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(54) **STORAGE UNIT**

(57) A storage unit comprising: a generally rectangular base, which has two short sides and two long sides, four upstanding peripheral walls, which comprise a pair of opposed short side walls and opposed front and back walls, the side walls extending between the front and back walls, and a pair of lids, which pivot about axes that extend substantially parallel to the short side walls.

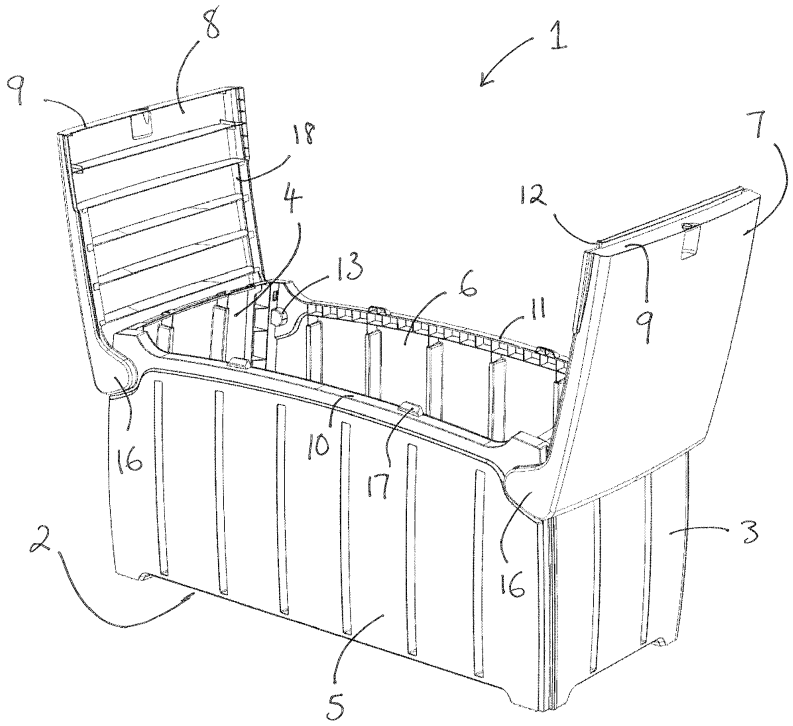

Fig. 1

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Description

[0001] The present disclosure relates to a storage unit, in particular to a storage unit of the form suitable for outdoor use, which may otherwise be referred to as a garden store.

[0002] For a great many years, people have used wooden sheds for outside garden storage. These are simple wooden structures with a felt roof, available in numerous sizes and configurations. In recent times a new form of outdoor storage has become increasingly popular. Garden stores are typically metal or plastic containers with open fronts/tops, which are closed by lockable doors/lids. Whilst these units vary in size for different uses, particularly popular are models that are smaller in size than conventional sheds, have a closable open top and are made from plastic. They may be found in front or rear gardens, on patios or even on the balconies of flats. They are zero maintenance due to their materials and construction and are low cost.

[0003] The present invention arose in a bid to provide an improved low cost storage unit, in particular such a storage unit that is easy to construct and assemble and cost effective to manufacture.

[0004] According to the present invention in a first aspect, there is provided a storage unit comprising: a generally rectangular base, which has two short sides and two long sides, four upstanding peripheral walls, which comprise a pair of opposed short side walls and opposed front and back walls, the side walls extending between the front and back walls, and a pair of lids, which pivot about axes that extend substantially parallel to the short side walls.

[0005] By the provision of two lids, which pivot about axes that extend substantially parallel to the short side walls, it is possible, as is preferred, for the lids to pivotally engage with the front and back walls. The front and back walls may be formed by identical moulded panels, which reduces manufacturing costs since less tooling is required, allowing for a cheaper product. Preferably, the base snap fits to the four upstanding peripheral walls. Preferably, the side walls and front and back walls snap fit together. Preferably, the lids and the front and back side walls snap fit together. Most preferably, the construction is entirely snap-fit. With such a construction, assembly by an end user is simple, and, again, a cost effective arrangement is provided, since there are no additional mechanisms, fittings or fixings required.

[0006] An additional/alternative benefit of the provision of the two lids is that they may be mounted so that their centres of mass maintain them in an open position, opening outwardly in length direction of the storage unit. This obviates the need for any additional mechanisms or fixings for maintaining the lids in an open position during access to the storage unit.

[0007] Furthermore, the storage unit may be placed with the back wall closely adjacent a wall or other surface without hindering the opening of the storage unit.

[0008] The storage unit may be available in a range of sizes. The length of the long sides is preferably at least 50cm and more preferably at least 1 m.

[0009] Further, preferred, features are presented in the dependent claims.

[0010] Embodiments of the inventions are described below with reference to the accompanying drawings, in which:

Figure 1 shows a perspective view of a storage unit according to an embodiment of the invention with the lids open;

Figure 2 shows a perspective view of the storage unit of Figure 1 with the lids closed;

Figure 3 shows a perspective view of the storage unit of Figure 1 with one of the lids partially disengaged to show an engagement means for the lids, including a detail view thereof; and

Figure 4 shows a perspective view of the storage unit with one of the lids partially disengaged showing an attachment means for the base, including a detail view thereof.

[0011] As shown, there is provided a storage unit 1 that comprises a generally rectangular base 2, which has two short sides and two long sides. Four upstanding peripheral walls 3, 4, 5, 6 are provided, which comprise a pair of opposed short side walls 3, 4 and opposed front and back walls 5, 6. The side walls extend between the front and back walls. A pair of lids 7, 8 is provided. The lids 7, 8 pivot about axes that extend substantially parallel to the short side walls 3, 4.

[0012] The storage unit is preferably of "snap-fit" construction, formed entirely from moulded plastic panels. In the depicted arrangement, the base snap fits to the four upstanding peripheral walls, the side walls and front and back walls snap fit together and the lids and the front and back side walls snap fit together. The panels are provided with complementary mating/engaging features to permit such assembly. Such features are well known to those skilled in the art. The panels are preferably configured such that the assembly order is not critical. Each of the panels is preferably of unitary moulded construction. Whilst less preferable, arrangements may be provided that are not of entirely snap-fit construction.

[0013] As mentioned, the front and back walls 5, 6 are preferably formed by identical moulded panels. The side walls 3, 4 are also preferably formed by identical moulded panels. The base 2 is preferably formed by a pair of identical moulded panels 2a, 2b, shown in Figure 4. By such arrangement, the walls and base may be formed using just three moulds. Tooling costs are reduced as compared to prior art arrangements. By the provision of a two-part base 2, the mould for the base/floor is reduced in size, which further reduces tooling costs. The lids in the present arrangement are different to one another, principally due to the provision of an integrally moulded gutter on one of the lids, as discussed below. Accordingly,

only five moulds are required in total for producing the storage unit. In alternative arrangements, the lids could be identical, particularly if the gutter 12 (discussed below) is separately formed to the respective lid provided therewith. The unitary formation of all of the panels making up the storage unit is, however, preferred.

[0014] Each of the pivot axes is located adjacent a respective one of the side walls, i.e. adjacent a side edge of the front/back walls. The lids open outwardly in a longitudinal direction (i.e. in a direction perpendicular to the pivot axes). In the closed position, the inner edges of the lids 9, which are parallel to one another, lie closely adjacent to one another at a mid-point of the storage unit in the longitudinal direction. In some arrangements the inner edges 9 may contact one another, although it is preferred that a small clearance between the edges is provided to avoid the lids fouling. In the closed position, it is preferable that undersides of the lids rest against the upper edges 10, 11 of the front and back walls. Suitable cooperating locking means are provided on the lids adjacent the inner edges 9, such locking means may be arranged to receive a padlock to secure the storage unit.

[0015] The lids preferably overlap in a closed position. Such overlap is provided for by the provision of a gutter 12 on one of the lids 7, which projects (in the longitudinal direction) under the edge 9 of the other lid 8 in the closed position. The gutter 12 entirely overlaps the clearance between the edges 9 of the lids. It spans the opening of the storage unit in the transverse direction (i.e. in the direction of the pivot axes), as do both of the lids. The gutter comprises an open channel. The gutter preferably slopes downwardly from a mid-point, in the transverse direction, between the front and back walls towards the front and back walls. Such a slope may be straight or curved. The gutter alone may be sloped or the lid and the gutter may be sloped. The gutter is provided to prevent the ingress of rainwater or other moisture into the storage unit when closed. The sloping of the gutter promotes the flow of liquid away from the storage unit.

[0016] The lids 7, 8 pivotally engage with the front and back walls 5, 6. The lids 7, 8 are connected with the front and back walls only, they are not connected to the side walls 3, 4. In the present arrangement, the front and back walls are provided with sockets 13, which are arranged to receive lugs 14 provided on the lids 7, 8. The sockets, each comprise a slot that has a substantially circular end. A ramp 15 is provided over which the lug 14 rides during attachment of the lid, the ramp 15 preventing removal of the lug from the slot and constraining movement of the lid to pivotal movement about the axis of the lug. It should be noted that in alternative arrangements, the front and back walls may be provided with the lugs whilst the lids are provided with the sockets. The form of the engagement means between the lids and the sidewalls is not to be particularly limited. Numerous suitable arrangements will be readily appreciated by those skilled in the art.

[0017] The lids each preferably comprise a pair of protruding portions 16. The protruding portions may comprise extensions of side walls of the lids. The protruding portions of each lid project substantially normal to a plane of the lid. In this regard, it should be appreciated that whilst the lids of the present arrangement include a small curvature, the plane of the lid is the plane in which the lid substantially lies. The protruding portions overlap the front and back walls. The protruding portions are positioned outside the front and back walls in the direction of the pivot axes. The lugs are provided on the protruding portions and project substantially perpendicularly therefrom, inwards in the axial direction.

[0018] The upper edges 10, 11 of the front and back walls are provided with protrusions 17 that are received by the lids in a closed position. The lids comprise inner surfaces 18 that are provided outside the protrusions in the direction of the pivot axes, which surfaces engage with the protrusions in the closed position. The inner surfaces may be formed by side walls of the lids. The protrusions are tapered, as shown. The arrangement is such that the engagement of the protrusions with the opposed surfaces of the lid acts to urge the upper edges of the front and back walls towards one another. A wedging action is allowed for by the tapered form of the protrusions. The engagement of the protrusions with the lids prevents bulging of the front and back walls.

[0019] The lids are preferably mounted so that their centre of mass maintains them is an open position. This is best illustrated in Figure 1. By such arrangement, no additional mechanism is required to maintain the lids in an open position. The outer transversely extending edges 19 of the lids abut the outer faces of the side walls in the open position, as shown in Figure 1. Alternative arrangements will, of course, be possible, as will be appreciated by those skilled in the art.

[0020] The front and back walls are preferably provided with integrally formed vertically extending ribs 20 on their inner faces, which engage with corresponding indentations 22 in the front and back side edges of the base panels, as best seen in Figure 4. The ribs may be provided with vertical wedges 21 that engage corresponding openings in the base panels, as again shown in Figure 4. Protrusions 23 may be provided on the inner faces of the front and back walls, which limit upward vertical movement of the base panels. The protrusions preferably comprise wedges, as shown, which, in combination with the wedges/openings lock the floor panels and the front and back side walls together. It should be appreciated, however, that various other means of engaging the base panels and front and back side walls may be provided.

Claims

1. A storage unit comprising:

a generally rectangular base, which has two short sides and two long sides,
four upstanding peripheral walls, which com-

prise a pair of opposed short side walls and opposed front and back walls, the side walls extending between the front and back walls, and a pair of lids, which pivot about axes that extend substantially parallel to the short side walls,

2. A storage unit as claimed in Claim 1, wherein the side walls and the front and back walls snap fit together and the lids and the front and back side walls snap fit together.

3. A storage unit as claimed in Claim 1 or 2, wherein the base snap fits to the four upstanding peripheral walls

4. A storage unit as claimed in any preceding claim, wherein each of the pivot axes is located adjacent a respective one of the side walls.

5. A storage unit as claimed in any preceding claim, wherein the lids overlap in a closed position.

6. A storage unit as claimed in any preceding claim, wherein one of the lids comprises a gutter that projects under an edge of the other lid in the closed position.

7. A storage unit as claimed in Claim 6, wherein the gutter spans an opening of the storage unit.

8. A storage unit as claimed in any preceding claim, wherein the lids or the front and back walls are provided with lugs, which are received by corresponding sockets provided in the other of the front and back walls or the lids.

9. A storage unit as claimed in any preceding claim, wherein the lids each comprise a pair of protruding portions, which overlap the front and back walls, the protruding portions being positioned outside the front and back walls in the direction of the pivot axes.

10. A storage unit as claimed in Claim 9, when dependent on Claim 8, wherein the lugs or sockets are provided on the protruding portions.

11. A storage unit as claimed in any preceding claim, wherein the upper edges of the front and back walls are provided with protrusions that are received by the lids in a closed position.

12. A storage unit as claimed in Claim 11, wherein the lids comprise inner surfaces that are provided outside the protrusions in the direction of the pivot axes, which engage with the protrusions in the closed position.

13. A storage unit as claimed in Claim 12, wherein the protrusions are tapered and the inner surfaces engage tapered surfaces of the protrusions.

14. A storage unit as claimed in any preceding claim, wherein the front and back walls are formed by identical moulded panels and/or wherein the side walls are formed by identical moulded panels and/or wherein the base is formed by a pair of identical moulded panels.

15. A storage unit as claimed in any preceding claim, wherein the lids are mounted so that their centre of mass maintains them in an open position.

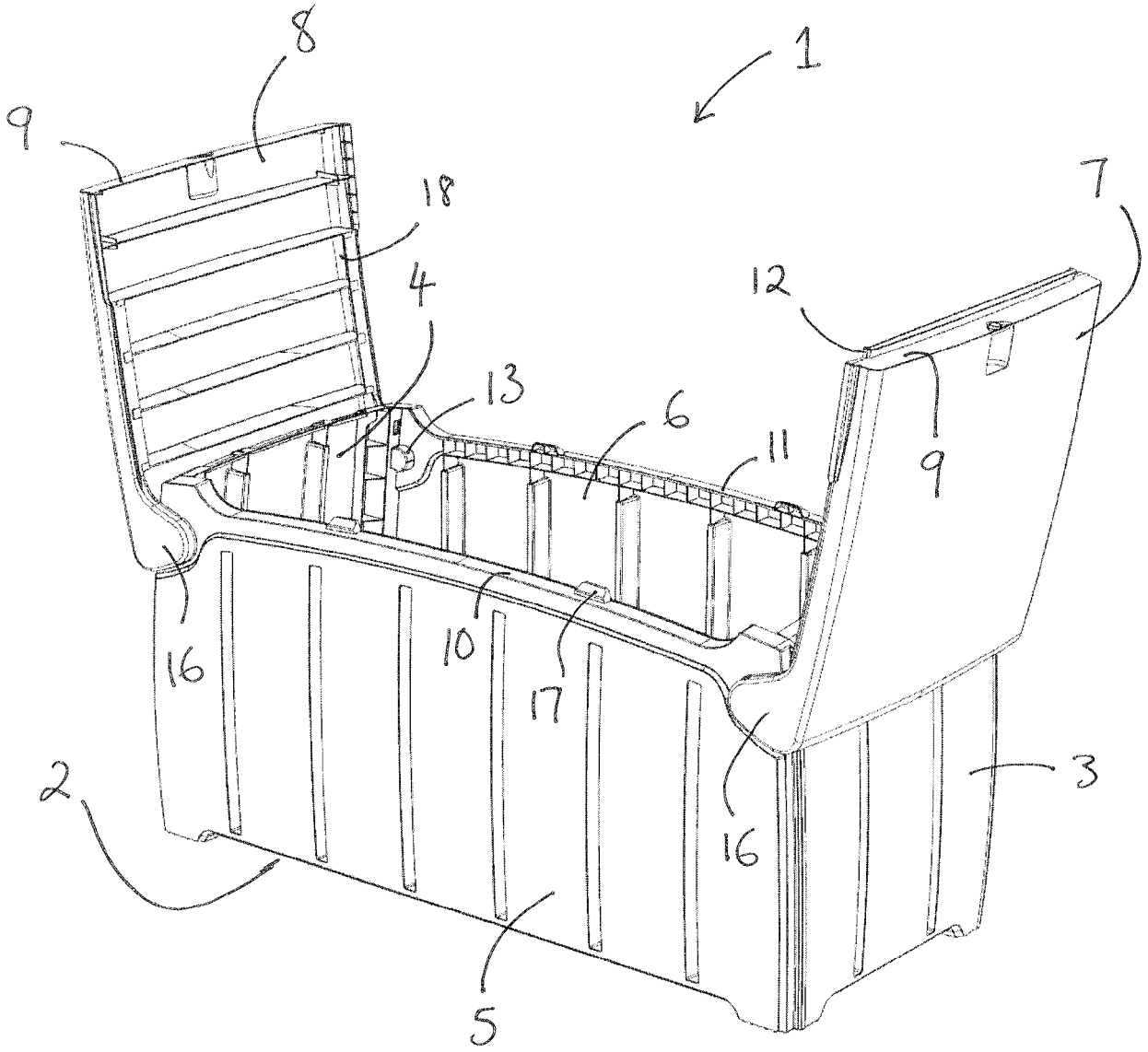

Fig. 1

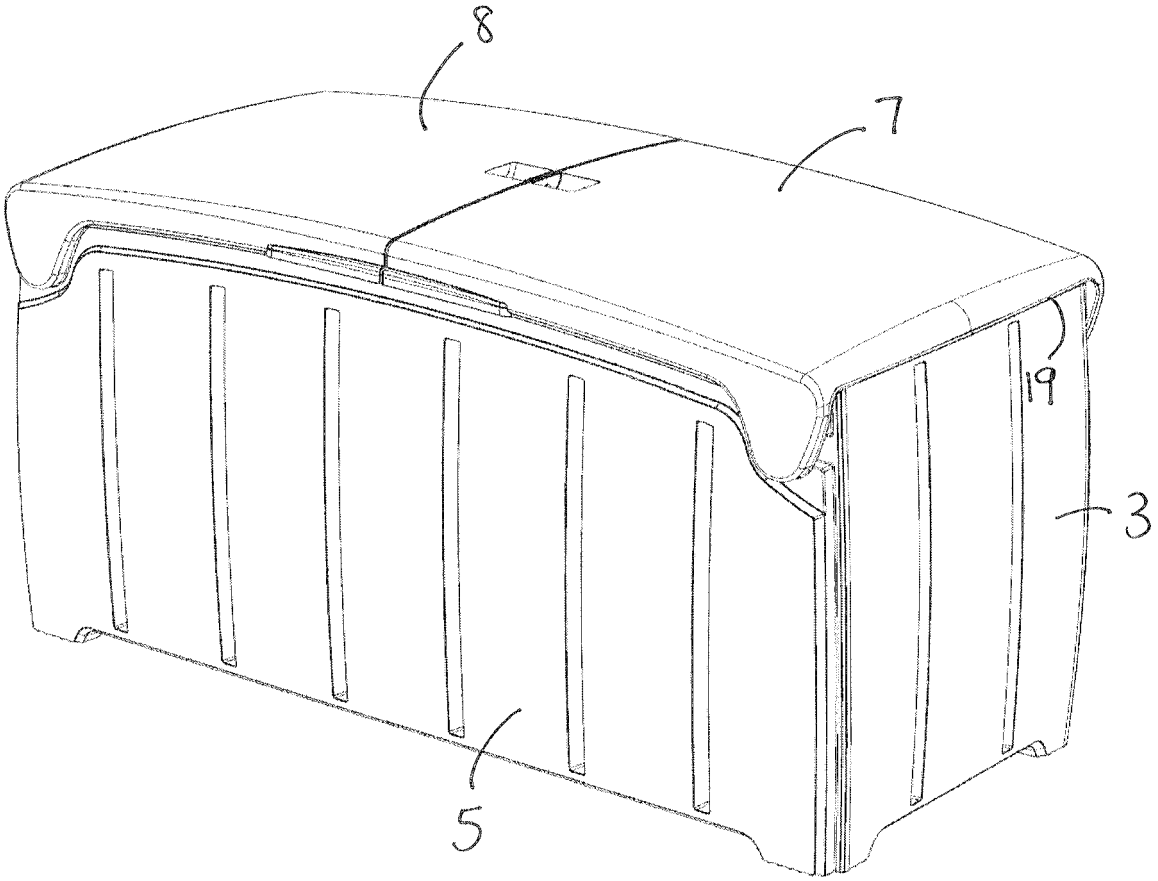

Fig. 2

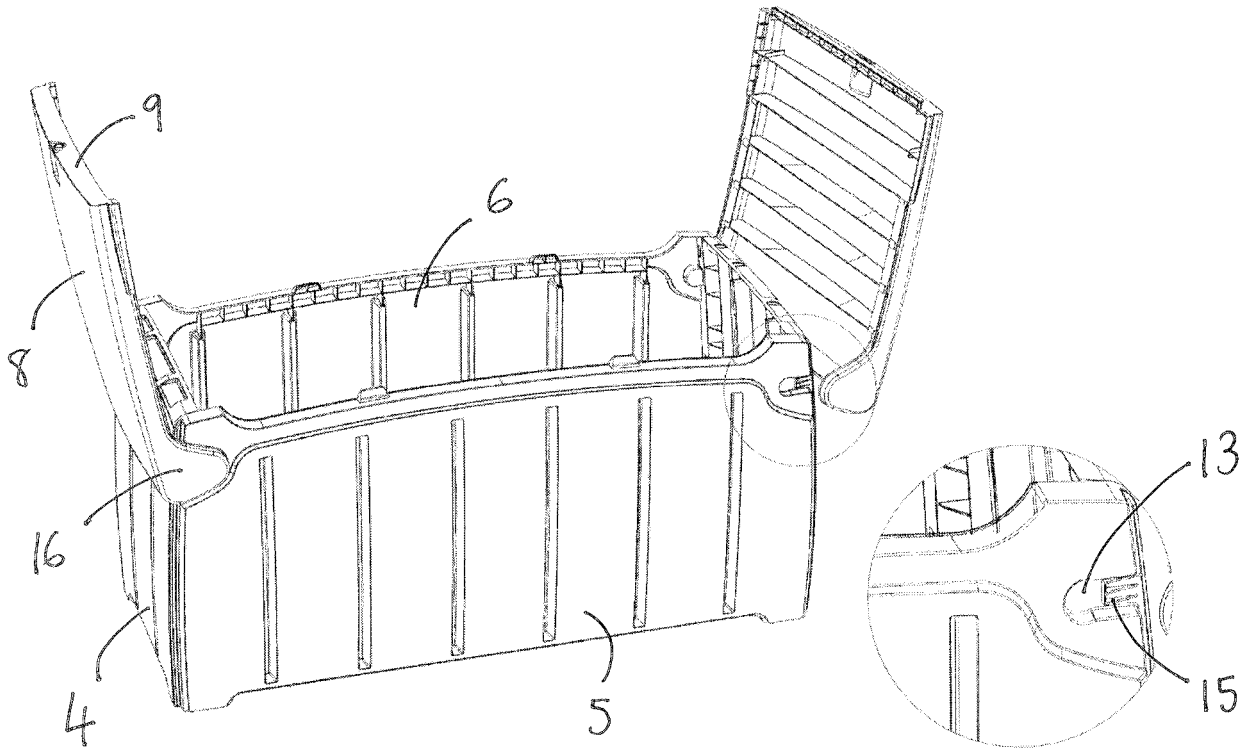

Fig. 3

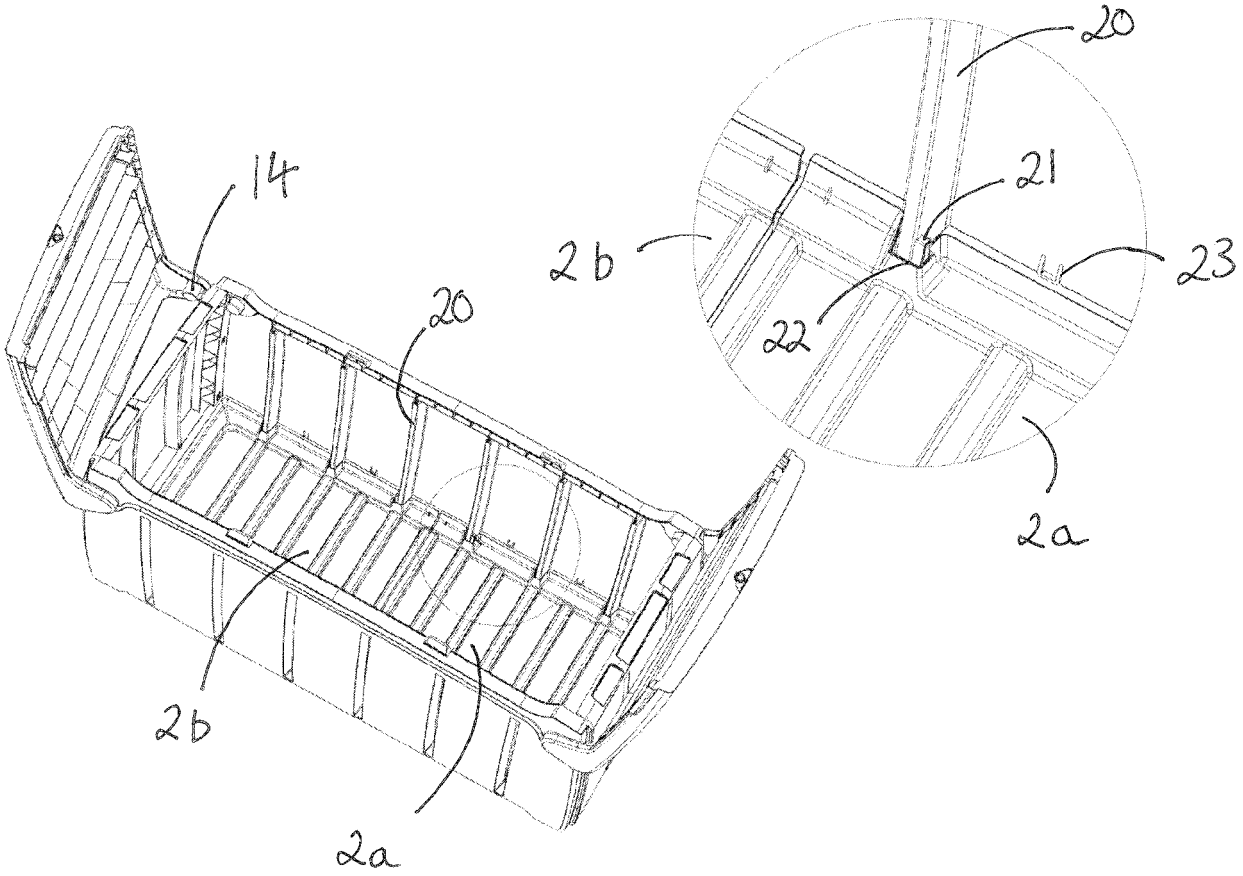

Fig. 4