



US 20060279188A1

(19) **United States**

(12) **Patent Application Publication**

Alitalo et al.

(10) **Pub. No.: US 2006/0279188 A1**

(43) **Pub. Date: Dec. 14, 2006**

(54) **DOOR COMPARTMENT FOR A REFRIGERATOR**

(86) PCT No.: **PCT/EP04/09504**

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(30) **Foreign Application Priority Data**

Aug. 29, 2003 (DE)..... 10339929.1

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Publication Classification

(51) **Int. Cl.**
A47B 96/04 (2006.01)

F25D 11/02 (2006.01)

(52) **U.S. Cl.** **312/401; 62/441**

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(57) **ABSTRACT**

A door compartment for a refrigerator including at least one chamber designed to hold products to be cooled, that can be sealed on all sides. The ceiling of the chamber forms the base of an open tray.

(21) Appl. No.: **10/567,530**

(22) PCT Filed: **Aug. 25, 2004**

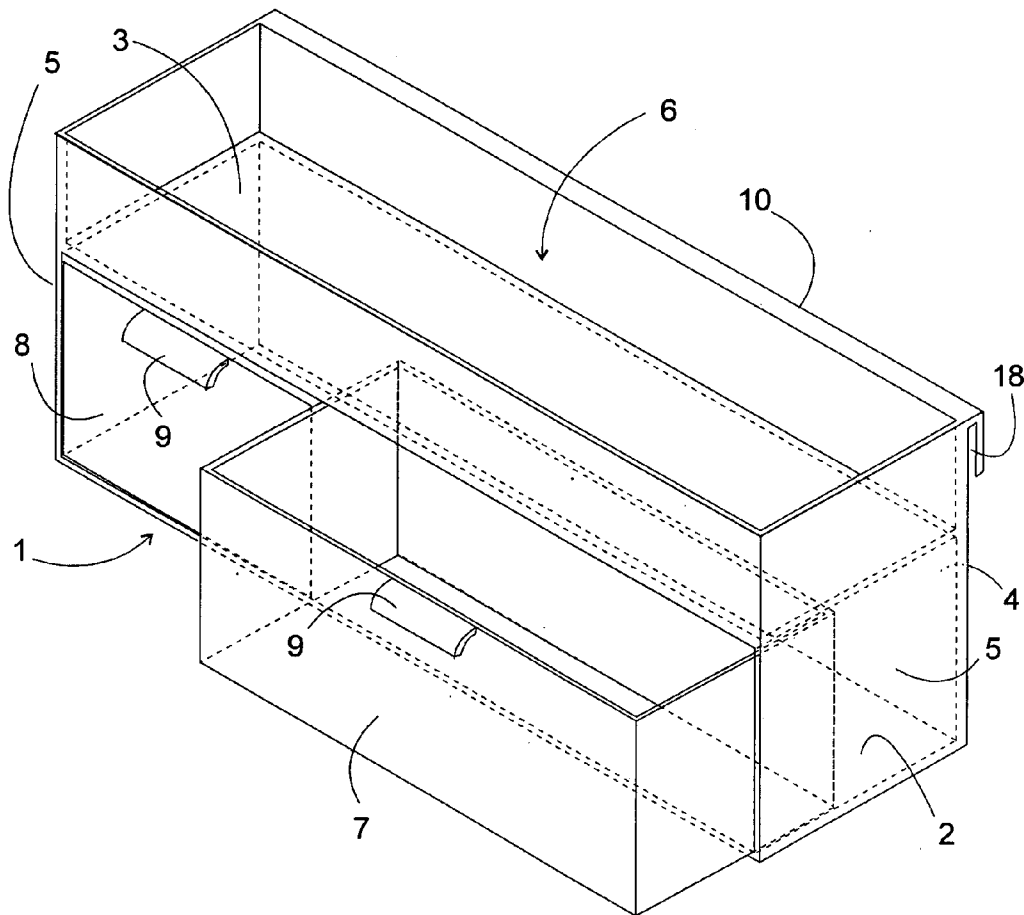


Fig. 1

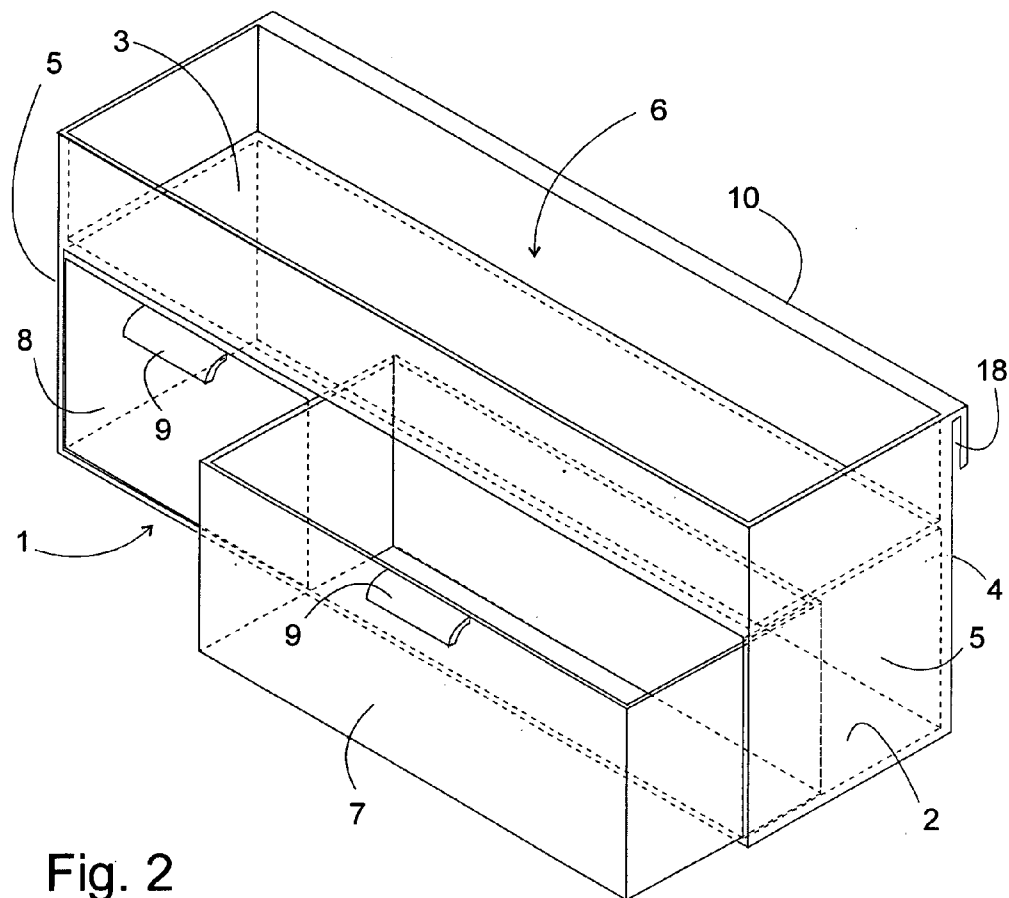


Fig. 2

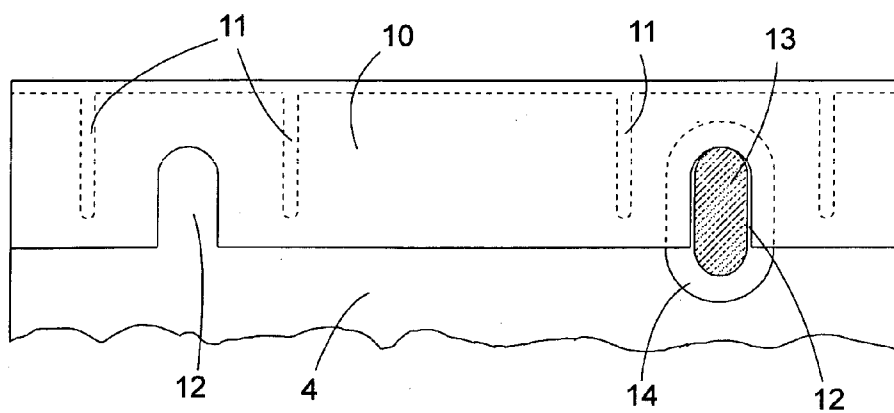
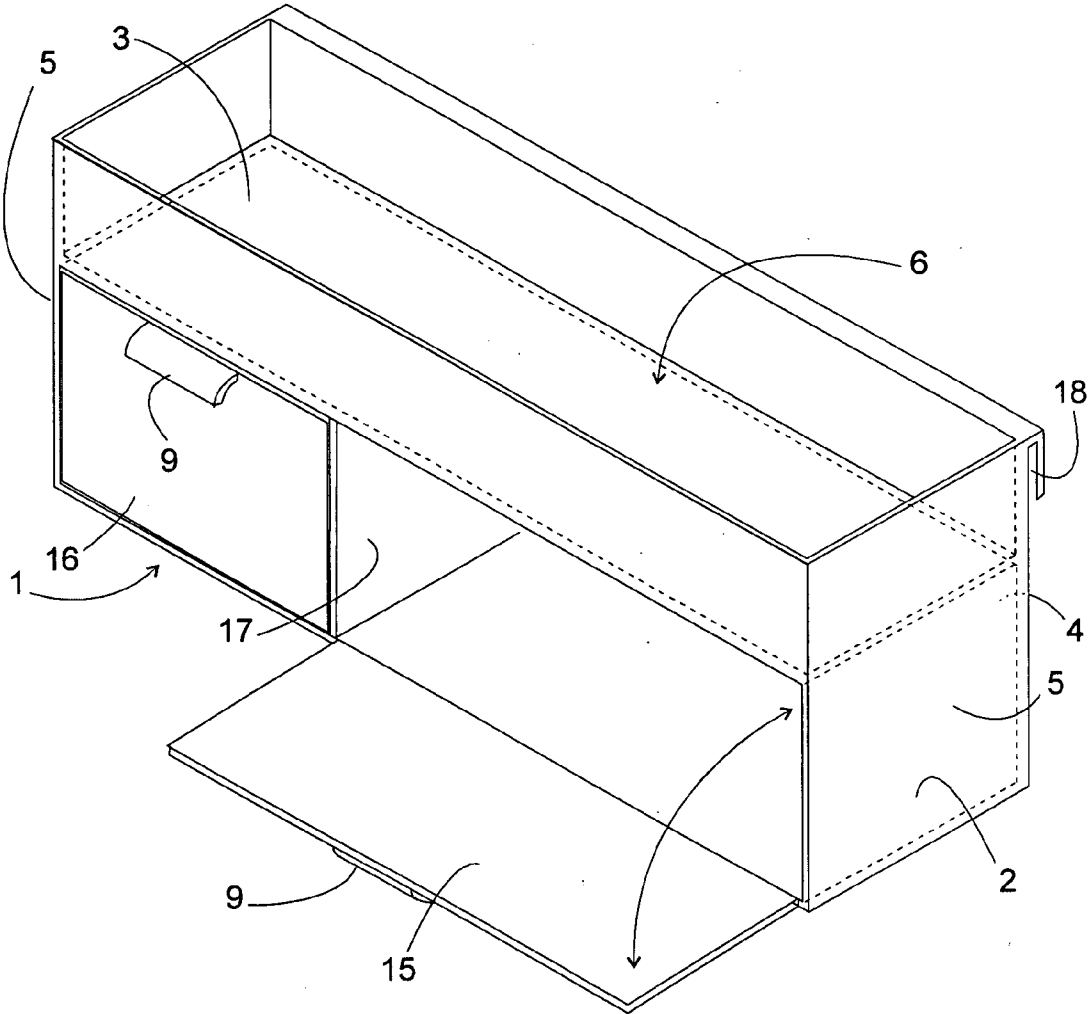


Fig. 3



DOOR COMPARTMENT FOR A REFRIGERATOR

[0001] The present invention relates to a door compartment for accommodating products to be cooled on the inside of the door of a refrigerator.

[0002] Conventionally, these door compartments usually take the form of a box open at the top which is mounted fixedly on the door or can be mounted at different heights on the inside of the door as selected by the user. Door compartments comprising a chamber which can be sealed on all sides, frequently designated as a butter compartment, are usually attached fixedly in the upper area of the inside of the door and have a flap pivotable about a horizontal axis which forms a large portion of the front side and possibly also a part of the ceiling of the chamber, and which can be pivoted to access the interior of the chamber. This type of butter compartment is restricted to being attached on the upper edge of the inside of the door since attachment in a different position would result in poor utilisation of space since nothing can be accommodated thereabove.

[0003] The object of the invention is to provide a door compartment for a refrigerator comprising at least one chamber that can be sealed on all sides for holding products to be cooled, which can be mounted at any height on an inside of a refrigerator door and makes it possible to utilise space efficiently at every height.

[0004] The object is solved by a ceiling of said chamber forming the base of an open tray which for its part can be used as a conventional open door compartment to accommodate further goods to be cooled.

[0005] The chamber can be formed by a compartment comprising a pivotally hinged front flap or preferably by a drawer and a compartment from which the drawer can be withdrawn. Such a drawer can also be used for example to remove goods to be cooled which are contained therein, from the refrigerator in order to place them on a dining table or to work with them in the kitchen.

[0006] The compartment for its part can be provided with a rear wall which stiffens the tray; however, since the door compartment is generally mounted in the immediate vicinity of the door inner wall, such a rear wall is not absolutely essential.

[0007] The compartment and the open tray forming its ceiling are preferably constructed in one piece, for example, by plastic injection moulding.

[0008] The compartment can especially be provided to accommodate two drawers, where these can be of different sizes. Thus, regardless of which side the door is hinged, a user can always place the more frequently used drawer on the more readily accessible side of the compartment.

[0009] Preferably, at least one of the drawers, optionally also the frame accommodating said drawers, consists of a transparent material which allows the user to identify the contents of the drawer without needing to withdraw it.

[0010] Further features and advantages of the invention are obtained from the following description of the exemplary embodiments with reference to the appended figures. In the figures:

[0011] FIG. 1 is a perspective view of a first embodiment of a door compartment according to the invention;

[0012] FIG. 2 is a partial view of the back of the door compartment facing the refrigerator door; and

[0013] FIG. 3 is a perspective view of a second embodiment of the door compartment.

[0014] The door compartment shown in FIG. 1 is constructed from a rectangular compartment 1 comprising base 2, ceiling 3, rear wall 4 and two side walls 5 and an open front and a tray 6 which is joined to the compartment 1 in one piece and is open at the top, whose rear and side walls each represent an extension of the rear and side walls 4, 5 of the compartment 1.

[0015] The compartment 1, which is open at the front in the figure, that is on the side facing away from the door of a refrigerator holding the door compartment, accommodates two drawers 7, 8 of different width, of which the larger 7 is shown in a partly withdrawn position. The drawers 7 like the compartment 1 are injection mouldings of plastic which is preferably transparent to allow the user to identify the contents of the drawers 7, 8 without opening these.

[0016] The drawers 7, 8 have four side walls and a base where a projecting gripping tab 9 is moulded on a front wall of each drawer, facilitating withdrawal of the drawers 7, 8 from the compartment 1.

[0017] The two drawers 7, 8 are held in a common continuous compartment so that a user can exchange their arrangement according to his needs.

[0018] Moulded at the upper edge of the rear wall 4 is a fixing tab 10 for mounting the door compartment on an inside of a refrigerator door. The fixing tab 10 consists for the most part of a plate separated from the rear wall 4 by a gap 18 and parallel thereto, which is connected in one piece to the rear wall 4 along its upper edge and possibly, as shown in FIG. 2, by fins 11 extending from the upper edge downwards through the gap 18. Cut-outs 12 of the plate, which are open at the bottom, are provided to each receive the shank 13 of a fixing projection starting from the inside of the door, which projection holds a retaining plate 14 at its free end facing away from the door, whose cross-section is larger than that of the shank 13 and which engages in the gap 18 and thus anchors the compartment 1 on the rear wall.

[0019] In the modified embodiment in FIG. 3, the drawers 7, 8 are replaced by pivotable flaps 15, 16. Each flap 15, 16 is used for sealing one of two compartments which are separated from one another by a dividing wall 17 and whose common ceiling 3 forms the base of the tray 6 located thereabove. The flaps 15, 16 are shown as hinged at their lower edge on their respective compartment but a hinged connection at the height of the upper edge of the flaps or at one of its lateral edges can also be considered.

1-7. (canceled)

8. A door compartment for a refrigerator, comprising:

at least one chamber which can be sealed on all sides for holding products to be cooled, a ceiling of said chamber forming the base of an open tray.

9. The door compartment according to claim 8, including said chamber formed by a drawer and a compartment from which said drawer can be withdrawn.

10. The door compartment according to claim 9, including said chamber and said tray are constructed in one piece.

11. The door compartment according to claim 9, including said compartment accommodates two drawers of different sizes.

12. The door compartment according to claim 8 including said chamber is accessible by means of a hinged front wall.

13. The door compartment according to claim 12, including said hinged front wall, when open, is held at substantially the same height as the base of said chamber and, together with said base, forms a continuous storage level.

14. The door compartment according to any one of claims 9, including at least said drawers and said front wall are formed of a substantially transparent plastic material.

15. A door compartment for a refrigerator, comprising:

at least one chamber which can be sealed on all sides for holding products to be cooled, a ceiling of said chamber forming the base of an open tray;

said chamber formed by a pair of separate drawers and a compartment from which said drawers can be withdrawn; and

said chamber and said tray are constructed in one piece from a substantially transparent plastic material.

16. The door compartment according to claim 15, including said pair of separate drawers are different sizes.

17. The door compartment according to claim 15 including said chamber is accessible by means of a hinged front wall.

18. The door compartment according to claim 17, including said hinged front wall, when open, is held at substantially the same height as the base of said chamber and, together with said base, forms a continuous storage level.

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