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(54) **A COOLING DEVICE**

KÜHLVORRICHTUNG

DISPOSITIF DE REFROIDISSEMENT

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(56) References cited:

**FR-A1- 2 433 461 JP-A- 9 002 482**  
**US-A- 4 241 831**

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## Description

**[0001]** This invention relates to cooling device wherein food to be cooled is placed and which comprises more than one basket that can be positioned one on top of the other.

**[0002]** Cooling devices, particularly chest freezers incorporate a body loaded from the top side. By being loaded into the wire baskets placed one on top of the other, foods to be frozen are placed into the mentioned body. Each basket incorporates two handles whereby transportation is facilitated. During the loading procedure, the user hangs the wire basket onto the upper side of the freezer body as the handle is brought to a position such that it horizontally extends outwards from two sides of the basket. After the basket is loaded, the user rotates the handle inwards of the basket in this case and places the basket into the chest freezer. As the baskets are stacked, the basket on top fits onto the handles of the lower basket. Thereby, it is achieved that the upper basket does not damage the food inside the basket below. Furthermore, since the handle extends to the interior of the basket, it does not take much space inside the freezer. In order to be able to efficiently utilize the interior volume of the freezer, a narrow gap is provided between the basket and the interior wall of the body. For that reason, the user cannot put his/her hand between the basket and the body and pull out the basket by grasping it from the outer side, but can raise only by grasping from the inner side.

**[0003]** In the current state of the art, in the French Patent Document no. FR2433461, a description is given of a basket handle comprising two L-shaped limbs. Each limb incorporates an L-form groove. The handle is moved between the hanging and stacking positions by being rotated about a horizontal wire whereon it is attached at the mentioned two grooves. A gap is provided between two limbs. Above and below the limb, located are two grooves which fit to a second wire of the basket in hanging and stacking positions. The handle attached to the wires of the baskets via said groove can be rotated between the hanging and stacking positions. At stacking position, the user is not permitted to grasp the handle and pull out the basket from the freezer, because the structure of the handle does not permit the basket to be attached to the wires opposing to a moment in the described direction.

**[0004]** A state of the art embodiment is described in the United States Patent Document no. US4241831. A handle is attached between the ends of two horizontal wires at the upper side of the wire basket, the handle comprising two longer parts and three L-shaped connection parts whereby said longer parts are joined both at the ends and at the middle. The ends of the wire are fitted into the quadrangular housings having their corners rounded which are located at the mentioned connection parts outside. At hanging position, the interior section of the L-shape leans against the surface where the basket is hung. At that position, the weight of the basket is sup-

ported by curtain shaped sections connecting said two housing and the limb. Whereas at stacking position, the weight of the overlaid basket is supported by a groove engaging with a second horizontal wire and again with said two housings. At that position, the user is enabled to pull out the basket by grasping the handle. However, in case the basket is heavy, it is possible that the moment applied by the user cannot be supported as the limbs, having a narrow cross-section, bend such that the groove disengages with the baskets which groove contacts the wire at a considerably small area.

**[0005]** Moreover, the structure of the handles used in the current state of the art applications where the handle solely grasps horizontal wires and/or leans against these wires, reduces the load carrying capacity of the handle.

**[0006]** The aim of the present invention is the realization of a cooling device comprising a more easily transportable basket.

**[0007]** The cooling device designed to fulfill the objectives of the present invention is described in the annexed claims. In the mentioned cooling device, as the handle, attached to the wire such that it can rotate around a horizontal wire, is rotated between the hanging and stacking positions, one side of it passes through two parallel horizontal wires of the basket. The handle accomplishes the described movement as a result of its railed structure separated by slits, capable of passing through the vertical wires extending between the parallel horizontal wires.

**[0008]** As a consequence of the described structure, the handle incorporates supporting and bearing surfaces whereby the weight of the basket is supported in a more effective manner as the handle leans against the vertical wires of the basket, both at hanging and stacking positions. Said surfaces are realized by forming several projections and holes on two plates which are joined at one side to form an L-shape. Different from the embodiments of prior art, the handle which utilizes both the vertical wires of the basket and also grasps the basket wires on a wider surface, enables the user to transport the basket safely and easily, both at hanging and stacking positions.

**[0009]** The cooling device designed to fulfill the objectives of the present invention is illustrated in the annexed figures where:

Fig.1 - is a schematic representation of a cooling device where the basket is at hanging position.

Fig.2 - is a schematic representation of a cooling device where baskets are at stacking position.

Fig.3 - is a side view of the handle.

Fig.4 - is a side view of the handle and the basket, at hanging position.

Fig.5 - is a perspective view of the handle and the basket, at hanging position.

Fig.6-9 - are side views of the handle and the basket at intermediate positions while the basket is transformed from hanging position to stacking position.

Fig.10 - is a side view of the handle and the basket, at stacking position.

Fig.11 - is a perspective view of the handle and the basket, at stacking position.

**[0010]** Elements shown on figures are numbered as follows:

1. Cooling device ,
2. Body
- 3., 30. Basket
4. Axis wire
5. Bearing wire
6. Supporting wire
7. Handle
8. Carrying plate
9. Fixing plate
10. Housing
11. Bearing
12. Groove
13. Projection
14. Slit
15. Channel

**[0011]** The cooling device (1) in accordance with the present invention comprises,

- a body (2),
- at least one basket (3) where items are placed into, which is stacked and placed into the said body (2) and incorporates, at two opposite sides, an axis wire (4) having both ends free, a horizontal bearing wire (5) below and parallel to the mentioned axis wire (4) and at least two vertically aligned supporting wires (6) connecting the axis wire (4) and the bearing wire (5) and,
- two handles (7) which are oppositely attached to the axis wires (4) and bearing wires (5) of the basket (3), whereby at a hanging position, the basket (3) can be hung at its two sides and/or be transported and whereby more than one basket (3, 30) can be positioned one on top of the other at a stacking position, the upper basket being supported by the handles (7) from below, wherein said handles (7) are capable of being moved from the hanging position to the mentioned stacking position. (Figure 1 and Figure 2).

**[0012]** The hanging position is a position where the handles (7) extend outwards the basket (3) and, by means of the handles (7), the basket (3) is hung between two planes with a certain gap therebetween, for instance upper sections of the body (2) (Figure 1, Figure 4, Figure 5). At the described position, the handle (7) leans against the plane whereas the basket (3) extends below the plane level. As for the stacking position, it is a position where the handles (7) are folded towards the interior of the basket (3) and where a second basket (30) is positioned onto the handles (7), if necessary (Figure 2, Figure 10, Figure 11).

**[0013]** The handle (7) incorporates two housings (10)

where two ends of the axis wire (4) are attached to and whereby, between the stacking and hanging positions, the handle (7) is moved by being rotated around the said wire (4), a bearing (11) that fits to the bearing wire (5) at stacking position, and a groove (12) fitting to the bearing wire (5) at hanging position.

**[0014]** The handle (7) is basically an L-shape piece (Figure 3). The inner corner of this L-shape faces downwards at hanging position and upwards at stacking position. The handle (7) comprises two plates (8, 9) forming the mentioned L-shape. On of these plates is carrying plate (8). At hanging position, this plate (8) extends approximately horizontal outwards from the side of the basket (3). At that position, by fitting the mentioned carrying plate (8) to the upper section of the body (2), food may be loaded into the basket (3). If necessary, the user may grasp the carrying plate (8) and pull out the basket (3) to transport the basket (3) from one place to another. Whereas at stacking position, the carrying plate (8) extends approximately horizontal towards the interior of the basket (3), the bottom of the upper basket (30) fitting onto the plate (8). If the user desires to pull out the basket (3) at stacking position, he/she can raise it by grasping the carrying plate (8). By means of the fixing plate (9) positioned vertically to the carrying plate (8), it is achieved that the handle (7) is attached to the basket (3) and can support the load applied.

**[0015]** In the preferred embodiment of the present invention, the handle (7) incorporates at least two slits (14) starting from one side of the fixing plate (9) extending up to the carrying plate (8). These slits (14) permit the handle (7) to be moved and rotated between the stacking and hanging positions such that the fixing plate (9) passes between the axis wire (4) and the bearing wire (5). Said slits (14) slide on the vertical supporting wires (6) as the handle (7) is being rotated. When the stacking position is attained, the supporting wires (6) lean against the carrying plate (8) through the slits (14). At stacking position, the supporting wires (6) pass through the slit (14) and extend upwards parallel to the fixing plate (9), above the carrying plate (8). Again at the stacking position, the portions of the fixing plate (9) at both sides of the slit (14) lean against the axis wire (4) from the outside.

**[0016]** In another embodiment of the present invention, the handle also incorporates at least one projection (13) positioned above the carrying plate (8), extending in the same direction with and parallel to the fixing plate (9). This projection (13), at stacking position, squeezes the supporting wires (6) between the fixing plate (6) and itself as it leans against the mentioned supporting wires (6) that extend parallel to the fixing plate (9) (Figure 11). At stacking position, said projection (13) permits the handle (7) to be detached from its position if and only if a force is applied at the lower side of the fixing plate (9) of the handle (7) along the supporting wires (6). When the user tries to pull out the basket (3) at stacking position, detaching the handle (7) from its position is not possible since the force applied at the carrying plate (8) is not

along the supporting wires (6). By means of also the projection (13), the handle (7) is fixed at its position on the basket (3) and it is accomplished that it does not disengage with the wires (4, 5) and become free, in an unintended moment. Moreover, the thickness of the mentioned projection (13) is adjusted such that, at stacking position, the upper basket (30) is not allowed to move in an inappropriate direction as it is fitted between the projections (13) at the opposite handles (7).

**[0017]** In an embodiment of the present invention, the housing (10) is located at a position at two sides of the fixing plate (9) where the end of the axis wire (4) of the basket (3) fits into. There is a gap provided between two housings (10) so that the wire (4) of the basket (3) can be attached. In order for the axis wire (4) to slideably move inside the housing (10) as the handle (7) is moved between the hanging and stacking positions, the housing (10) is in form of a quadrangle the corners of which is rounded. The width of the housing (10) is approximately equal to the diameter of the wire (4). Whereas the length of said housing (10) is such that the wire (4) is able to lean against the interior of two ends of the housing (10) both at stacking and hanging positions. The longer side of the housing (10) is approximately parallel to the plane of fixing plate (9).

**[0018]** On the other hand, the groove (12) is in form of a hook positioned at one side of the fixing plate (9) so as to grasp the bearing wire (5) from inside and below as the handle (7) is at hanging position. As the handle (7) is at stacking position, said groove (12) is positioned on top such that its opening faces the interior of the basket (3).

**[0019]** The bearing (11) is positioned at the other side of the fixing plate (9) with respect to the groove (12) and at stacking position, grasps the bearing wire (5) from the top. As the handle (7) is at hanging position said bearing (11) is positioned on top such that its - opening faces upwards.

**[0020]** In another embodiment of the present invention, the handle (7) incorporates channels (15) with proper shape and dimension, positioned at the surface of the carrying plate (8). This surface is supporting the upper basket (30) at stacking position, where the wires at the bottom of the mentioned basket (30) fit into (Figure 11).

**[0021]** In the cooling device (1) subject to the present invention, when the user is to load items, he/she brings the handle (7) to the hanging position and hangs the basket (3) to the upper sides of the body (2) (Figure 1). At hanging position, the axis wire (4) is at upper most position inside the housing (10) wherein the groove (12) grasps the bearing wire (5) from inside and below (Figure 4, Figure 5), whereas the bearing (11) is empty positioned on top. The supporting wires (6) are located near the end of the slit (14). The carrying plate (8) leans against the side of the body (2) from the upper side.

**[0022]** After loading process is completed, the user brings the handle (7) from the hanging position to the stacking position. To be able to do that, firstly the handle

(7) is rotated around the axis wire (14) such that the side of the fixing plate (9) moves towards the interior of the basket (3) (Figure 6). After that, without rotating the handle (7), the axis wire (4) is pulled upwards until it contacts the other end inside the housing (10) (Figure 7). As the pulling phase is completed, the lower side of the fixing plate (9) is located at the same level as the gap between two wires (4, 5). Afterwards, the handle (7) is rotated around the axis wire (4) for approximately 180° such that lower side of the fixing plate (9) comes out of the basket (3) through two wires (4, 5) (Figure 8). As the bearing (11) is located on top of the bearing wire (5), the supporting wires (6) reach a far most position inside the slit (14) and lean against the carrying plate (8) internally. At that position, by pushing the handle (7) downwards, the axis wire (4) is brought to an upper most position inside the housing (10), wherein the bearing (11) grasps the bearing wire (5) from the top (Figure 9).

**[0023]** At stacking position, the carrying plate (8) extends in horizontal plane, towards the interior of the basket (3) wherein the fixing plate (9) raises upwards from the side of the basket (3), being vertical to said carrying plate (8). Projections lean against the supporting wires (6) from the inside of the basket (3).

**[0024]** As the baskets (3, 30) are stacked, the bottom wires of the upper basket (30) fit into the channels (15) positioned at the handle (7) of the lower basket (3) (Figure 2). Furthermore, the lateral walls of the upper basket (30) are squeezed between the projections (13) of the handle (7) below. Thereby, the upper basket (30) is disabled to move in unintended directions, right-left, forwards-backwards.

**[0025]** If the user is to pull a stacked basket (3) out of the body (2), he/she grasps the carrying plate (8). At that instant, forces applied to the carrying plate (8) are transferred to the wires (4, 5, 6) as a moment. However, since only a vertically aligned force applied from below the supporting wires (6) can disengage the handle (7) from its position, the described movement of the user does not cause the handle (7) to be detached from its position.

**[0026]** By means of the cooling device (1) according to the present invention, both at hanging and stacking positions, it is accomplished to prevent the handle (7) from being detached from its position unless the user intends to do so.

## Claims

1. A cooling device (1) comprising,

- a body (2),
- at least one basket (3) where items are placed into, which is stacked and placed into the said body (2) and incorporates, at two opposite sides, an axis wire (4) having both ends free, a horizontal bearing wire (5) below and parallel to the mentioned axis wire (4) and at least two verti-

cally aligned supporting wires (6) connecting the axis wire (4) and the bearing wire (5), and  
 - two handles (7) which are oppositely attached to the axis wires (4) and bearing wires (5) of the basket (3), whereby at a hanging position, the basket (3) can be hung at its two sides and/or be transported and whereby more than one basket (3, 30) can be positioned one on top of the other at a stacking position, the upper basket being supported by the handles (7) from below, wherein said handles (7) are capable of being moved from the hanging position to the mentioned stacking position,

and **characterized by** a handle (7) which incorporates,

- a carrying plate (8) which, at hanging position, extends approximately horizontal outwards from the side of the basket (3), leans against the upper side of the body (2) and supports the basket (3), whereas at stacking position, extends approximately horizontal inwards to the basket (3), the bottom of the upper basket (30) fitting thereon,

- a fixing plate (9) which is vertically attached to the carrying plate (8) to form the L-shape and whereby the handle (7) is attached to the basket (3) and supports the load applied,

- two housings (10) on the fixing plate (9), where two ends of the axis wire (4) are attached to and whereby, between the stacking and hanging positions, the handle (7) is moved by being rotated around the said wire (4),

- a bearing (11) positioned at one side of the fixing plate (9) which bearing (11) fits to the bearing wire (5) at stacking position,

- a groove (12) positioned at the other side of the fixing plate (9) fitting to the bearing wire (5) at hanging position,

- at least two slits (14) starting from one side of the fixing plate (9) extending up to the carrying plate (8) the slits (14) of which permit the handle (7) to be moved and rotated between the stacking and hanging positions such that the fixing plate (9) passes through the axis wire (4) and the bearing wire (5), said slits (14) sliding on the vertical supporting wires (6) as the handle (7) is being rotated, wherein the supporting wires (6) lean against the carrying plate (8) by passing therethrough.

2. A cooling device (1) according to Claim 1 **characterized by** a handle (7) incorporating at least one projection (13) positioned above the carrying plate (8), extending in the same direction with and parallel to the fixing plate (9) the projection (13) of which, at stacking position, squeezes the supporting wires (6)

between the fixing plate (6) and itself as it leans against the mentioned supporting wires (6) that extend parallel to the fixing plate (9).

3. A cooling device (1) according to Claims 1 or 2 **characterized by** a handle (7) incorporating two opposite housings (10) which are positioned at two sides of the fixing plate (9), where the ends of the axis wire (4) fit into, a gap is being provided therebetween so that the axis wire (4) can be attached and the housings (10) of which are in form of a quadrangle having its corners rounded so that the axis wire (4) can slideably move thereon as the handle (7) is moved between the hanging and stacking positions.

4. A cooling device (1) according to Claims 1, 2 or 3 **characterized by** a handle (7) incorporating a groove (12) which is in form of a hook positioned at one side of the fixing plate (9) so as to grasp the bearing wire (5) from inside and below as the handle (7) is at hanging position.

5. A cooling device (1) according to any one of the above Claims **characterized by** a handle (7) incorporating a bearing (11) which is positioned at the other side of the fixing plate (9) and at stacking position, grasps the bearing wire (5) from the top.

6. A cooling device (1) according to any one of the above Claims **characterized by** a handle (7) incorporating channels (15) with proper shape and dimension, positioned at the surface of the carrying plate (8) the surface of which is supporting the upper basket (30) at stacking position, where the wires at the bottom of the mentioned basket (30) fit into.

#### Patentansprüche

1. Kühlvorrichtung (1), umfassend:

- einen Gehäusekörper (2),
- wenigstens einen Korb (3), in den Artikel gelegt werden und der gestapelt und in dem Gehäusekörper (2) angeordnet ist und auf zwei gegenüberliegenden Seiten einen Achsendraht (4), dessen beide Enden frei sind, einen horizontalen Lagerungsdraht (5) unter dem Achsendraht (4) und parallel dazu und wenigstens zwei vertikal aneinander ausgerichtete Stützdrähte (6) aufweist, die den Achsendraht (4) und den Lagerungsdraht (5) verbinden, und
- zwei Griffe (7), die einander gegenüber an den Achsendrähten (4) und Lagerungsdrähten (5) des Korbs (3) angebracht sind, wodurch der Korb (3) in einer Hängeposition an seinen zwei Seiten aufgehängt und/oder transportiert werden kann und wodurch mehr als ein Korb (3, 30)

in einer Stapelposition über dem anderen angeordnet werden kann, wobei der obere Korb von den Griffen (7) von unten abgestützt wird, wobei die Griffe (7) aus der Hängeposition in die Stapelposition bewegt werden können,

und **gekennzeichnet durch** einen Griff (7), der Folgendes aufweist

- eine Trägerplatte (8), die sich in der Hängeposition ungefähr horizontal von der Seite des Korbs (3) nach außen erstreckt, sich an die Oberseite des Gehäusekörpers (2) anlehnt und den Korb (3) stützt, während sie sich in der Stapelposition ungefähr horizontal nach innen zum Korb (3) erstreckt, wobei der Boden des oberen Korbs (30) darauf sitzt,

- eine Befestigungsplatte (9), die vertikal an der Trägerplatte (8) angebracht ist, um eine L-Form zu bilden, und wodurch der Griff (7) am Korb (3) angebracht ist und die ausgeübte Belastung abstützt,

- zwei Gehäuse (10) an der Befestigungsplatte (9), an denen zwei Enden des Achsendrahts (4) angebracht sind und wodurch der Griff (7) zwischen der Stapel- und der Hängeposition **durch** Drehen um den Draht (4) bewegt wird,

- ein Lager (11), das an einer Seite der Befestigungsplatte (9) angeordnet ist, wobei das Lager (11) in der Stapelposition mit dem Lagerdraht (5) zusammenpasst,

- eine Nut (12), die an der anderen Seite der Befestigungsplatte (9) angeordnet ist und in der Hängeposition mit dem Lagerdraht (5) zusammenpasst,

- wenigstens zwei Schlitze (14), die von einer Seite der Befestigungsplatte (9) ausgehen und sich bis hinauf zur Trägerplatte (8) erstrecken, wobei deren Schlitze (14) es dem Griff (7) erlauben, bewegt und zwischen der Stapel- und der Hängeposition bewegt zu werden, derart, dass die Befestigungsplatte (9) zwischen dem Achsendraht (4) und dem Lagerungsdraht (5) hindurch tritt, wobei die Schlitze (14) an den vertikalen Stützdrähten (6) gleiten, wenn der Griff (7) gedreht wird, wobei sich die Stützdrähte (6) an der Trägerplatte (8) anlehnen, indem sie **durch** sie hindurch verlaufen.

2. Kühlvorrichtung (1) nach Anspruch 1, **gekennzeichnet durch** einen Griff (7), der wenigstens einen Vorsprung (13) aufweist, der über der Trägerplatte (8) angeordnet ist und sich in dieselbe Richtung wie die Befestigungsplatte (9) und parallel dazu erstreckt, wobei deren Vorsprung (13) in der Stapelposition die Stützdrähte (6) zwischen sich und der Befestigungsplatte (6) zusammendrückt und sich an die Stützdrähte (6) anlegt, die sich parallel zur Befestigungs-

platte (9) erstrecken.

3. Kühlvorrichtung (1) nach den Ansprüchen 1 oder 2, **gekennzeichnet durch** einen Griff (7), der zwei gegenüberliegende Gehäuse (10) aufweist, die an zwei Seiten der Befestigungsplatte (9) angeordnet sind, in die die Enden des Achsendrahts (4) eingesetzt sind, wobei ein Spalt dazwischen vorgesehen ist, derart, dass der Achsendraht (4) angebracht werden kann, und dessen Gehäuse (10) die Form eines Vierecks aufweisen, dessen Ecken abgerundet sind, derart, dass der Achsendraht (4) sich gleitend daran bewegen kann, während der Griff (7) zwischen der Hänge- und der Stapelposition bewegt wird.
4. Kühlvorrichtung (1) nach den Ansprüchen 1, 2 oder 3, **gekennzeichnet durch** einen Griff (7), der eine Nut (12) in der Form eines Hakens aufweist, die an einer Seite der Befestigungsplatte (9) angeordnet ist, um den Lagerdraht (5) von innen und unten zu ergreifen, wenn der Griff (7) in der Hängeposition ist.
5. Kühlvorrichtung (1) nach einem der vorangehenden Ansprüche, **gekennzeichnet durch** einen Griff (7), der Lager (11) aufweist, das an der anderen Seite der Befestigungsplatte (9) angeordnet ist und in der Stapelposition den Lagerungsdraht (5) von oben ergreift.
6. Kühlvorrichtung (1) nach einem der vorangehenden Ansprüche, **gekennzeichnet durch** einen Griff (7), der Kanäle (15) mit einer geeigneten Form und Abmessung aufweist, die an der Oberfläche der Trägerplatte (8) angeordnet sind, deren Oberfläche den oberen Korb (30) in der Stapelposition abstützt und in die die Drähte am Boden des Korb (30) passen.

## Revendications

1. Un dispositif de refroidissement (1) comprenant

- un corps (2),  
 - au moins un panier (3) dans lequel des objets sont placés, qui est empilé et placé dans ledit corps (2) et qui présente, sur deux côtés opposés, un fil d'axe (4) ayant deux extrémités libres, un fil de support horizontal (5) au-dessous de et parallèlement audit fil d'axe (4) et au moins deux fils de supports verticalement alignés (6) reliant le fil d'axe (4) et le fil de support (5), et  
 - deux poignées (7) qui sont fixées de manière opposée aux fils d'axe (4) et aux fils de support (5) du panier (3), par lequel dans une position de suspension le panier (3) peut être suspendu à ses deux côtés et/ou être porté et par lequel plus d'un panier (3, 30) peut être positionné l'un sur l'autre dans une position d'empilement, le

panier supérieur étant supporté par les poignées (7) par le bas, où lesdites poignées (7) sont capables d'être déplacées de la position de suspension à ladite position d'empilement,

et **caractérisé par** une poignée (7) qui présente

- une plaque de support (8) qui, dans la position de suspension, s'étend à peu près horizontalement vers l'extérieur à partir du côté du panier (3), qui s'appuie sur le côté supérieur du corps (2) et supporte le panier (3), tandis que dans la position d'empilement, elle s'étend à peu près horizontalement vers l'intérieur au panier (3), le fond du panier supérieur (30) être placé sur celle-là,

- une plaque de fixation (9) qui est fixée verticalement à la plaque de support (8) pour créer la forme en L et par lequel la poignée (7) est fixée au panier (3) et supporte la charge appliquée,

- deux logements (10) sur la plaque de fixation (9), auxquels deux extrémités du fil d'axe (4) sont fixées et par lequel la poignée (7) est déplacée entre les positions de suspension et d'empilement en étant tournée autour dudit fil d'axe (4),

- un palier (11) qui est positionné à un côté de la plaque de fixation (9), où le palier (11) est placé sur le fil de support (5) dans la position d'empilement,

- une rainure (12) qui est positionnée à l'autre côté de la plaque de fixation (9), qui est placée sur le fil de support (5) dans la position de suspension,

- au moins deux fentes (14) qui commencent à partir d'un côté de la plaque de fixation (9) s'étendant jusqu'à la plaque de support (8) dont les fentes (14) permettent à la poignée (7) d'être déplacées et tournées entre les positions d'empilement et de suspension de telle sorte que la plaque de fixation (9) passe à travers le fil d'axe (4) et le fil de support (5), lesdites fentes (14) glissant sur les fils de support verticaux (6) comme la poignée (7) est tournée, où les fils de support (6) s'appuient sur la plaque de support (8) en passant à travers celles-là.

2. Un dispositif de refroidissement (1) selon la Revendication 1, **caractérisé par** une poignée (7) qui présente au moins une protubérance (13) positionnée au-dessus de la plaque de support (8), qui s'étend dans la même direction avec et parallèlement à la plaque de fixation (9) dont la protubérance (13) presse les fils de support (6) entre la plaque de fixation (6) et elle-même dans la position d'empilement comme elle s'appuie sur lesdits fils de support (6) qui s'étendent parallèlement à la plaque de fixation (9).

3. Un dispositif de refroidissement (1) selon les Revendications 1 ou 2, **caractérisé par** une poignée (7) qui présente deux logements opposés (10) positionnés au deux côtés de la plaque de fixation (9), où les extrémités du fil d'axe (4) sont placées, un espace est fourni entre celles-là de telle sorte que le fil d'axe (4) est fixé et dont les logements (10) sont en forme d'un quadrilatère ayant des coins arrondis de telle sorte que le fil d'axe (4) peut se déplacer de manière coulissante sur celles-ci comme la poignée (7) est déplacée entre les positions de suspension et empilement.

4. Un dispositif de refroidissement (1) selon les Revendications 1, 2 ou 3, **caractérisé par** une poignée (7) qui présente une rainure (12) qui est en forme de crochet positionné à un côté de la plaque de fixation (9) de manière à saisir le fil de support (5) à partir de l'intérieur et par le bas comme la poignée (7) est dans la position de suspension.

5. Un dispositif de refroidissement (1) selon l'une quelconque des revendications précédentes, **caractérisé par** une poignée (7) qui présente un palier (11) qui est positionné à l'autre côté de la plaque de fixation (9) et saisit le fil de support (5) par le haut dans la position d'empilement.

6. Un dispositif de refroidissement (1) selon l'une quelconque des revendications précédentes, **caractérisé par** une poignée (7) qui présente des canaux (15) avec la forme et la dimension appropriées, qui sont positionnés sur la surface de la plaque de support (8) dont la surface supporte le panier supérieur (30) dans la position d'empilement, où les fils au fond dudit panier (30) sont placés.

Figure 1

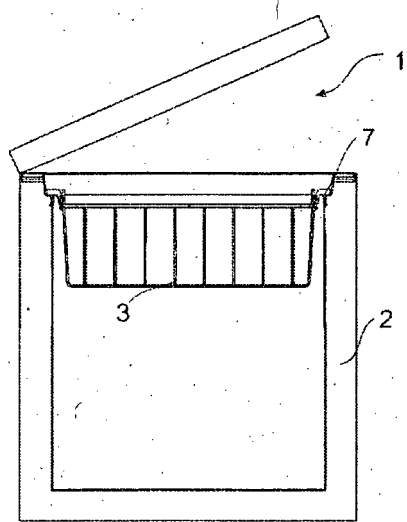


Figure 2

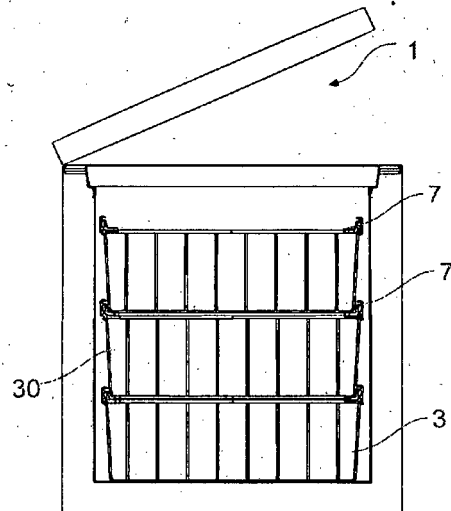


Figure 3

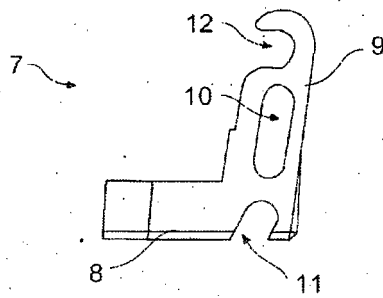


Figure 4

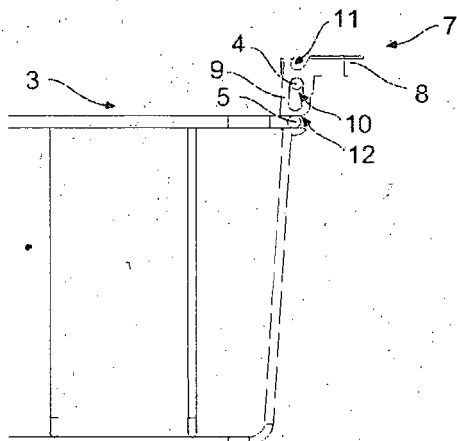


Figure 5

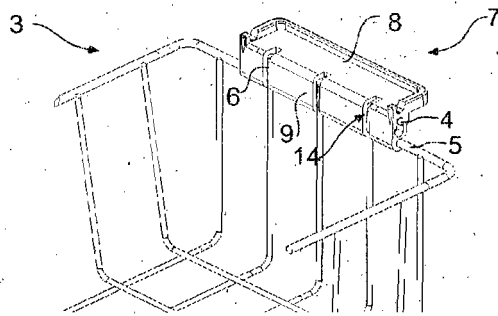


Figure 6

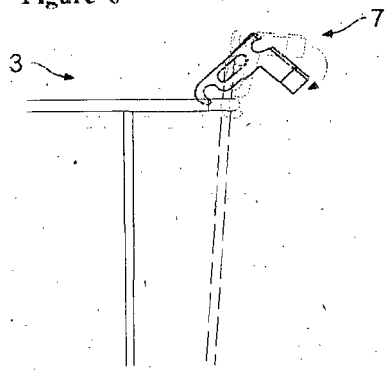


Figure 7

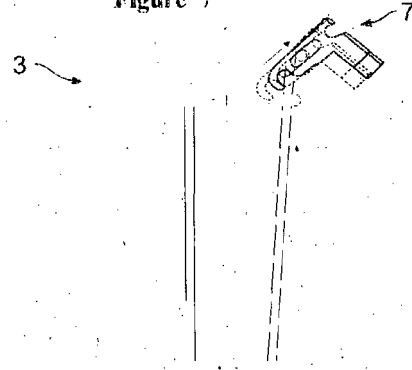


Figure 8

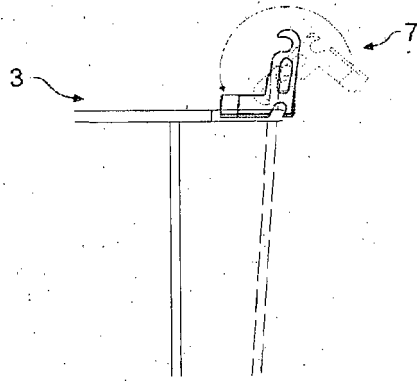


Figure 9

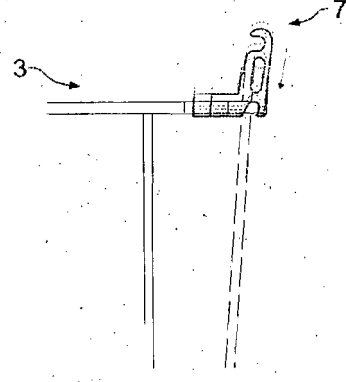


Figure 10

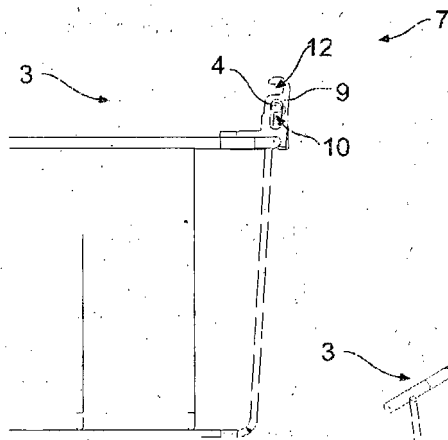
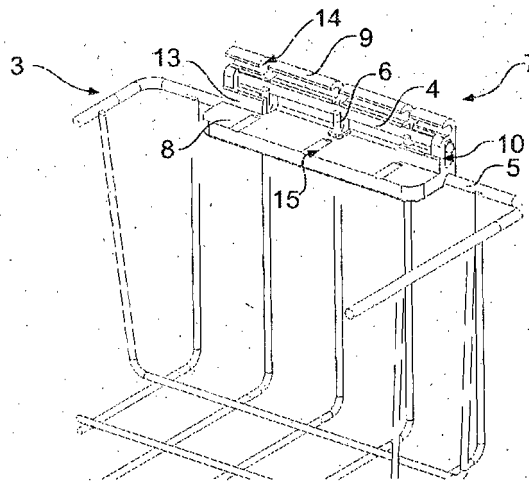


Figure 11



**REFERENCES CITED IN THE DESCRIPTION**

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**Patent documents cited in the description**

- FR 2433461 [0003]
- US 4241831 A [0004]