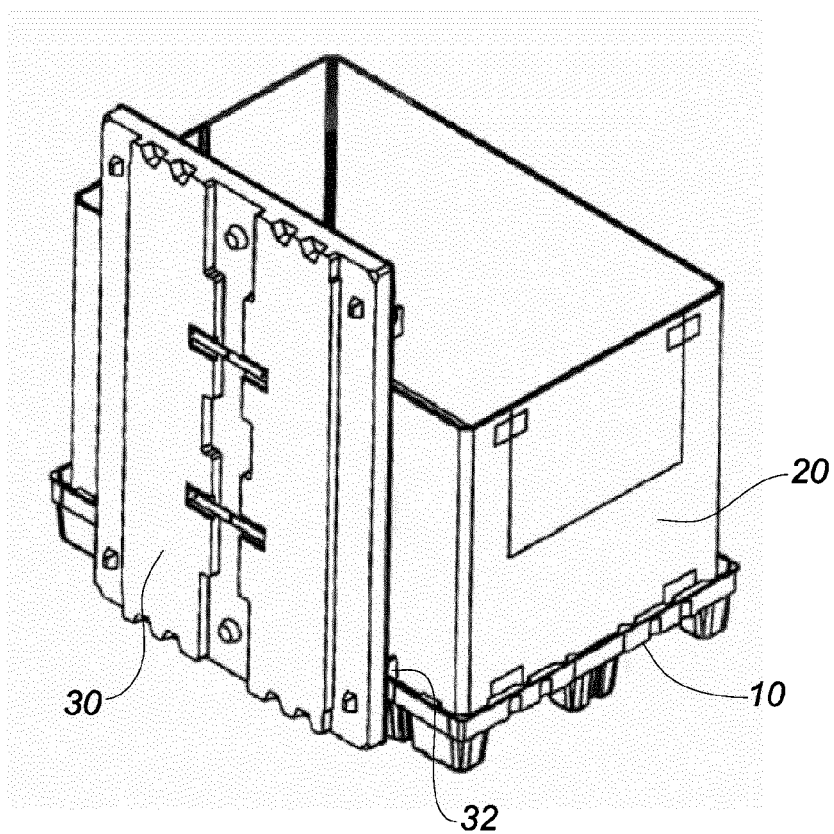


Fig. 6

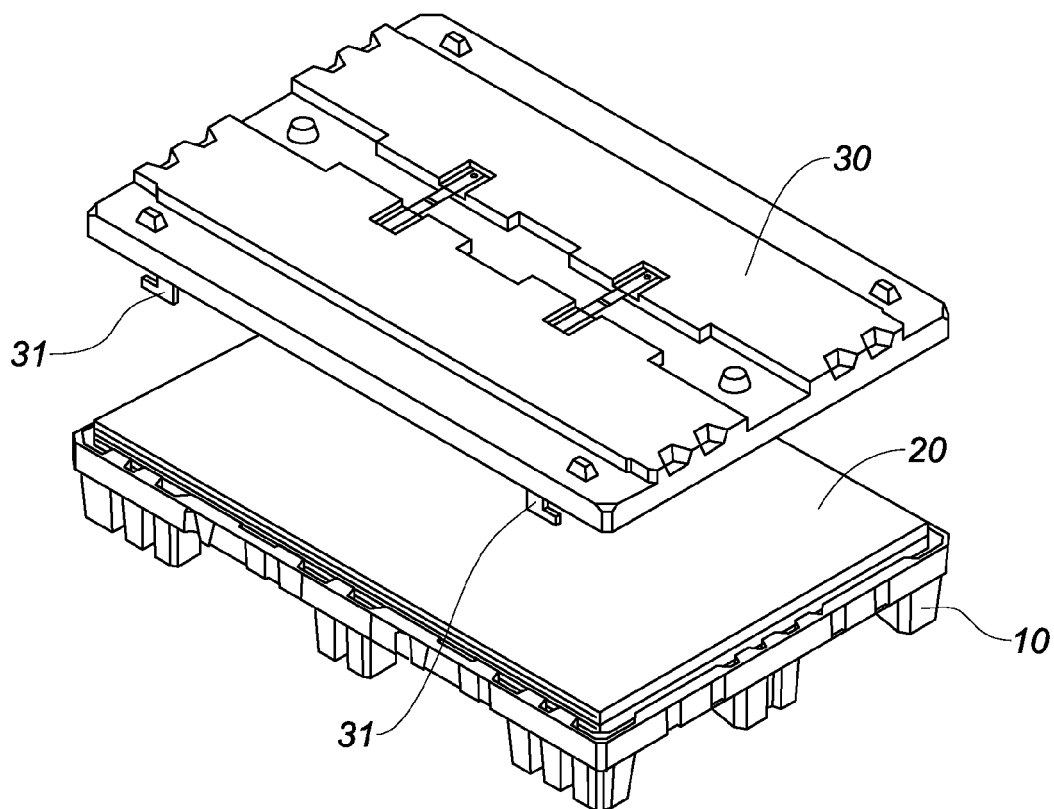


Fig. 7

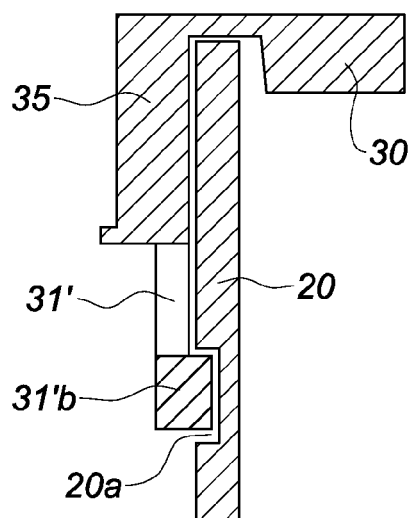


Fig. 8

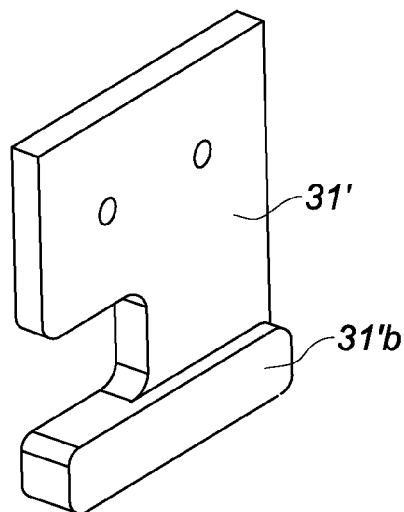


Fig. 9



EUROPEAN SEARCH REPORT

Application Number
EP 13 30 6511

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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 19 March 2014	Examiner Czerny, M
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	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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The members are as contained in the European Patent Office EDP file on
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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