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(54) **A cooling device**

(57) The present invention discloses a cooling device (S) which comprises at least two sections having temperature values different from each other. Said cooling device (S) comprises an outer body (S1); at least one internal volume (2) which is formed by the outer body (S1) and in which the products to be cooled are placed; at least one drawer compartment (C) which is positioned in the internal volume (2), which comprises at least one outer body (C1) and at least one chamber (3) which is placed in at least one internal region (C2) formed by the outer body (C1) and which is able to move inside the region (C2) by sliding; at least one separator (5) which is positioned in the chamber (3) and which forms at least two compartments (4) having temperature values different from the internal volume (2) inside the chamber (3); air holes (6) which allow air passage between the internal volume (2) and the chamber (3) and which are provided on the outer body (C1).

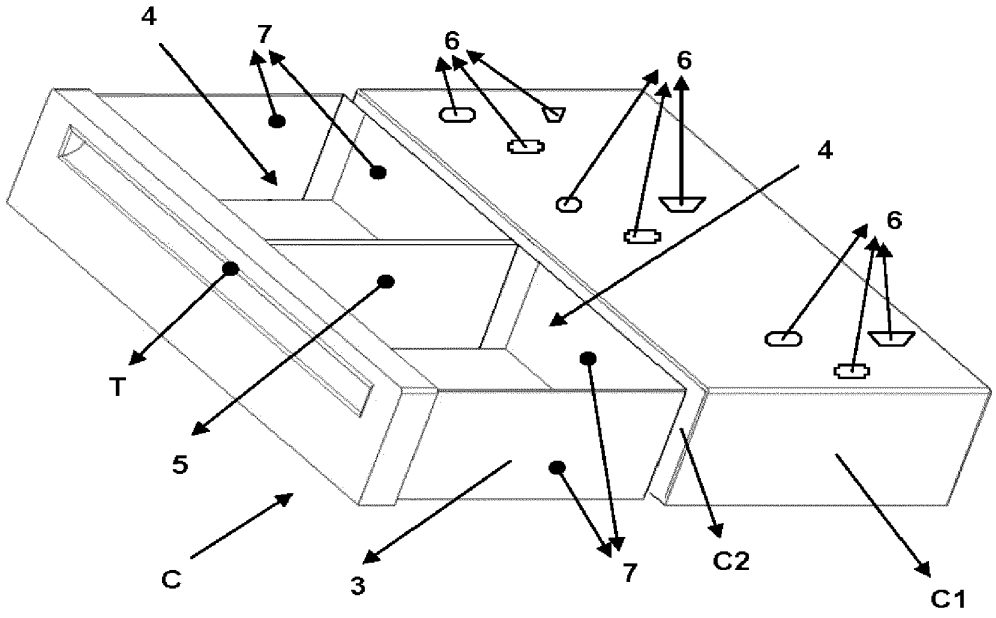

Figure 3

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Description

Technical Field

[0001] The present invention relates to cooling devices which comprise compartments having temperature values different from each other.

Prior Art

[0002] Conventional cooling devices known in the state of the art comprises at least one internal volume formed by at least one outer body. Said internal volume can be a uniform structure so as to be only a normal cooling compartment or only a freezing compartment as well as being separated compartments having temperature values different from each other by separating the internal volume into more than one compartment by a material having low thermal conductivity.

[0003] However the temperatures of the compartments provided in said conventional cooling devices are at certain values, and the user cannot store a product to be cooled in a temperature value different from these values.

[0004] In the patent document no JP2007163066A of the state of the art, which discloses a refrigerator developed for solving said problem, the internal volume of the refrigerator is partitioned into various compartments having different temperature values by an insulated partition wall. However, the internal volume cannot be used effectively since positions of the compartments cannot be changed according to the user's need in the embodiment performed in said document.

[0005] Also, another patent document no US7228704B2 discloses a refrigerator comprising two drawers having refrigerating and freezing compartments. Although the temperature values of the drawers provided in said refrigerator are different from each other, internal temperatures of the drawers are fixed within a certain value range. In other words, the drawers do not comprise more than one compartment having temperature values different from each other.

Brief Description of the Invention

[0006] The present invention discloses a cooling device which comprises at least two sections having temperature values different from each other. Said cooling device comprises an outer body; at least one internal volume which is formed by the outer body and in which the products to be cooled are placed; at least one drawer compartment which is positioned in this internal volume, which comprises at least one outer body and ; at least one chamber which is placed in at least one internal region formed by the outer body and which is able to move inside the region by sliding; at least one separator which is positioned in the chamber and which forms at least two compartments inside the chamber having temperature values different from the internal volume; air holes which allow air passage between the internal volume and the chamber and which are provided on the outer body.

[0007] With the embodiment of the invention, by means of air holes provided on the outer body of the drawer compartment, a drawer compartment comprising a chamber having a temperature value different from the internal volume of the cooling device is obtained, and at least two sections having temperature values different from each other inside the cooling device are obtained. Therefore, the user is able to store the products to be cooled in the sections which have related temperature values according to the need.

Objectives of the Invention

[0008] An aim of the invention is to develop a cooling device which is provided with at least one drawer compartment comprising at least two compartments having temperature values different from the internal volume of the cooling device.

[0009] The other aim of the invention is to develop a cooling device which is provided with at least one drawer compartment comprising at least two compartments having temperature values different from each other.

[0010] Another aim of the invention is to develop a cooling device which is provided with at least one drawer compartment whose compartment temperatures are able to be adjusted via holes provided on the outer body of the drawer compartment.

[0011] A further aim of the invention is to develop a cooling device which is cost-effective and easy to produce.

Description of the Drawings

[0012] Exemplary embodiments of the cooling device of the invention comprising at least one drawer compartment are shown in attached drawings wherein;

Figure 1 is a perspective view of the cooling device.
Figure 2 is a perspective view of the drawer compartment.

Figure 3 is a perspective view of the drawer compartment in an opened state.

[0013] The parts in figures are individually enumerated and the corresponding terms of reference numbers are given as follows:

Cooling device	(S)
Drawer compartment	(C)
Outer body	(S1, C1)
Handle	(T)
Internal region	(C2)
Internal volume	(2)
Chamber	(3)
Compartment	(4)
Separator	(5)
Air holes	(6)
Lateral wall	(7)

Description of the Invention

[0014] The cooling device (S) of the invention, an exemplary view of which is shown in figure 1, comprises an outer body (S1); at least one internal volume (2) which is formed by this outer body (S1) and in which the products to be cooled are placed; and at least one drawer compartment (C) which is positioned in the internal volume (2). The internal volume (2) can be in uniform structure as well as being separated compartments having different temperature values (e.g. cooling compartment and freezing compartment).

[0015] The drawer compartment (C), an exemplary embodiment of which is shown in figures 2 and 3, comprises at least one outer body (C1) and at least one chamber (3) which is placed in at least one internal region (C2) formed by the outer body (C1) and which is able to move inside the chamber (C2) by sliding. Said chamber (3) is separated into at least two compartments (4) via at least one separator (5) which is positioned in the chamber (3).

[0016] On the outer body (C1), air holes (6) in various geometries allowing air passage between the internal volume (2) and the chamber (3) are provided. Cooled air in the internal volume (2), in which the drawer compartment (C) is placed, enters into the chamber (3) from the internal volume (2) via the air holes (6). Depending on the number, position and geometric form of the air holes (6) on the outer body (C1), amount of the air which has entered into chamber (3) is determined, and it is ensured that the chamber (3) has a temperature value different from the internal volume (2). Therefore, at least two sections, which have temperatures different from each other, are obtained inside the cooling device. Said air holes (6) are positioned preferably on the outer body (C1) so as to ensure air passage directly into the chamber (3). Air holes (6) are in such a form that preferably they are able to be closed by the user or preferably opening of which are able to be adjusted by the user. Thus, the user is able to adjust temperatures of the compartments (4) according to the need.

[0017] In an exemplary embodiment of the invention, air entrance to the chamber (3), which is separated into at least two compartments (4) by at least one separator (5), is ensured through the air holes (6) positioned on the outer body (C1) so as to allow air entrance from the internal volume (2) to only one of the compartment (4). In such case, temperature adjustment of the other compartment (4) is ensured as follows: the air in the compartment (4), where the air entrance is ensured from the internal volume (2), is passed to the other compartment (4) by forming pressure difference thanks to the space left between the chamber (3) and the outer body (C1). Therefore, the temperature of the compartment (4), where the air entrance is ensured directly from the internal volume (2), is different from the internal volume (2); and by ensuring air passage from the compartment (4) having air entrance from the internal volume (2) to the other compartment (4), it is ensured that the temperatures of both of the compartments (4) are different from each other. Thus; at least three different sections having temperatures different from one another are able to be obtained inside the cooling device (S).

[0018] Said outer body (C1) is made of a material which has preferably low thermal conductivity. Thus, heat exchange of the drawer compartment (C) with the internal volume (2) of the cooling device (S) is performed only by forms directing air input/output, and the temperature of the drawer compartment (C) is able to be controlled more effectively. The separator (5) positioned in the chamber (3) is preferably made of a material having heat insulation and is placed inside the chamber (3) so as to ensure heat insulation between the compartments (4). Therefore, different temperatures of the compartments (4) formed via the separator (5) become independent from each other.

[0019] In a preferred embodiment of the invention, the separator (5) is detachable to the chamber (3). The separator (5) is able to be positioned inside the chamber (3) in various positions depending on the positions and numbers of the air holes (6) located on the outer body (C1); and thus compartments (4) having temperature values different from each other are able to be formed. In other words, temperature value of the compartment (4) varies depending on the volume

of the compartment (4) in which the air entering from a certain number of air holes (6) is dispersed. For instance, the more the volume of the compartment (4) increases, the more the temperature value of the compartment (4) increases. Accordingly, by changing the position of the separator (5) inside the chamber (3), the various combinations of the air holes (6) in different numbers and positions with the volume of the compartment (4) allow for obtaining compartments (4) in different temperature values and different volumes.

[0020] In another preferred embodiment of the invention, in order to be able to change the position of the separator (5) inside the chamber (3), at least two channels (not shown in figures) located in at least one lateral wall (7) of the chamber (3) are provided. Since said separator (5) is preferably in the form of a plate, the separator (5) is placed into the channel by sliding. When the position of the separator (5) inside the chamber (3) is desired to be changed, the separator (5) is removed from the channel it is seated and placed in another channel. Therefore, the position of the separator (5) inside the chamber (3) is changed.

[0021] In a preferred embodiment of the invention, the drawer compartment (C) comprises at least one handle (T) positioned on the chamber (3). Thus, the user is able to move the chamber (3) easily.

[0022] The drawer compartment (C) of the present invention is a detachable compartment (C); and the compartment (C) is able to be positioned in a desired region inside the cooling device (S) according to the user's need. Therefore, according to the dimensions of the products to be cooled placed inside the cooling device (S), the position of this compartment (C) is able to be adjusted and effective usage of the internal volume (2) of the cooling device (S) is ensured.

[0023] Thanks to the drawer compartment (C), which is comprised by the cooling device (S) of the invention and exemplary embodiment of which is shown in figures, the internal volume (2) of the cooling device (S) is able to be separated into two sections having temperature values different from each other. Thus, products to be cooled in different temperature values are able to be stored in sections having relevant temperature value; and the internal volume (2) of the cooling device (S) is able to be used effectively. Besides, thanks to the drawer compartment (C) of the invention, a cooling device (S), which is cost-effective and easy to use and comprises compartments having different temperature values, is obtained.

Claims

1. A cooling device (S) comprising at least one outer body (S1); at least one internal volume (2) which is formed by the outer body (S1) and in which the products to be cooled are placed; at least one drawer compartment (C) which is positioned in the internal volume (2), which comprises at least one outer body (C1) and at least one chamber (3) which is placed in at least one internal region (C2) formed by the outer body (C1) of the drawer compartment (C) and which is able to move inside the region (C2) by sliding **characterized by** comprising

   - at least one separator (5) which is positioned in the chamber (3) and which forms at least two compartments (4) having temperature values different from the internal volume (2) inside the chamber (3);
   - air holes (6) in various geometries which allow air passage between the internal volume (2) and the chamber (3) and which are provided on the outer body (C1) in different numbers and positions.

2. A cooling device (S) according to claim 1 **characterized in that** said separator (5) is detachable to the chamber (3).

3. A cooling device (S) according to claim 1 or 2 **characterized in that** the position of said separator (5) in the chamber (3) is able to be changed.

4. A cooling device (S) according to claim 1 **characterized in that** the air holes on the outer body (C1) are positioned so as to ensure air passage directly to the chamber (3).

5. A cooling device (S) according to claim 1 **characterized in that** air holes are positioned on the outer body (C1) so as to ensure air passage from the internal volume (2) to one of the compartments (4).

6. A cooling device (S) according to claim 1 **characterized in that** the outer body (C1) of the drawer compartment (C) is made of a material having low thermal conductivity.

7. A cooling device (S) according to claim 1 **characterized in that** said separator (5) is made of a material having heat insulation.

8. A cooling device (S) according to claim 1 **characterized in that** said separator (5) is placed inside the chamber (3) so as to ensure heat insulation between the compartments (4) formed by the separator (5) in the chamber (3).

9. A cooling device (S) according to claim 1 **characterized in that** the hole opening of the air holes (6) is able to be adjusted by the user.

10. A cooling device (S) according to any one of the preceding claims **characterized in that** the drawer compartment (C) comprises at least one handle.

11. A cooling device (S) according to any one of the preceding claims **characterized in that** the drawer compartment (C) is removable.

12. A cooling device (S) according to any one of the preceding claims **characterized by** comprising at least two channels which are located at least one lateral wall (7) of the chamber (3) and in which the separator (5) is placed by sliding.

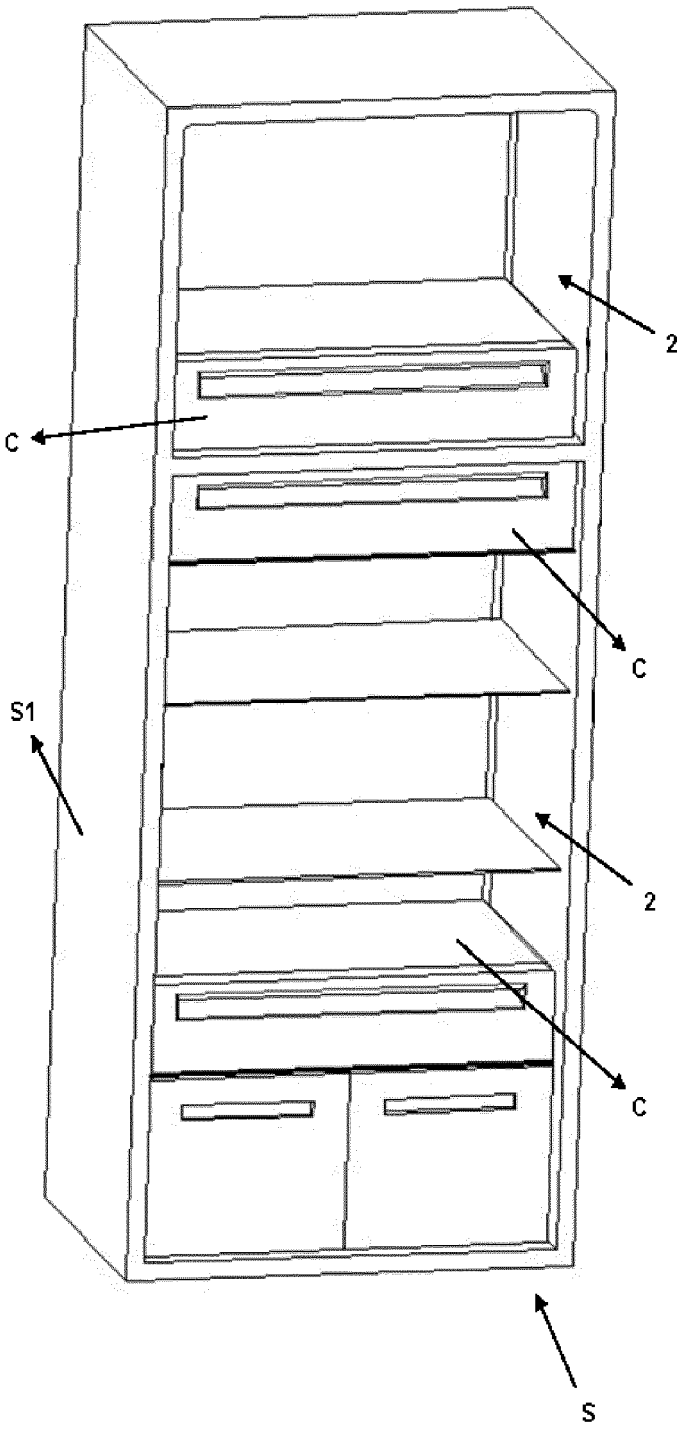

Figure 1

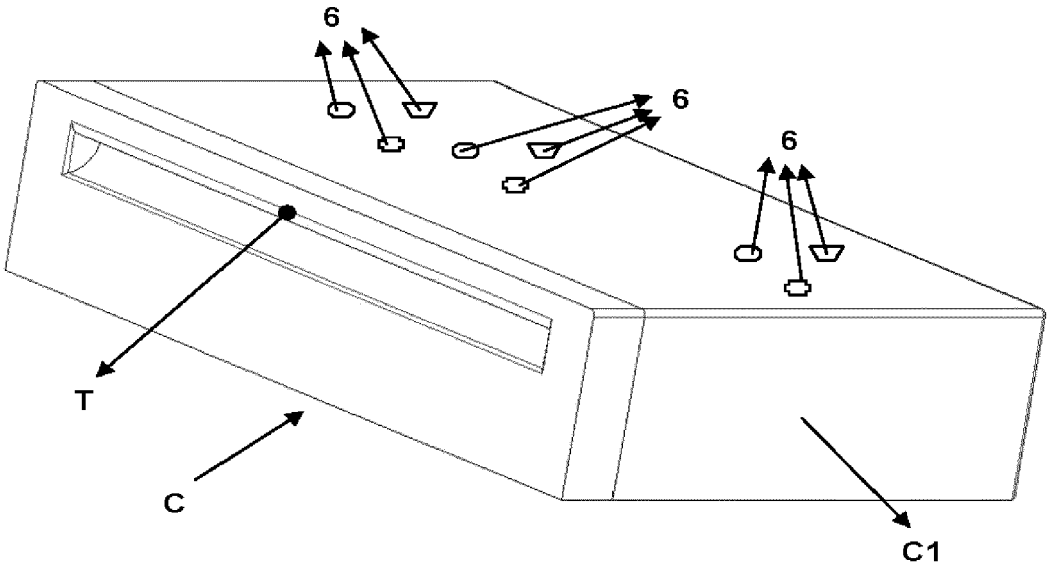

Figure 2

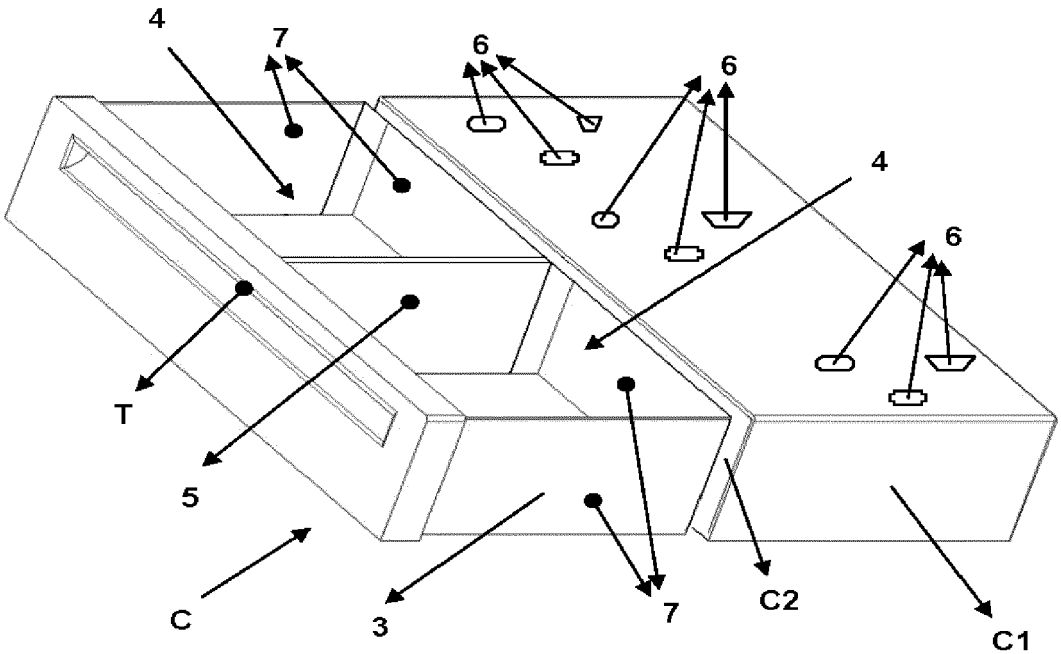

Figure 3

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- JP 2007163066 A **[0004]**
- US 7228704 B2 **[0005]**