

PATENT SPECIFICATION

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 (72) Inventors PETER LEONARD MEAD and MICHAEL JAMES WARWICK



(54) IMPROVEMENTS IN OR RELATING TO CONTAINERS

(71) We, GPG HOLDINGS LIMITED, of Cranford, Blackdown, Leamington Spa, Warwickshire, a British Company, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to containers and is particularly concerned with an open topped container of the type (hereinafter referred to as the type specified) comprising a base, an end wall extending between opposed side walls and a substantially U-shaped support bar having a back portion which extends between the opposed side walls and leg portions which are pivotally mounted about an axis on the opposed side walls so that the support bar can be pivoted about the axis from a first position in which the back portion extends across the open top for supporting the base of a similar container which may be column stacked thereon to a second position in which the back portion is located clear of the open top for permitting a similar container to be nested therein.

According to the present invention there is provided a container of the type specified in which the leg portions of the support bar are pivotally mounted within channels or rebates provided in the upper edges of the opposed side walls, and the back portion of said support bar is substantially co-extensive with the upper edge of the end wall, the support bar being arranged so that when pivoted to its second position, the back portion abuts and lies on the upper edge of the end wall for substantially the whole length of said upper edge, and so that in the first position of the support bar, the back portion thereof is at a greater height from the base than is the axis about which the support bar is pivotally mounted.

An embodiment of an open topped container constructed in accordance with the present invention will now be described, by way of example only, with reference to

the accompanying illustrative drawings in which:—

Figure 1 is a perspective view of the container which includes two support bars, such bars being shown pivoted to their aforementioned first position, and

Figure 2 is a perspective view of part of the container shown in Figure 1 and illustrates the pivotal mounting of one of the support bars such bar being shown pivoted to its aforementioned second position.

The container, except for undermentioned support bars, is conveniently injection moulded in plastics and comprises a rectangular base 1, a pair of opposed side walls 2 and 3 and a pair of opposed end walls 4 and 5. The walls 2 to 5 extend upwardly from the base 1 and slightly diverge outwardly to form a rectangular open top within which can be located the base and lower portions of the walls of a similar overlying container (not shown) to provide nest stacking in known manner.

Extending between the opposed side walls 2 and 3 are two metal support bars 6 and 6a which are respectively located adjacent to the end walls 4 and 5. Both support bars are pivotally mounted and operatively associated with the walls of the container in a similar manner. For convenience therefore, the arrangement of bar 6 only will be described and the references in such description as applying to the support bar 6a will bear the suffix "a". The support bar 6 is of substantially U-shape and has a straight back portion 7 and leg portions 8. The back portion 7 is co-extensive with the upper edge of the adjacent end wall 4 and the free ends of the leg portions 8 are pivotally mounted to the respective side walls 2 and 3 so that the back portion 7 is parallel with the upper edge of the end wall 4. Provided in the upper edges of the side walls 2 and 3 for at least their part length adjacent to the end wall 4 are channels 9 and 10 which respectively receive the free ends of the leg

portions 8 as shown in Figure 2. These free ends of the leg portions 8 are provided with small integral studs 8' which extend outwardly of the U-shape and engage within complementary holes in the outer portions of the side walls 2 and 3 which define the channels 9 and 10. If required the studs 8' may extend inwardly of the U-shape to engage in holes in the inner portions of the side walls which define the channels. The engagement of the studs 8' provides the pivotal mounting for the support bar 6. By such pivotal mounting the leg portions 8 are, during their swinging movement, maintained within substantially vertical planes extending vertically upwardly of their respective side walls 2 and 3. As shown in Figure 2, when the bar 6 is pivoted into its second position clear of the open top, the leg portions 8 and back portion 7 are so arranged that the back portion overlies and rests on the upper edge of the end wall 4 for substantially the whole length of such upper edge. Alternatively, when the support bar 6 is pivoted to its first position in which the back portion 7 extends across the open top, the outer ends of the back portion 7 are located in seatings 11 moulded in the inner portions of the side walls defining the channels 9 and 10.

As will be apparent from the drawings, the dimensions of the support bars are such that they do not increase the overall dimensions (at least in plan) of the container. Further, since the back portions of the bars when in their second position lie along and rest on the upper edges of the respective end walls with the leg portions located in their respective channels, the support bars are unobtrusive and will not adversely affect nesting of several containers one within the other.

If required rebates may be substituted for the channels 9 and 10, for example by omitting the inner portions of the side walls 2 and 3 which partly define the channels 9 and 10.

The upper edges of the end walls 4 and 5 may be rebated or channelled (not shown, but in a similar manner to the upper edges of the side walls) to receive the back portions of the respective support bars when in their second positions so that, in effect, substantially the whole lengths of the support bars can be received in such a channel or rebate. Rebates or channels when provided as aforementioned in the upper edges of the end wall 4 and 5 may be arranged so that the back portions of the support bars received thereby lie, when in their second positions, substantially flush with or below the uppermost surfaces of the said upper edges. Further, if the upper

edges of the end walls are channelled, the wall portions which partly define such channels may be provided with rebates to facilitate access to the back portions of the support rods when received in the channels.

Preferably the support bars are sufficiently spring loaded so that the studs 8' snap engage within the holes in the respective side walls.

As shown in Figure 1, in the first position of the support bar 6, the back portion 7 thereof is located at a greater height from the base 1 of the container than are the studs 8' which define the axis about which the support bar is pivotally mounted. In the embodiment shown, this feature allows the depth of the seating 11 to be minimal, or in an embodiment where the upper edge of each side wall is rebated, such rebate may be of minimal depth.

WHAT WE CLAIM IS:—

1. A container of the type specified in which the leg portions of the support bar are pivotally mounted within channels or rebates provided in the upper edges of the opposed side walls, and the back portion of the support bar is substantially co-extensive with the upper edge of the end wall, the support bar being arranged so that when pivoted to its second position, the back portion abuts and lies on the upper edge of the end wall for substantially the whole length of said upper edge, and so that in the first position of the support bar, the back portion thereof is at a greater height from the base than is the axis about which the support bar is pivotally mounted.

2. A container according to claim 1 in which the upper edge of the end wall is rebated or channelled in its longitudinal direction so that, with the support rod in its second position, substantially the whole length of the back portion of the support rod is located in said rebate or channel on the end wall.

3. A container according to claim 2 in which the upper edge of the end wall is rebated or channelled so that the back portion of the support rod lies, in its second position substantially flush with or below the uppermost surface of said upper edge.

4. A container according to either claim 2 or claim 3 in which the upper edge of the end wall is channelled and a wall portion partly defining said channel is provided with rebates to facilitate access to the back portion of the support rod when received in the channel.

5. A container as claimed in claim 1 and substantially as herein described with reference to the accompanying illustrative drawings.



portions 8 as shown in Figure 2. These free ends of the leg portions 8 are provided with small integral studs 8' which extend outwardly of the U-shape and engage within complementary holes in the outer portions of the side walls 2 and 3 which define the channels 9 and 10. If required the studs 8' may extend inwardly of the U-shape to engage in holes in the inner portions of the side walls which define the channels. The engagement of the studs 8' provides the pivotal mounting for the support bar 6. By such pivotal mounting the leg portions 8 are, during their swinging movement, maintained within substantially vertical planes extending vertically upwardly of their respective side walls 2 and 3. As shown in Figure 2, when the bar 6 is pivoted into its second position clear of the open top, the leg portions 8 and back portion 7 are so arranged that the back portion overlies and rests on the upper edge of the end wall 4 for substantially the whole length of such upper edge. Alternatively, when the support bar 6 is pivoted to its first position in which the back portion 7 extends across the open top, the outer ends of the back portion 7 are located in seatings 11 moulded in the inner portions of the side walls defining the channels 9 and 10.

As will be apparent from the drawings, the dimensions of the support bars are such that they do not increase the overall dimensions (at least in plan) of the container. Further, since the back portions of the bars when in their second position lie along and rest on the upper edges of the respective end walls with the leg portions located in their respective channels, the support bars are unobtrusive and will not adversely affect nesting of several containers one within the other.

If required rebates may be substituted for the channels 9 and 10, for example by omitting the inner portions of the side walls 2 and 3 which partly define the channels 9 and 10.

The upper edges of the end walls 4 and 5 may be rebated or channelled (not shown, but in a similar manner to the upper edges of the side walls) to receive the back portions of the respective support bars when in their second positions so that, in effect, substantially the whole lengths of the support bars can be received in such a channel or rebate. Rebates or channels when provided as aforementioned in the upper edges of the end wall 4 and 5 may be arranged so that the back portions of the support bars received thereby lie, when in their second positions, substantially flush with or below the uppermost surfaces of the said upper edges. Further, if the upper

edges of the end walls are channelled, the wall portions which partly define such channels may be provided with rebates, facilitate access to the back portions of the support rods when received in the channels.

Preferably the support bars are sufficiently spring loaded so that the studs 8' snap engage within the holes in the respective side walls.

As shown in Figure 1, in the first position of the support bar 6, the back portion 7 thereof is located at a greater height from the base 1 of the container than are the studs 8' which define the axis about which the support bar is pivotally mounted. In the embodiment shown, this feature allows the depth of the seating 11 to be minimal, or in an embodiment where the upper edge of each side wall is rebated, such rebate may be of minimal depth.

WHAT WE CLAIM IS:—

1. A container of the type specified in which the leg portions of the support bar are pivotally mounted within channels or rebates provided in the upper edges of the opposed side walls, and the back portion of the support bar is substantially co-extensive with the upper edge of the end wall, the support bar being arranged so that when pivoted to its second position, the back portion abuts and lies on the upper edge of the end wall for substantially the whole length of said upper edge, and so that in the first position of the support bar, the back portion thereof is at a greater height from the base than is the axis about which the support bar is pivotally mounted.

2. A container according to claim 1 in which the upper edge of the end wall is rebated or channelled in its longitudinal direction so that, with the support rod in its second position, substantially the whole length of the back portion of the support rod is located in said rebate or channel on the end wall.

3. A container according to claim 2 in which the upper edge of the end wall is rebated or channelled so that the back portion of the support rod lies, in its second position substantially flush with or below the uppermost surface of said upper edge.

4. A container according to either claim 2 or claim 3 in which the upper edge of the end wall is channelled and a wall portion partly defining said channel is provided with rebates to facilitate access to the back portion of the support rod when received in the channel.

5. A container as claimed in claim 1 and substantially as herein described with reference to the accompanying illustrative drawings.



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URQUHART-DYKES & LORD,
11th Floor, St. Martin's House,
140, Tottenham Court Road,
London, W1P 9LN.,

— and —

11th Floor, Tower House, Merrion Way,
Leeds LS2 8PB.
Chartered Patent Agents.

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