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(54) **A COOLING DEVICE**

KÜHLVORRICHTUNG

DISPOSITIF DE REFROIDISSEMENT

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## Description

**[0001]** The present invention relates to a cooling device that comprises drawers.

**[0002]** In cooling devices that comprise drawers disposed one over the other, drawers are produced in various heights. Models having the same body sizes but of different drawer heights are produced due to reasons such as aesthetic concern, customer demands, habits in market. For example, an 80 cm high model comprises two 40 cm high drawers, yet another model comprises two drawers, the below being 30 cm high and the above being 50 cm high. Two separate body molds, wherein the positions of the housing for the beam disposed between the drawers to be mounted, are used for these cooling device models. Since the bodies of the said models are different from each other, installation times between the model transitions on the production line and stocking different bodies causes the amount of stock to increase. A cooling device according to the preamble of claim 1 is known from US2005/0061021. Other cooling devices are known from US3601463 and EP1170561.

**[0003]** The aim of the present invention is the realization of a cooling device comprising a body that can be used with drawers of different heights by changing the position of the beam disposed between the drawers.

**[0004]** The cooling device realized in order to attain the aim of the present invention is explicated in the attached claims. In the cooling device of the present invention, the beam dividing the opening into two, wherein the drawers are disposed, is mountable in two different ways. When the way of mounting of the beam is changed, the heights of the portions remaining below and above the beam change. Thus, cooling devices of same body sizes but different drawer heights are provided to be produced with the same body mold.

**[0005]** The beam is configured as a rod comprising two legs on the each end of which two legs are disposed. Legs on the ends of the "H" shaped beam oppositely extend against each other. In an embodiment of the present invention, lengths of the opposite legs on the ends are different from each other, while lengths of the legs on different ends extending in the same direction are equal to each other. Thus, directions of the legs change when the beam is mounted to the body by being turned upside down.

**[0006]** The beam is mounted into two opposite housings disposed on the frame, wherein the ends of the beam are fitted. When the beam mounted into the housings in the first position is mounted into the housings in the second position by being turned upside down, an end different than the end in the first position sits in the housing.

**[0007]** The total length of the legs on one end of the beam is equal to the total length of the legs on the other end. The height of the housing is as much as the total length of two legs sitting therein.

**[0008]** By means of the cooling device of the present invention, cooling device models of different appearances and drawer heights are enabled to be produced by using a single body.

**[0009]** The cooling device realized in order to attain the aim of the present invention is illustrated in the attached figures, where:

Figure 1 - is the perspective view of a cooling device, wherein one of the drawers is open and the other is closed.
Figure 2 - is the perspective view of a beam and a body.
Figure 3 - is the front view of the body when the beam is in the first position.
Figure 4 - is the perspective view of the body when the beam is in the first position.
Figure 5 - is the front view of the body when the beam is in the second position.
Figure 6 - is the perspective view of the body when the beam is in the second position.

**[0010]** The elements illustrated in the figures are numbered as follows:

1. Cooling device
2. Body
3. Opening
4. Frame
5. Drawer
6. Frontal
7. Beam
8. Housing

**[0011]** 101,102,103,104. Leg

**[0012]** The cooling device (1) of the present invention comprises a body (2), an opening (3) disposed in the body (2), a frame (4) peripherally surrounding the opening (3), at least two drawers (5) disposed one over the other, pushed into the body (2) and pulled by passing through the opening (3), and at least one beam (7) extending from one side of the frame (4) to the other so as to remain between the drawers (5) (Figure 1).

**[0013]** The cooling device (1) furthermore comprises a frontal (6) mounted to the front side of the drawer (5), at least partially covering the opening (3) when seated in the body (2). When the drawers (5) are in the body (2), frontals (6) provide the opening (3) to be closed in an impermeable manner by bearing against the frame (4) and the beam (7).

**[0014]** The beam (7) divides the opening (3) into two compartments (U, A). The drawers (5) are disposed in these compartments. The beam (7) is mountable to the frame (4) in two different positions. When the mounting position of the beam (7) is changed, heights of the compartments (U and A) the beam divides the opening also change.

**[0015]** The cooling device (1) furthermore comprises two legs (101, 102, 103, 104) each, disposed on both ends of the beam (7), extending against each other. The

"H" shaped beam (7) is mounted to the body (2) such that the legs (101, 102, 103, 104) will bear on the frame (4) and form some portion of the frame (4). Lengths of at least two of the legs (101, 102, 103, 104) are different than the others.

**[0016]** The beam (7) is disposed in two different positions by being turned upside down. The legs (101, 103) extending upwards in the first position (Figure 2 and 3) extend downwards in the second position (Figure 4 and 5) and the legs (102, 104) extending downwards in the first position (Figure 2 and 3) extend upwards in the second position (Figure 4 and 5).

**[0017]** The total heights of the compartments (U, A) are changed by changing the lengths of the legs (101, 102, 103, 104). For example, lengths (L1) of the legs (101, 103) in one direction are equal to each other, lengths (L2) of the legs (102, 104) in the opposite direction to these legs (101, 103) are also equal to each other but shorter than the other legs (101, 103). The height of the compartment (U) remaining above the beam (7) when disposed in the first position is equal to the sum of the distance (h1) to the beam (7) and the length (11) of the legs (101, 103) extending upwards. The height of the compartment (U) remaining above the beam (7) when disposed in the second position is equal to the sum of the distance (h1) to the beam (7) and the length (l1) of the legs (101, 103) extending upwards. According to the position the beam (7) is disposed to the frame (4) by being turned upside down, the heights of the compartments (U, A) can be changed as much as "L1-L2".

**[0018]** The cooling device (1) furthermore comprises two housings (8), which are oppositely disposed on the frame (4) and wherein the legs (101, 102, 103, 104) are disposed. The legs (101, 102) on one end of the beam (7) sit in one of the housings (8) when the beam (7) is in the first position, while the legs (103, 104) on the other end sit in the same housing (8) when the beam (7) is mounted to the housing (8) by being turned upside down. Therefore, the total length of the legs (101, 102) on one end of the beam (7) is equal to the total length of the legs (103, 104) on the other end in order to enable the beam (7) to be mounted to the housing (8) by being turned upside down.

**[0019]** Since the lengths of the legs (101, 102, 103, 104) are different from each other, the beam (7) stands at different heights when the beam (7) is disposed in the housing (8) in the first or the second position.

**[0020]** In another embodiment of the present invention, all of the legs (101, 102, 103, 104) are of different heights. The total length of the legs (101, 102) on one end of the beam (7) is equal to the total length of the legs (103, 104) on the other end in order to enable the beam (7) to be mounted to the housing (8) by being turned upside down. For example, the lengths of the legs (101, 102, 103, 104) are 5 cm, 8 cm, 10 cm and 3 cm respectively.

**[0021]** In the cooling device (1) of the present invention, by means of the beam (7) being able to be mounted to the housing (8) on the body (2) in two different positions, drawers (5) of different heights can be used in the lower and the upper position. Since cooling devices (1) are produced by using a single body (2) in models of different drawer (5) heights, both the investment cost is reduced and a decrease in cost is provided by reducing the diversity in production.

## Claims

1. A cooling device (1) comprising a body (2), an opening (3) disposed in the body (2), a frame (4) peripherally surrounding the opening (3), at least two drawers (5) disposed one over the other in the body (2), pushed into the body (2) and pulled by passing through the opening (3), and at least one beam (7) separating the opening (3) into two compartments (U, A) wherein the drawers (5) are disposed, said beam (7) extending from one side of the frame (4) to the other so as to remain between the drawers (5) **characterized in that** the beam (7) which divides the opening (3) can be mounted to the frame (4) in two different positions, whereby heights of the compartments (U, A) change as the mounting position is changed.

2. A cooling device (1) as in Claim 1, **characterized in that** the beam (7) can be mounted to the frame (4) in two different positions by being turned upside down.

3. A cooling device (1) as in Claim 1 or 2, **characterized in that** the beam (7) comprises two legs (101, 102, 103, 104) disposed on each end thereof, said legs extending against each other.

4. A cooling device (1) as in Claim 3, **characterized in that** the legs (101, 102, 103, 104) are mounted to the body (2) so as to bear on the frame (4) and to form a portion of the frame (4).

5. A cooling device (1) as in Claim 3 or 4, **characterized in that** the two legs (101, 102, 103, 104) have lengths which are different from each other.

6. A cooling device (1) as in any one of the Claims 3 to 5, **characterized by** legs (101, 103) that extend upwards in a first position and downwards when mounted to the frame (4) in a second position, by turning the beam (7) upside down, and by legs (102, 104) that extend downwards in the first position and upwards in the second position.

7. A cooling device (1) as in any one of the Claims 3 to 6, **characterized by** legs (101, 103) extending in one direction, have equal lengths (L1) and by legs (102, 104) extending in the opposite direction, have equal but different lengths (L2) than the other legs

(101, 103).

**8.** A cooling device (1) as in any one of the above claims, **characterized by** two housings (8) disposed oppositely on the frame (4), wherein the legs (101, 102, 103, 104) are disposed.

**9.** A cooling device (1) as in Claim 8, **characterized by** the housing (8) wherein the legs (101, 102) on one end of the beam (7) sit when the beam (7) is in the first position and the legs (103, 104) on the opposite end sit when the beam (7) is mounted to the housing (8) by being turned upside down in the second position.

**10.** A cooling device (1) as in any one of the Claims 3 to 9, **characterized in that** the total length of the legs (101, 102) on one end of the beam (7) is equal to the total length of the legs (103, 104) on the opposite end of the beam (7).

**Patentansprüche**

**1.** Kühlvorrichtung (1), umfassend einen Gehäusekörper (2), eine Öffnung (3), die im Gehäusekörper (2) angeordnet ist, einen Rahmen (4), der die Öffnung (3) am Umfang umgibt, wenigstens zwei Fächer (5), die übereinander im Gehäusekörper (2) angeordnet sind, in den Gehäusekörper (2) geschoben und gezogen werden, indem sie durch die Öffnung (3) treten, und wenigstens eine Strebe (7), die die Öffnung (3) in zwei Abteilungen (U, A) unterteilt, in denen die Fächer (5) angeordnet sind, wobei die Strebe (7) sich von einer Seite des Rahmens (4) zur anderen erstreckt, derart, dass sie zwischen den Fächern (5) bleibt, **dadurch gekennzeichnet, dass** die Strebe (7), die die Öffnung (3) teilt, in zwei verschiedenen Positionen am Rahmen (4) angebracht sein kann, wodurch sich die Höhe der Abteilungen (U, A) mit Verändern der Anbringungsposition ändert.

**2.** Kühlvorrichtung (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** die Strebe (7) in zwei verschiedenen Positionen am Rahmen (4) angebracht werden kann, indem sie umgedreht wird.

**3.** Kühlvorrichtung (1) nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** die Strebe (7) zwei Beine (101, 102, 103, 104) umfasst, die an ihren einzelnen Enden angeordnet sind, wobei sich die Beine einander gegenüber erstrecken.

**4.** Kühlvorrichtung (1) nach Anspruch 3, **dadurch gekennzeichnet, dass** die Beine (101, 102, 103, 104) derart am Gehäusekörper (2) angebracht sind, dass sie am Rahmen (4) anliegen und einen Teil des Rahmens (4) bilden.

**5.** Kühlvorrichtung (1) nach Anspruch 3 oder 4, **dadurch gekennzeichnet, dass** die zwei Beine (101, 102, 103, 104) voneinander unterschiedliche Längen aufweisen.

**6.** Kühlvorrichtung (1) nach einem der Ansprüche 3 bis 5, **dadurch gekennzeichnet, dass** Beine (101, 103) sich in einer erste Position nach oben erstrecken, und sich nach unten erstrecken, wenn sie durch Umdrehen der Strebe (7) in einer zweiten Position am Rahmen (4) angebracht sind, und dadurch, dass Beine (102, 104) sich in der ersten Position nach unten und in der zweiten Position nach oben erstrecken.

**7.** Kühlvorrichtung (1) nach einem der Ansprüche 3 bis 6, **dadurch gekennzeichnet, dass** Beine (101, 103), die sich in eine Richtung erstrecken, gleiche Längen (L1) aufweisen, und dass Beine (102, 104), die sich in die entgegengesetzte Richtung erstrecken, gleiche, aber von den anderen Beinen (101, 103) verschiedene Längen (L2) aufweisen.

**8.** Kühlvorrichtung (1) nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** zwei Gehäuse (8) gegenüberliegend am Rahmen (4) angeordnet sind, in denen die Beine (101, 102, 103, 104) angeordnet sind.

**9.** Kühlvorrichtung (1) nach Anspruch 8, **dadurch gekennzeichnet, dass** die Beine (101, 102) an einem Ende der Strebe (7) in dem Gehäuse (8) sitzen, wenn die Strebe (7) in der ersten Position ist, und die Beine (103, 104) am gegenüberliegenden Ende darin sitzen, wenn die Strebe (7) derart am Gehäuse (8) angebracht ist, dass sie umgedreht in der zweiten Position ist.

**10.** Kühlvorrichtung (1) nach einem der Ansprüche 3 bis 9, **dadurch gekennzeichnet, dass** die Gesamtlänge der Beine (101, 102) an einem Ende der Strebe (7) gleich der Gesamtlänge der Beine (103, 104) am gegenüberliegenden Ende der Strebe (7) ist.

**Revendications**

**1.** Un dispositif de refroidissement (1) comprenant un corps (2), une ouverture (3) qui est disposée dans le corps (2), un cadre (4) qui entoure périphériquement l'ouverture (3), au moins deux tiroirs (5) qui sont disposés l'un sur l'autre dans le corps (2) et qui sont poussés dans le corps (2) et tirés en passant à travers l'ouverture (3), et au moins une poutre (7) qui sépare l'ouverture en deux compartiments (U, A) dans lesquels les tiroirs (5) sont disposés, ladite poutre (7) s'étendant à partir d'un côté du cadre (4) vers l'autre de manière à rester entre les tiroirs (5), **caractérisé en ce que** la poutre (7) qui divise l'ouver-

ture (3) peut être montée au cadre (4) en deux positions différentes, par lequel les hauteurs des compartiments (U, A) changent lorsque la position de montage est changée.

**2.** Un dispositif de refroidissement (1) selon la Revendication 1, **caractérisé en ce que** la poutre (7) peut être montée au cadre (4) en deux positions différentes en étant retournée.

**3.** Un dispositif de refroidissement (1) selon la Revendication 1 ou 2, **caractérisé en ce que** la poutre (7) comprend deux pieds (101, 102, 103, 104) disposés à chaque extrémité de celle-là, lesdits pieds s'étendant l'un contre l'autre.

**4.** Un dispositif de refroidissement (1) selon la Revendication 3, **caractérisé en ce que** les pieds (101, 102, 103, 104) sont montés au corps (2) de manière à s'appuyer sur le cadre (4) et à former une partie du cadre (4).

**5.** Un dispositif de refroidissement (1) selon la Revendication 3 ou 4, **caractérisé en ce que** les deux pieds (101, 102, 103, 104) sont des longueurs qui sont différentes l'une de l'autre.

**6.** Un dispositif de refroidissement (1) selon l'une quelconque des revendications de 3 à 5, **caractérisé en ce que** des pieds (101, 103) s'étendent vers le haut dans une première position et vers le bas lorsqu'ils sont montés au cadre (4) dans une deuxième position, en tournant la poutre (7) et **en ce que** des pieds (102, 104) s'étendent vers le bas dans la première position et vers le haut dans la deuxième position.

**7.** Un dispositif de refroidissement (1) selon l'une quelconque des revendications de 3 à 6, **caractérisé en ce que** des pieds (101, 103) s'étendant dans une direction ont des longueurs égales (L1) et **en ce que** des pieds (102, 104) s'étendant dans la direction opposée ont des longueurs (L2) égales mais différentes des autres pieds (101, 103).

**8.** Un dispositif de refroidissement (1) selon l'une quelconque des revendications précédentes, **caractérisé par** deux logements (8) qui sont disposés de manière opposée sur le cadre (4), dans lesquels les pieds (101, 102, 103, 104) sont placés.

**9.** Un dispositif de refroidissement (1) selon la Revendication 8, **caractérisé en ce que** le logement (8) dans lequel les pieds (101, 102) sur une extrémité de la poutre (7) sont placés lorsque la poutre (7) est dans la première position et les pieds (103, 104) sur l'extrémité opposée est placés lorsque la poutre (7) est montée au logement (8) en étant retournée dans la deuxième position.

**10.** Un dispositif de refroidissement (1) selon l'une quelconque des revendications de 3 à 9, **caractérisé en ce que** la longueur totale des pieds (101, 102) sur une extrémité de la poutre (7) est égale à la longueur totale des pieds (103, 104) sur l'extrémité opposée de la poutre (7).

**Figure 1**

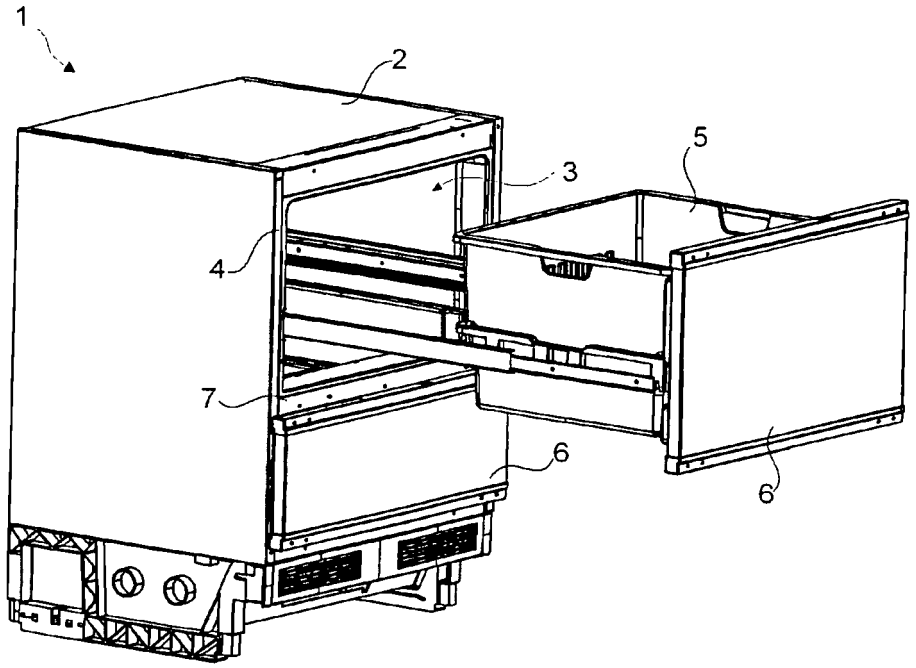



**Figure 2**

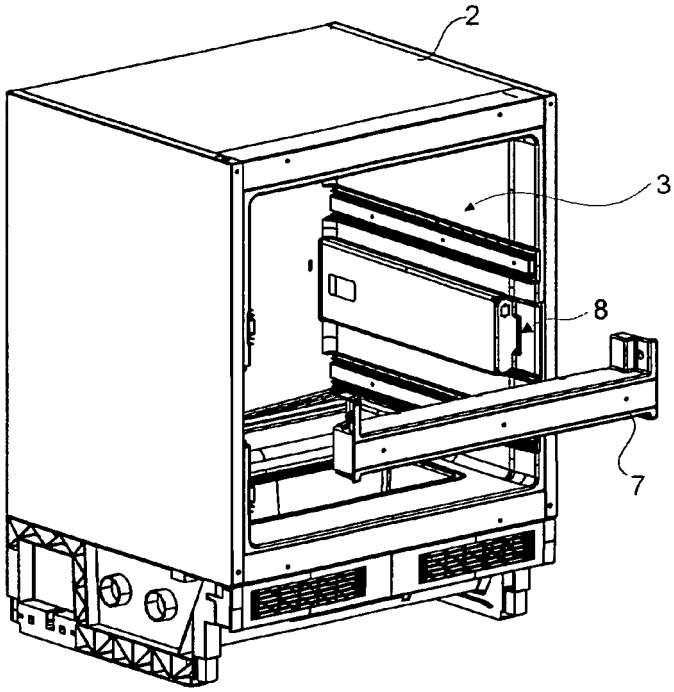


Figure 3

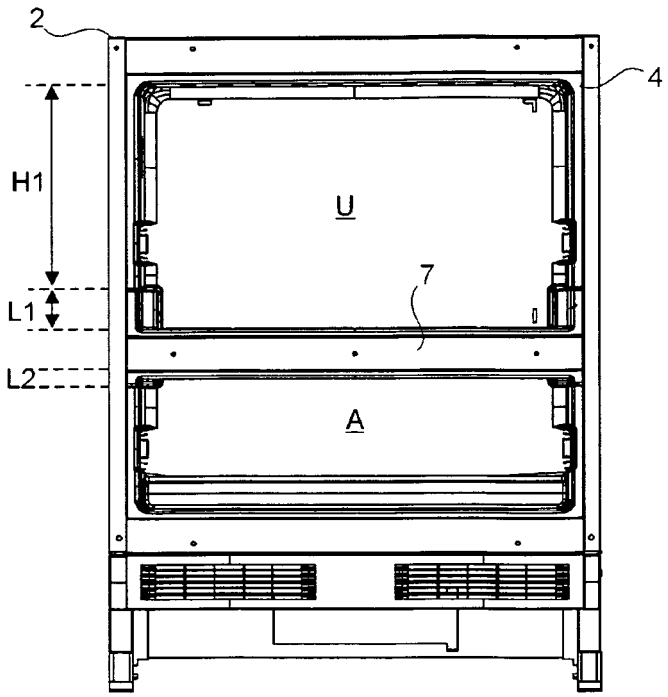



Figure 4

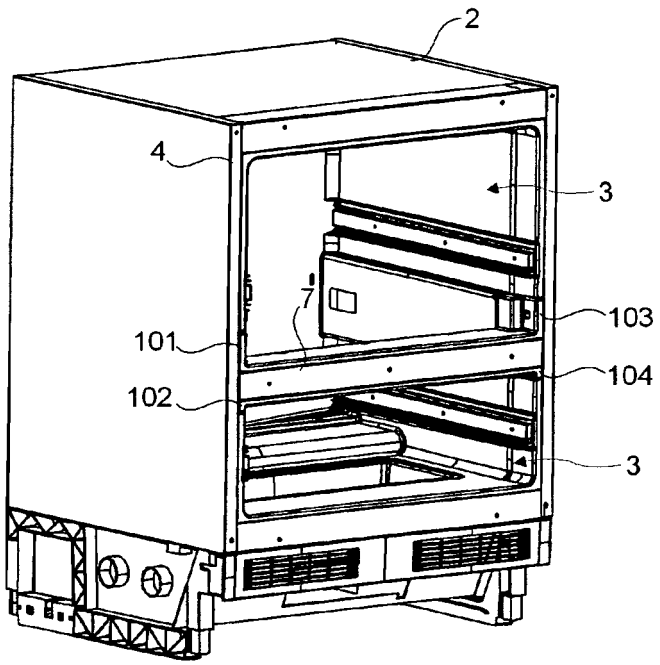


Figure 5

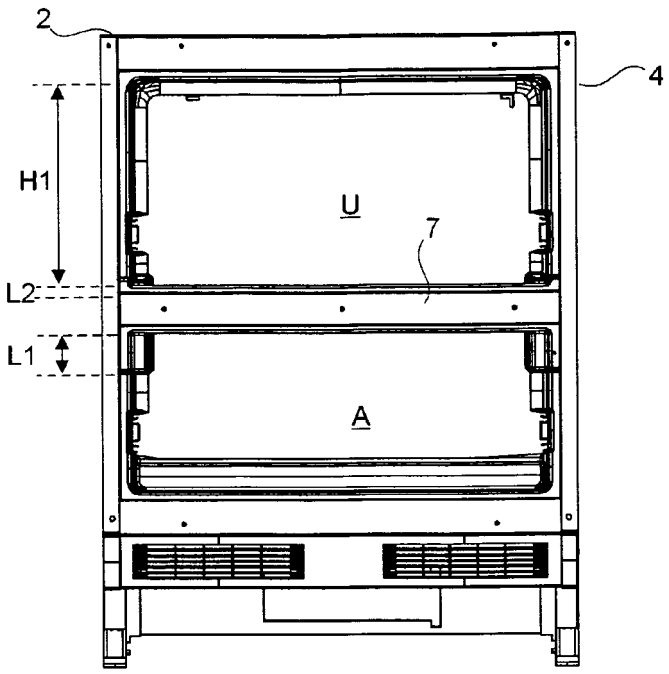
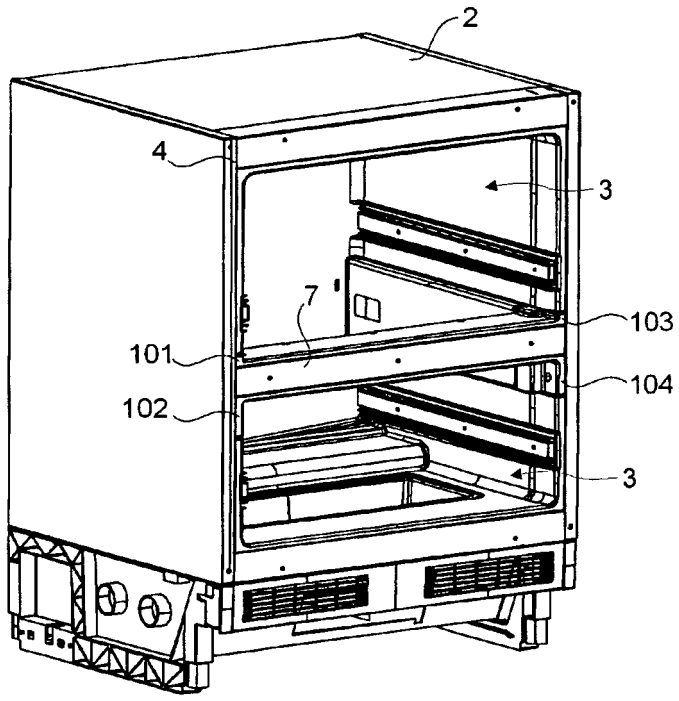



Figure 6



## REFERENCES CITED IN THE DESCRIPTION

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