

- [54] **DISMOUNTABLE AND SUPERPOSABLE BASKETS**
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- [51] Int. Cl. **B65d 7/20**
- [58] Field of Search **220/6, 7, 19**

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[57] **ABSTRACT**

Containers are provided which are adapted for being stacked upon one another. Each such container includes a base having feet depending therefrom. A triptych is hingably connected to the base and includes three walls forming a central panel to which are hinged two lateral panels. The triptych is pivoted to the base and capable of being folded into the same. The triptych is also displaceable to upright position in which the panels constitute extensions of lateral edges of the base. A further wall is provided which is hinged to the base and is collapsible into the latter. This wall includes at least two hingably connected panels and the arrangement is such that the panels are displaceable relative to the base and to above-mentioned lateral panels in order to be engaged by brackets on the lateral panels. This displacement is afforded by the use of elongated loops which couple the panels of the wall to each other and to the base respectively.

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4 Claims, 9 Drawing Figures

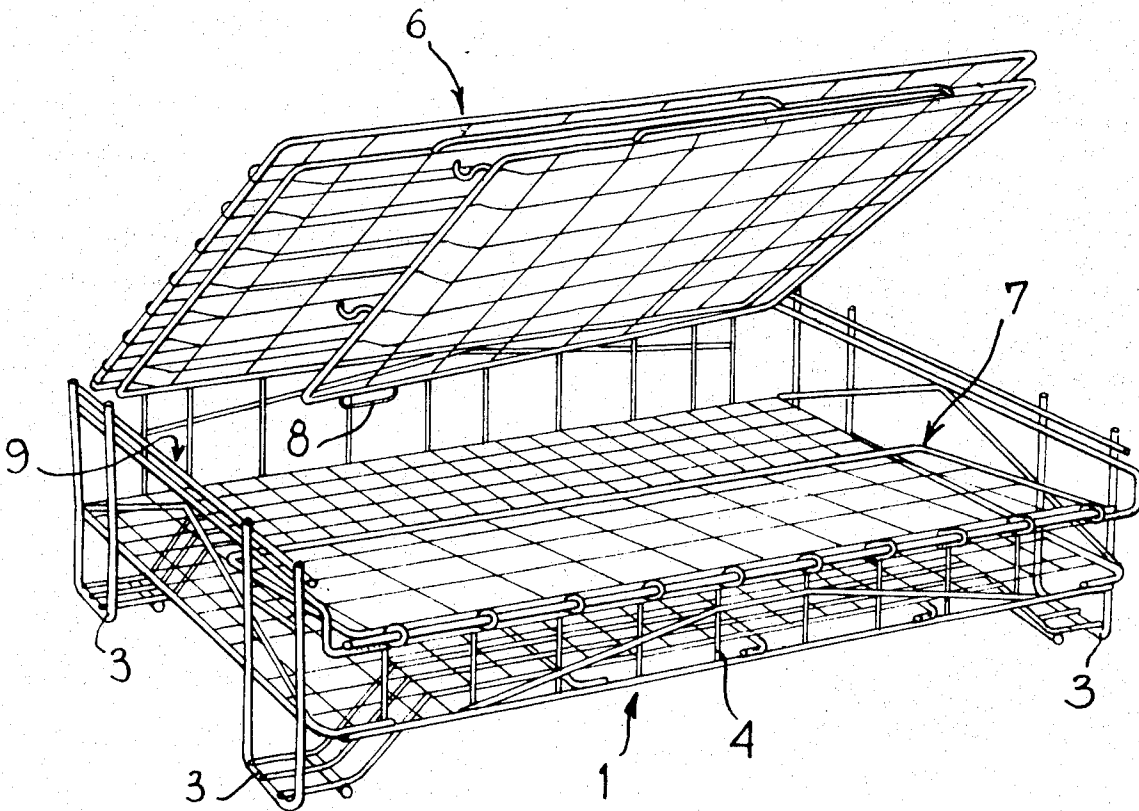


Fig. 1

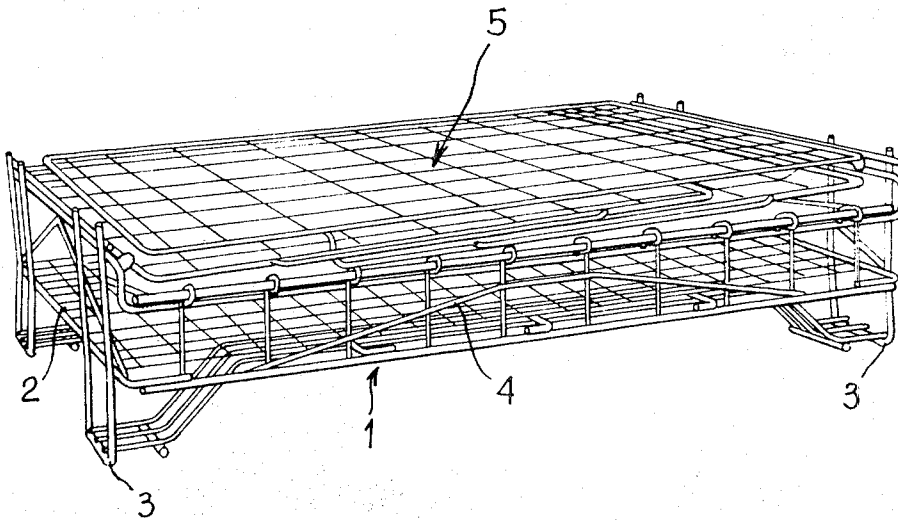


Fig. 2

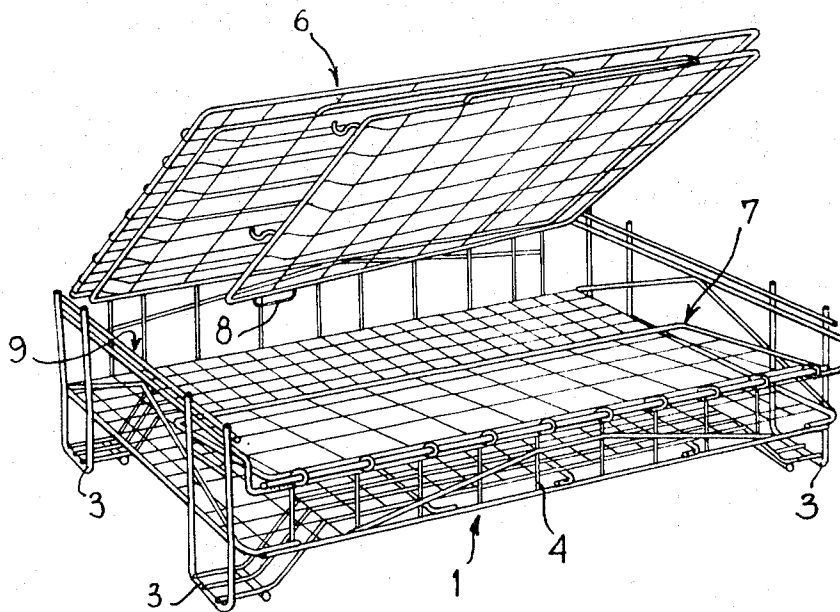


Fig. 3

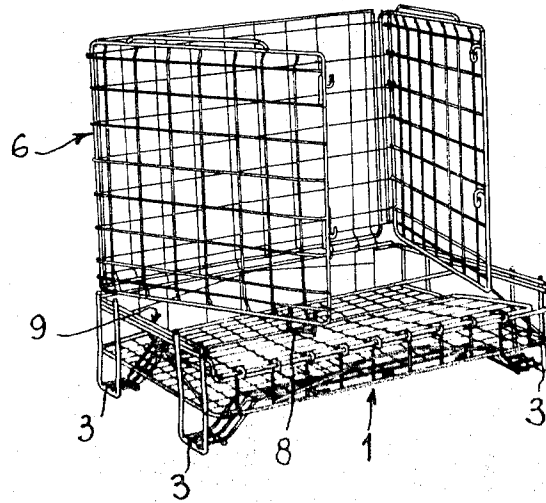


Fig. 4

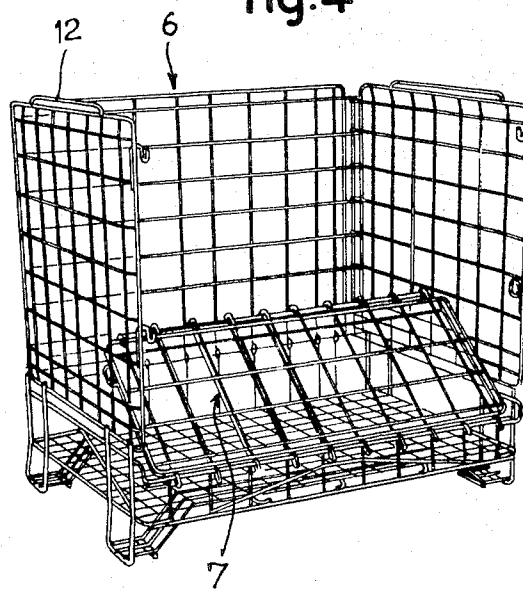


Fig. 5

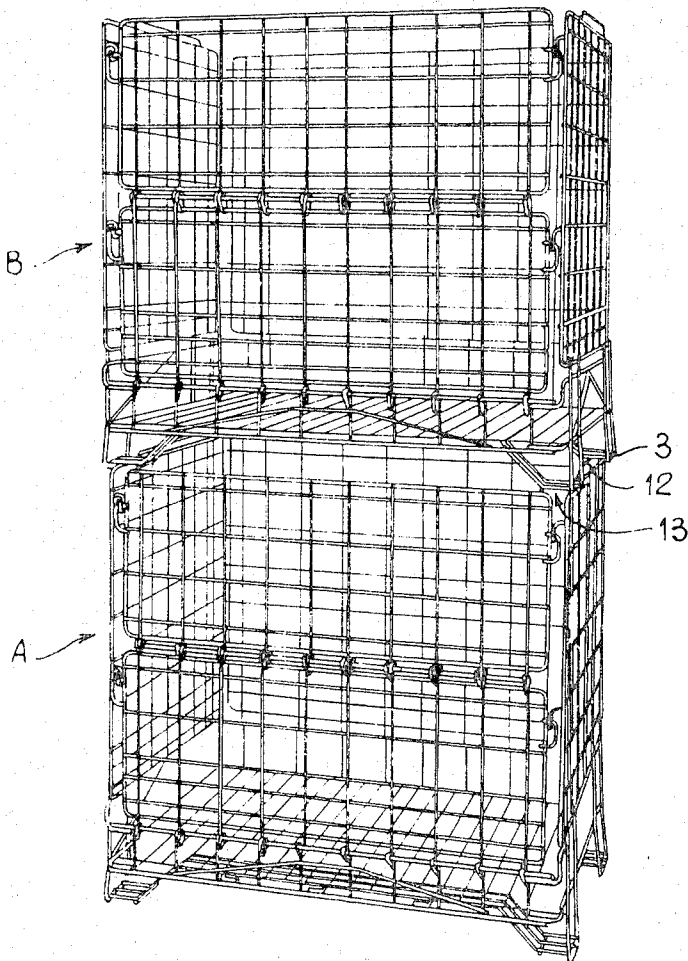
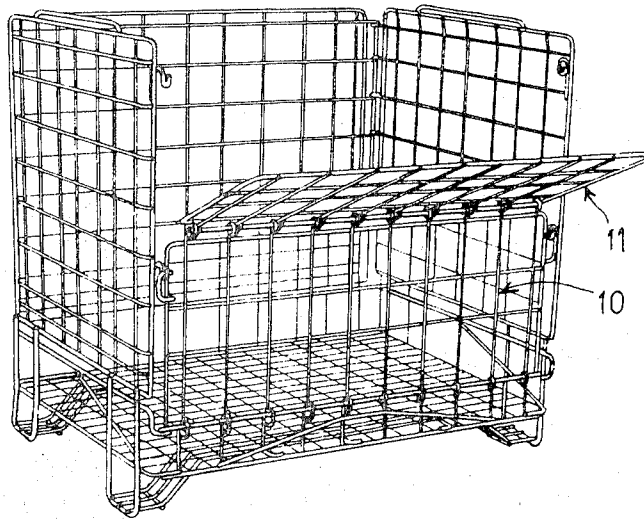


Fig. 6

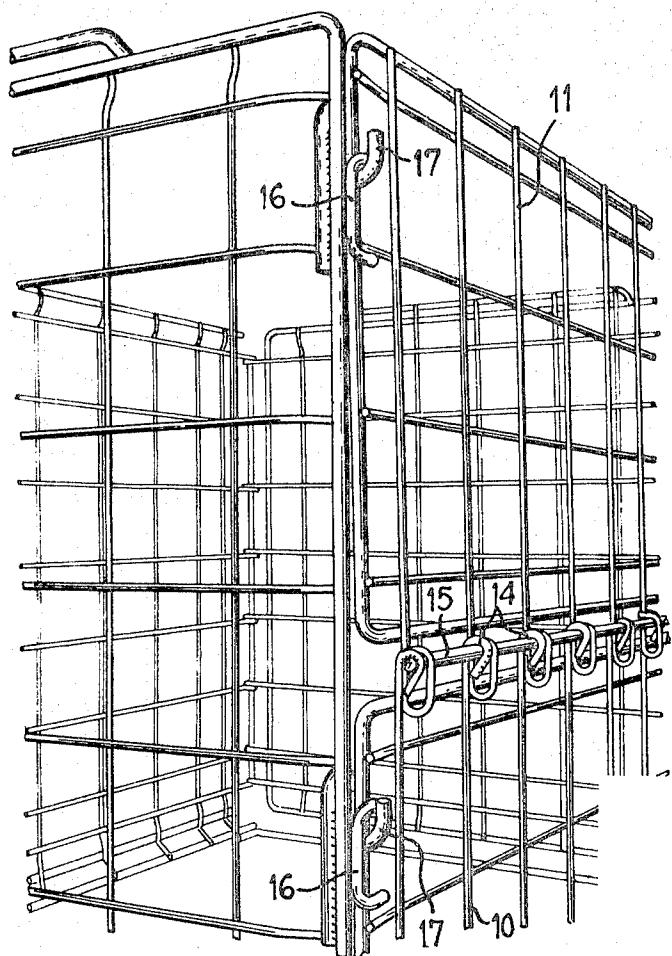
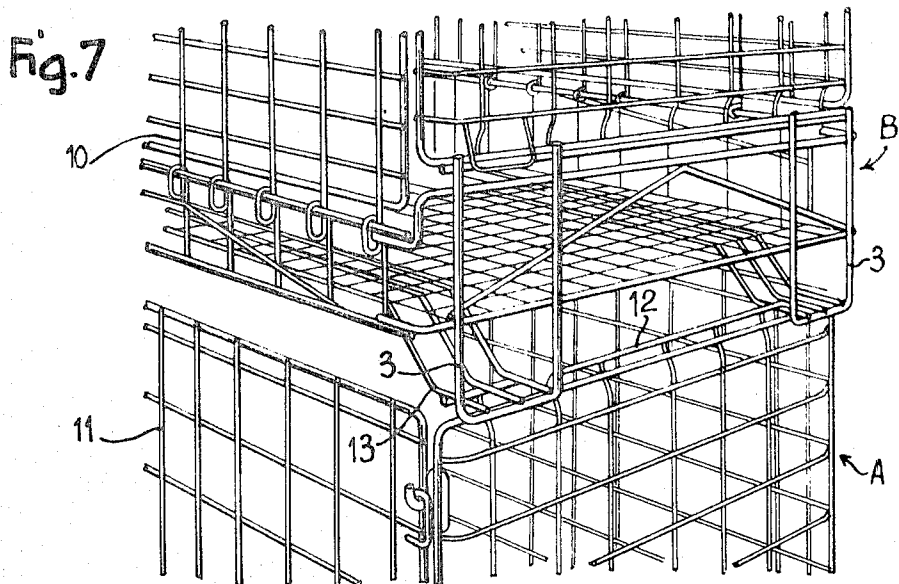
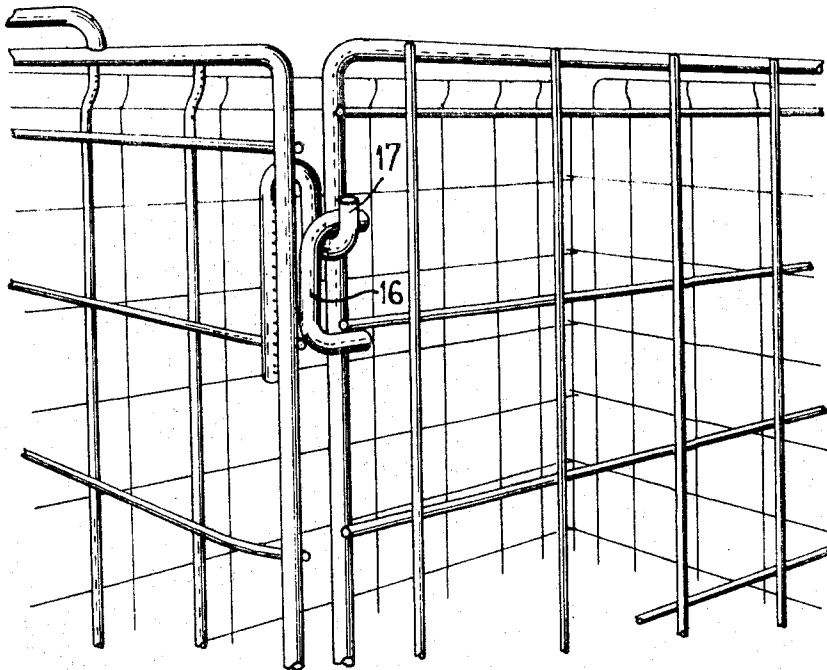


Fig. 8

Fig. 9



DISMOUNTABLE AND SUPERPOSABLE BASKETS

The present invention relates to a new type of container, which is foldable and dismountable, and which can be used in several fields of industrial activity such as, for example, for handling fruit and vegetables.

Such containers must meet a large number of requirements, which often are not easily compatible. For example, they must at the same time be strongly built and not lose their shape when unfolded, while being readily foldable into a very small volume. They must consist of parts which are joined by means of hooking and locking systems capable of resisting rough handling conditions, and, at the same time, these parts and systems must be as simple as possible. They must also be such that they can be stacked up, folded or unfolded, and be used at different degrees of filling. Finally, they must, to a certain extent, be aesthetic. None of the known types of baskets, made either of wood, metal or plastics, fulfills all of these conditions.

The invention has therefore as an object the provisions of improved containers enabling the above-mentioned advantages to be combined.

According to one embodiment of the invention a number of structural features which can be used, in combination or singly, are as follows:

1. A base provided with lateral edges and slightly widened feet,
2. Three lateral walls forming a triptych, foldable about its two vertical hinges, and about the lower horizontal edge of the central panel, this triptych, when folded, being housed exactly within the aforesaid base.
3. A fourth lateral wall, comprising at least two panels pivoting about a horizontal axis, each of these two panels, when slightly raised, being hookable to two brackets of the lateral panels of said triptych, and remaining locked when they fall down in position.
4. The upper lateral edges including shoulders for centering the feet when the baskets are stacked up.

Furthermore, in order to provide access to the products, movable parts adapted to said container are provided, such as doors or covers. Up to the present time, said movable parts have only consisted of the transposition of known doors or covers and were not easy to use. Some of these parts had to be completely removed to permit access to the container. Others required a very large space for being removed.

Furthermore, the invention relates to a basket surround with incorporated movable doors. Each door consists of a closing panel and a guiding panel, both having the height of the surround. The length of the closing panel is half the length of the opening of the surround, and the length of the guiding panel is equal to the difference between the width of the basket and the length of the first panel, so that each door thus formed has exactly the size of the lateral wall of the surround. Therefore, in the open position, said door merges with said wall, whereas in the closed position, only the guiding panel remains in the slides when the closing panel is folded back about a vertical hinge, in front of half of the opening of the basket surround. Once the two doors are closed, they can be immobilized by means of a suitable latch or bolt.

In practice, said basket surround, consisting of three complete panels, one open panel, and two doors as

above mentioned, folds back on itself and can be unfolded when used, its shape and its rigidity being insured by fitting its base on the periphery of the basket.

According to the invention, in order to obtain a still tighter fitting, a rod is fixed to the two opposite faces of the surround, in order to bring them closer to the level of the basket, forcing them to exert a strong pressure on the corresponding sides thereof.

Furthermore, it is usual in shops having a large turnover to pile up cubic containers made of metallic wire, opening at the front, and from which the customers take the products they want from the front part. It is obvious that this stacking (which is equivalent to stacking on the spot) does not comply with a logical sequence of handling operation, since each container is sealed and independent from the others, and consequently the customers will first empty the lower container, thereby making it necessary, in order to advance the following basket, to lift the full containers when it is desired to free the empty containers, then to re-stack the full containers, and so on.

Finally, the invention makes it possible to eliminate this drawback by eliminating all handling of the containers, without fundamentally modifying their construction. To this end, it consists of insuring, when filled containers are superposed, communication of each container with that on which it is placed, so as to provide continuous feeding of the lower container by the upper containers.

More particularly, considering a determined type of stackable container, the invention provides in the bottom part of this container a tilting trap, which preferably opens downwardly and which can be released from the outside once the full containers have been piled up.

As will be seen when the full containers are piled up, there will be no sudden and abrupt release of their contents whenever their trap is opened, which could deteriorate them. On the contrary, since the customers take the products from the front of the lower container, it is obvious that as soon as these removals have caused the contents of the lower container to come to a lower level, it is the contents of all the containers situated thereabove which will correspondingly come to a lower level, each article of each container progressively replacing those missing in the container situated therebelow.

It is possible to apply this solution not only to the containers of fairly robust articles, such as cans, but also to all other non-perishable articles, which can therefore be accumulated in several superposed containers.

This solution also makes it possible to insure supply of a certain product or article to a department, so as to obtain a relatively large stock, and to renew said stock without many handling operations, as the upper container will always be emptied first, and it may be replaced by a full one without having touch to the lower containers, which are still partly full, thereby insuring logical rotation of the stocks.

The invention will next be described in greater detail with reference to the accompanying drawings, in which:

FIGS. 1 to 5 show a "basket" according to the invention, in its various folding and unfolding positions;

FIGS. 6 and 7 illustrate, the superposition of two baskets; and

FIGS. 8 and 9 illustrate the closing and locking of a lateral wall.

Referring first to FIGS. 1 to 5, each basket includes a bottom, or base 1, consisting of a horizontal bottom portion 2 supported by four feet 3 and delimited by four edges 4. As shown in FIG. 1, the container according to the invention, when folded, is entirely housed in this bottom portion i.e., nothing extends above edges 4.

The portion, which is housed in this bottom portion 1, is designated by reference 5 in FIG. 1, and is composed of a triptych 6, (FIGS. 2-3) and a foldable panel 7 (FIGS. 3 and 4).

This triptych pivots about the horizontal hinge of the second panel, whereas the two lateral panels, folded inwardly (FIG. 2) unfold outwardly (FIG. 3) so as to rest by means of part 8 on the rims 9 of the base 1.

Panel 7 can then be raised, as seen in FIGS. 4 and 5, said panel being composed of two portions 10 and 11, pivoting about their lower horizontal edges and being respectively attached to hooks on the lateral panels of the triptych.

When unfolded, the baskets are perfectly rigid and can be stacked up. FIGS. 6 and 7 show how this stacking can be performed, with a saving and with space, in complete safety.

The upper edge of each lateral panel of the triptych 6 has a median shoulder 12, leaving a space on each side for one of the feet 3 of the upper container. Furthermore, the feet 3 are substantially offset towards the outside, so that instead of resting directly on said rim, it is their horizontal zone 13 which is hooked thereon. Proper positioning of the containers is therefore insured.

Finally, FIGS. 8 and 9 show the fastening system of the front panels. Each panel is fixed at its lower hinge by means of oblong eyelets 14, by means of a rod 15. Pivoting about this rod and lifting of the panel bring lugs 16 above hooks 16 protruding on the front part of the lateral panels. When said lugs move downwards, the front panels 7 are fixed and locked at the same time as the container assembly.

It is then possible to fasten horizontal partitions at different heights inside the container, notably at the level of hinge 15, thus permitting access to the upper half of the container, by lowering the upper portion of panel 7. These horizontal partitions may, during trans-

portation, be stocked in the bottom 2 with the walls of the container.

The whole assembly may of course be dismantled, since the articulation rods may be independent from the panels pivoting there around.

What is claimed is:

1. A container comprising a base provided with lateral edges and including widened feet, three lateral walls for alignment with corresponding edges of said base and forming a triptych, said walls including and being foldable about two vertical hinges, one of said walls being a central panel and having a lower horizontal edge coupled to said base, the other of said walls being lateral panels, said triptych being foldable about the lower horizontal edge of the central panel, said triptych, with said walls folded together, being housed within said base, a fourth lateral wall including at least two panels pivotally connected to each other about a horizontal axis, said fourth lateral wall being foldable into said base to be housed within the latter along with said triptych such that neither the triptych nor said fourth wall extends above the lateral edges, one of said two panels being pivotally connected to said base and both of said two panels being displaceable relative to the lateral panels of the triptych when the latter are aligned with the corresponding edges of the base, and brackets on the lateral panels of said triptych for engaging said two panels when the latter are displaced, said lateral panels including shoulders for centering the feet when the container is stacked on another like container, said brackets being upwardly open hooks.

2. A container as claimed in claim 1 wherein each of said feet include connected vertical and horizontal parts, said horizontal part being adapted to rest on a lateral edge of a lateral panel of another like container with the vertical part overlapping the latter said edge.

3. A container as claimed in claim 1 wherein said fourth wall includes elongated loops coupling the panels thereof together and coupling one of the latter said panels to the base whereby the latter said panels are displaceable.

4. A container as claimed in claim 1 wherein said lateral panels have upper edges and include extensions thereon to engage the feet of another like container.

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