



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
08.03.2017 Bulletin 2017/10

(51) Int Cl.:
F25D 25/02 (2006.01)

(21) Application number: **16182560.9**

(22) Date of filing: **03.08.2016**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
MA MD

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(30) Priority: **02.09.2015 TR 201510876**

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(54) **DOMESTIC COOLING APPLIANCE WITH A SHELF TO WHICH DIFFERENTLY SIZED FOOD RECEIVING UNITS ARE ATTACHABLE**

(57) The invention relates to a domestic cooling appliance (1) having at least an interior (4), which is delimited by the walls of an inner container (3) and configured to receive food, and with a shelf (9), which is arranged in the interior (4), and with a food receiving unit, which is attached to the shelf (9) by means of a retaining device

(15), wherein the retaining device (15) is size adjustable and in a first size adjustment configured to receive a first food receiving unit (14) having a first size and in a second size adjustment configured to receive a second food receiving unit (16) having a second size, which is different from the first size.

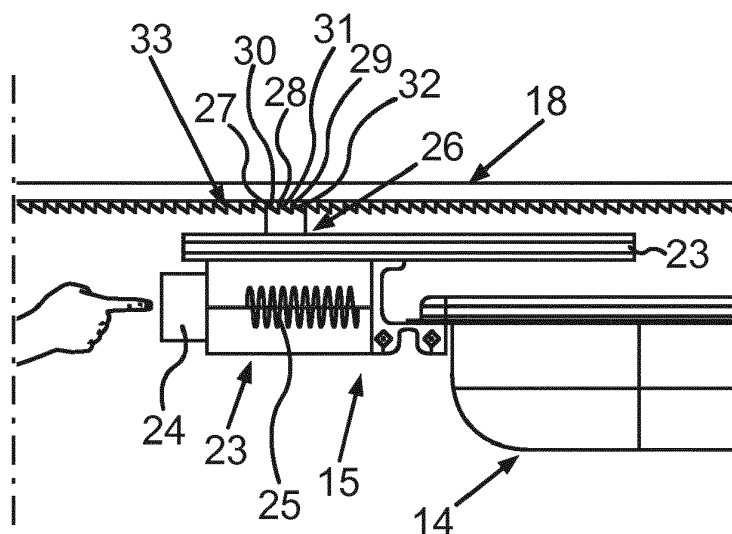


Fig.6

Description

Field of Invention

[0001] The invention relates to a domestic cooling appliance having at least an interior, which is delimited by the walls of an inner container and which is configured to receive food. Besides, the domestic cooling appliance comprises a first shelf, which is arranged in the interior. Moreover, the domestic cooling appliance has a first food receiving unit, which is attached to the shelf by means of a retaining device.

Prior Art

[0002] It is known with regard to domestic cooling appliances that they usually feature a plurality of shelves in an interior, by means of which the interior is divided into partial volumes. Storage goods can be positioned on the shelves. These storage goods are usually foodstuffs, i. e. food and beverages, which can thus be individually stored. Such a shelf usually features a plate-like element. Such a shelf is mounted on the walls of the inner container and can preferably also be pulled out and slid in and also in particular completely removed.

[0003] In order to increase storage capacity, it is known for example from WO 2014/090733 A1 that an additional receiving part for food is arranged at such a shelf. With such designs, where this additional receiving part is arranged at the shelf beneath said shelf, mounting at the shelf is cumbersome and, besides, minimized with regard to the creation of variants. A pivoting of a bracket of the receiving part itself can be performed.

Purpose of the Invention

[0004] It is the object of the present invention to provide a domestic cooling appliance where the food storage capacity of a module with a shelf and a further receiving part for storing food attached thereto is more variable.

[0005] This object is solved by a domestic cooling appliance having the features of claim 1.

[0006] A domestic cooling appliance according to the invention comprises at least an interior for receiving food, which is delimited by the walls of an inner container of the domestic cooling appliance. The domestic cooling appliance comprises at least one shelf, which is arranged in the interior. Besides, the domestic cooling appliance comprises a food receiving unit which is attached to the first shelf by means of a retaining device which is separate from the food receiving unit. An essential idea of the invention is to be seen in that the retaining device itself is size adjustable. In a first size adjustment of the retaining device said retaining device is configured to receive the first food receiving unit having a first size. A size adjustment of this retaining device, which does not require additional components, results in the adjustment of a second size, in which the retaining device is configured to

receive a second food receiving unit having a second size, which is different from the first size. Thus, the retaining device can be mechanically adjusted in itself, which presently results in a size variation. Due to this variability, the module with the shelf and a food receiving unit is rendered variable and flexible such that differently sized food receiving units can be arranged at the shelf.

[0007] The first food receiving unit is in particular a unit that is inherently rigid, dimensionally stable and unalterable with regard to its capacity. It is not in itself deformable. Thus, the storage capacity of a food receiving unit is unalterable. The same in particular also applies to the second food receiving unit.

[0008] Thus, the invention is particularly advantageous in that according to demand differently sized food receiving units can be attached to the shelf and thus differently sized additional volumes for the reception of food provided. Thus, the amount of food which can be received by a module formed by the first shelf and a food receiving unit can be individually increased or reduced. Moreover, due to the size variability of the module, in particular due to the attachment of a larger food receiving unit or a smaller food receiving unit to the shelf, the storage capacity of the entire module can be adjusted to the size of a specifically to be stored storage item. As a result, there is no unnecessary waste of storage space, while on the other hand the storage capacity is not undesirably restricted either.

[0009] As a result of such a design, also the interior can be improved and optimally utilized with regard to its storage capacity.

[0010] When the retaining device is adjusted in its size, the shelf remains unaltered with regard to its position and size. The first and the second food receiving unit also remain unchanged in their respective sizes. In particular, during the size adjustment of the retaining device no food receiving unit is arranged at the retaining device. Only after the desired size of the retaining device has been adjusted, the food receiving unit provided for this size adjustment is mounted thereon, in particular not until then inserted into a size adjusted receiving space of the retaining device and held by the retaining device.

[0011] It is preferably provided that the retaining device has a first carrier and a second carrier. On these two carriers the first food receiving unit or the second food receiving unit, depending on which of them is arranged at the retaining device, is mounted or arranged movably with regard to said carriers.

[0012] By means of the retaining device it is provided that only one food receiving unit at a time can be retained. However, by means of the invention it is enabled that said respective food receiving unit, which is attached to the shelf and retained by the retaining device, can be differently sized.

[0013] This food receiving unit which is attached to the shelf by means of the retaining device can be displaced relative to the carriers in a straight line in one direction, in particular in the depth direction of the domestic cooling

appliance pulled out of or slid into the interior. Thus it is also easy to use and easily accessible with regard to the insertion or removal of food.

[0014] It is in particular provided that the direction of movement of a food receiving unit which is arranged at the two carriers is perpendicular to the direction in which the retaining device is adjustable with regard to its size.

[0015] It is in particular provided that a food receiving unit and thus the first food receiving unit or the second food receiving unit is arranged beneath the shelf and retained by the retaining device. Thus, on its upper side the shelf is not restricted with regard to its capacity.

[0016] Besides, as a result of such a design and local arrangement the food receiving unit is covered by the shelf. Due to the fact that a food receiving unit is as it were suspended from the shelf from below by means of the retaining device, also the package space of the interior beneath the shelf is optimally utilized. Thus, a food receiving unit which is attached to a shelf by means of the retaining device is also improved as regards ease of handling.

[0017] The two carriers can preferably be formed in the manner of rails or profiles and can be profile parts.

[0018] In a preferred embodiment, it is envisaged that the first carrier is immovably arranged at the shelf. Thus a relative movement of said first carrier with regard to the shelf, particularly in order to adjust the size of the retaining device, is not envisaged. Thus, a mechanically highly stable design of the retaining device is achieved and the mounting of a food receiving unit on the first carrier improved.

[0019] It is preferably provided that for the size adjustment of the retaining device the second carrier is movable with regard to the shelf and correspondingly arranged at the shelf. Thus, a very simple design is created in order to be able to change or adjust the retaining device in its size. Particularly if the first carrier is immovably arranged at the shelf, the size adjustment can be safely and precisely performed without the occurrence of undesired size tolerances and without impairment of the reception or mounting of a food receiving unit on the carriers.

[0020] Due to the fact that only one of the carriers, i.e. in particular the second carrier, is formed to be movable relative to the shelf, a simultaneous adjustment of both carriers with regard to their position is also prevented. The practicality of the adjustment for a user is thus improved and more easily comprehensible. It is in particular provided that for the size adjustment the retaining device is formed in discrete size levels. This is advantageous in that the exactness of the size adjustment is improved. Due to the fact that these size levels are already predefined, in particular simply through the design of the retaining device itself, it is very easy for a user to identify the respective size levels and then to exactly adjust the desired size level. Thus, the subsequent placement of a food receiving unit is also simplified, since the size adjustment of the retaining device has already been precisely performed in adaptation, as it were, to the respec-

tive size of the food receiving unit to be inserted. An extensive re-setting or readjustment of the size of the retaining device is thus prevented, which might occur in the case of a continually size adjustable retaining device.

[0021] In particular, the size levels are adjusted to the given sizes of the first food receiving unit and of the second food receiving unit. In particular, if the food receiving units which are provided for mounting to the shelf feature conventional, in particular standardised sizes, this adjustment of discrete size levels of the retaining device is then particularly advantageous. In that case, a design of the retaining device with the discrete size levels is already given, which is adjusted to these predefined sizes of the food receiving units. Thereby, the above-mentioned advantages are again reinforced.

[0022] It is preferably provided that the retaining device features a latching element. A latching unit is in particular formed at the shelf, which features a first latching reception and at least a second latching reception. The latching element engages into the first latching reception in order to adjust the individual size of the retaining device and to fixate a first size of the retaining device thus adjusted. Besides, in order to adjust and fixate a second size of the retaining device, the latching element engages into the second latching reception. Thus, these two different possible size levels of the retaining devices, which are formed and capable of being adjusted by the latching receptions and the latching element, are very easily adjustable. Moreover, they are retained in a mechanically safe manner and an undesired release is avoided. Besides, such a design with a latching element and a latching unit is also mechanically highly stressable.

[0023] It is preferably provided that the latching element has at least a first latching tooth and a second latching tooth. Due to the provision of such an at least duplicate and thus redundant design of the latching element with these latching teeth, mechanical coupling with the latching unit can be improved. The stability and fixation of the individually selected size level of the retaining device is thus safely maintained without the occurrence of undesired tolerances.

[0024] It can be provided that the first latching reception and the second latching reception form a toothed rack. This structure enables a simple design of the latching unit. Besides, the direction of adjustment for the size adjustment of the retaining device is predefined in a simple manner since, based on the linear toothed rack, this direction of adjustment is also linear. This results in a simple size adjustment of the retaining device without jamming.

[0025] It is advantageously provided that the latched or interlocked state between the latching element and the first latching reception or the second latching reception is maintained in prestressed condition by means of a spring element of the retaining device. This is particularly advantageous in that thus an undesired release of the latched state is preventable in a further enhanced manner by means of the prestressing force of the spring

element. In this context, with its prestressing force the spring element acts in a direction which as it were attempts to push the latching element away from the opposite carrier so that by means of the spring element with its spring force the latching element is as it were pushed away from the stationary first carrier.

[0026] It is in particular provided that an operating element is arranged at the second carrier, operation of which enables the disengagement of the latching element from the first latching reception or the second latching reception and thus an alteration of the adjusted and fixated size adjustment of the retaining device. Thus, a very easy and user-friendly operating mechanism for the size adjustment of the retaining device can be provided. In this context, the operating element is easy to operate for a user and preferably has to be moved, particularly pushed, only in one direction. As a result of this manner of operation of the operating element also a reliable and simple release of the latched state is achievable. Due to this design of the retaining device a reliable principle with regard to the size adjustment of the retaining device can be achieved with a minimum number of components and in addition, as it were via a small and short-range effect chain of the components involved, an adjustment of a specific size of the retaining is enabled that is highly play-free and thus features low tolerances.

[0027] It is advantageously provided that the spring element is coupled to the operating element such and through operation of the operating element the spring element is operated such that the prestressed state of the latching element in the first latching reception or the prestressed state of the latching element in the second latching reception is released and the latching element is removed from the first latching reception or the second reception and lowered into the operating element. In this context, this means that through operation of the operating element with the spring element the latching element is automatically removed from the tooth structure of the latching unit and the latching element is then inserted into the operating element. The size adjustment of the retaining device is consequently enabled in a very simple and space-saving manner since in this context a distance between the operating element and the latching unit can thus be minimal. For, in the disengaged and thus decoupled state between the latching element and the latching unit, the latching element is, as it were, no longer present since it is arranged in the operating element. It thus does not impede a relative movement between the operating element, which is preferably arranged at the movable second carrier, and the latching unit, which is in particular immovably arranged at the shelf. As a result, also a very rapid adjustment of the different sizes of the retaining device is enabled.

[0028] Besides, during the size adjustment of the retaining device and thus also during the movement of the operating element with the latching element relative to the latching unit, the latching element is thus not damaged. This ensures permanent high functionality of the

latching element.

[0029] It is preferably provided that the shelf features a plate and a frame which at least partially surrounds the plate. The latching unit is in particular formed in the frame. The plate can, for example, be made of glass or plastic. The plate can be at least partially transparent. The plate is protected by the frame. In this context, the frame can be provided for direct mechanical coupling to other components, in particular for mounting on supports on the walls of the inner container. Thus, the plate is not directly contacted and protected from undesirable wear and damage.

[0030] Preferably, the frame features frame parts which encompass the plate on its edge sides.

[0031] Specifically, in two opposite frame parts recesses are formed, in particular grooves, into which, respectively, the first carrier and the second carrier of the retaining device engage and wherein they are supported. Thus, mounting of these two carriers is enabled in a highly stable manner and the plate is not impaired thereby. In an advantageous embodiment it is then envisaged that the second carrier of the retaining device, which is in particular movable relative to the shelf, is guided in these grooves in the opposite frame parts and accordingly capable of being moved therein.

[0032] The second carrier is thus prevented from undesirably falling out. It is in particular provided that the latching unit, in particular a latching unit formed as a toothed rack, is formed in at least one of these grooves of a frame part. This latching unit can then be formed on a groove bottom or on a groove side wall. The latching unit can in this context be integrated into the respective frame part.

[0033] Due to this local arrangement of the latching unit, the coupling to the latching element can be improved and also maintained in a permanently precise manner. Also, undesired decoupling between the latching element and the latching unit is thus prevented. Besides, due to this design, also the precise displacement of the second carrier is enabled and thus also the rapid, reliable and targeted attainment of a desired further size level of the retaining device.

[0034] It is preferably provided that the size adjustability is constituted by a width adjustment of a receiving space of the retaining device, wherein the receiving space is formed to receive the first or the second food receiving unit.

[0035] It is preferably provided that by means of the retaining device the first food receiving unit and the second food receiving unit are retained at the shelf beneath said shelf, as explained above.

[0036] In an advantageous embodiment it is provided that the first food receiving unit is a trough or a bottle holder.

[0037] The second food receiving unit can be formed correspondingly.

[0038] The terms "above", "below", "in front", "behind", "horizontal", "vertical", "depth direction", "width direc-

tion", "height direction" signify the positions and orientations given if the appliance is used and arranged as intended and an observer is then standing in front of and looking in the direction of the appliance.

[0039] Further features of the invention are apparent from the claims, the figures and the description of the figures. The features and feature combinations previously mentioned in the description and the features and feature combinations mentioned below in the description of the figures and/or shown in the figures alone are usable not only in the respectively specified combination, but also in other combinations or else alone, without leaving the scope of the invention. Thus, also embodiments are to be regarded as comprised and disclosed by the invention, which are not explicitly shown and explained in the figures, but which derive and are producible from the illustrated explanations by separated feature combinations. Also, embodiments and feature combinations are to be regarded as disclosed which thus do not exhibit all features of an originally formulated independent claim.

Brief Description of the Figures

[0040] Embodiments of the invention are detailed below with reference to schematic drawings.

[0041] Therein show:

- Fig. 1 a schematic perspective view of an embodiment of a domestic cooling appliance according to the invention;
- Fig. 2 a front view of a shelf with a first food receiving unit having a first size attached thereto;
- Fig. 3 a front view of a shelf with a second food receiving unit having second size attached thereto;
- Fig. 4 a perspective view of an embodiment according to Fig. 2;
- Fig. 5 a perspective view of the components shown in Fig. 4, which differs from Fig. 4;
- Fig. 6 a schematic sectional view of a partial area of the embodiment according to Fig. 2;
- Fig. 7 a view of the components according to Fig. 6 in a disengaged state of a latching element and a latching unit at a retaining device;
- Fig. 8 a further view of partial components at a retaining device for retaining a food receiving unit at a shelf.

Detailed Description of the Invention

[0042] In the figures identical or functionally identical

elements bear the same reference numbers.

[0043] Fig. 1 shows in a perspective view a domestic cooling appliance (1). The domestic cooling appliance (1) can, for example, be a refrigerator or a freezer or a fridge-freezer. The domestic cooling appliance (1) is configured to receive foodstuffs such as food or beverages. These foodstuffs are thus storage goods which can be inserted into the domestic cooling appliance (1) for storing and preserving.

[0044] The domestic cooling appliance (1) comprises a housing (2), in which an inner container (3) is arranged. With its walls, which are constituted by two opposite vertical side walls, a rear wall, a bottom wall and a top wall, the inner container (3) delimits an interior (4).

[0045] In the interior (4) an arrangement of a plurality of drawers is shown, which is merely intended as an example, wherein presently a first drawer (5) and a second drawer (6) are indicated with reference signs, again merely by way of example.

[0046] The interior (4) can be closed by a door (7), which is pivotably arranged at the housing (2). A plurality of door racks are arranged on an inner side facing the interior (4), of which a first door rack (8) is indicated by a reference sign.

[0047] Besides, in the interior (4) at least one shelf (9) is arranged. The shelf (9) divides the interior (4) into partial volumes. As can be seen, this shelf (9) extends across the whole width (width direction in x-direction). The shelf (9) comprises a plate (10), which can, for example, be made of glass. Besides, the shelf (9) comprises a frame (11) which surrounds the plate (10).

[0048] In the embodiment, the shelf (9) is non-destructively detachably removable from the interior and mounted on supports of the inner container (3), which are not shown.

[0049] On an upper side (12) of the shelf (9) and in particular of the plate (10) foodstuffs can be positioned as storage goods.

[0050] As can also already be seen in Fig. 1 and as schematically shown, on an underside (13) opposite the upper side (12) and thus beneath the shelf (9) a first food receiving unit (14) is arranged. In the embodiment, this first food receiving (14) unit is a trough which is configured to receive foodstuffs. However, the first food receiving unit (14) can also, for example, be a bottle holder.

[0051] The first food receiving unit (14) can be pulled out and slid in in the depth direction and thus in the z direction of the domestic cooling appliance (1) and in this context moved relative to the shelf (9), which is immovably arranged in the interior (4). Thus, accessibility from above into the first food receiving unit (14) in its pulled out state is enabled. In its fully inserted state, as shown in Fig. 1, the first food receiving unit (14) is covered from above by the shelf (9), in particular the plate (10).

[0052] A module is formed by the shelf (9) and the first food receiving unit (14), which offers a plurality of options and diverse places for the reception of food.

[0053] Fig. 2 shows in a front view the first embodiment

of such a module. In this embodiment it can be seen that the first food receiving unit (14) is retained at the shelf (9) by a retaining device (15). The first food receiving unit (14) has an individual and unalterable size, which is characterized by a specific width in the x direction.

[0054] The retaining device (15) is formed such that it is size adjustable in itself. This means in the embodiment that the retaining device (15) is size adjustable in the width direction and thus in the x direction. Due to this size variability of the retaining device (15), the reception of differently sized food receiving units can be enabled.

[0055] In this context Fig. 3 shows a front view, in which by means of the retaining device (15) a second food receiving unit (16) is attachable to the shelf (9) previously shown in Fig. 2. As can be seen in comparison with Fig. 2, this second food receiving unit (16) is smaller than the first food receiving unit (14), in particular smaller with regard to its width. Due to the adjustability of the retaining device (15), alternatively two differently sized food receiving units, i.e. at least the first food receiving unit (14) and the second food receiving unit (16) having a different size thereto, can be accommodated one at time at the same shelf (9) by means of the same retaining device (15).

[0056] In particular, the retaining device (15) is thus adjustable with regard to a receiving space (17), in which the first food receiving unit (14) or the second food receiving unit (16) can be accommodated. In this context, the width of the receiving space (17), which is measured in the x direction, can be varied.

[0057] In Fig. 4 the module with the arrangement of the shelf (9) and the first food receiving unit (14) is shown in a perspective view. It can be seen that presently the frame (11) has four frame parts, namely a first frame part (18), a second frame part (19), a third frame part (20) and a fourth frame part (21).

[0058] Fig. 5 shows the embodiment according to Fig. 4 in a perspective view which differs from Fig. 4.

[0059] As can particularly be gathered from Fig. 5, the retaining device (15) comprises a first separate carrier (22). This first carrier (22) is a rail which extends between the first frame part (18) and the third frame part (20) and is preferably fastened thereto. This first carrier (22) is preferably immovably mounted thereon so that it cannot move in relation thereto.

[0060] The retaining device (15) further comprises a second separate carrier (23). The second carrier (23) is preferably arranged parallel to the first carrier (22). The second carrier (23) is also preferably arranged at the first frame part (18) and the third frame part (20). However, the second carrier (23) is arranged at the shelf (9) movably in relation thereto and it is specifically movable in a straight line in the width direction and thus in the x direction. Due to this design of the second carrier (23), the receiving space (17) can be adjusted and thus also the size adjustment of the retaining device (15) altered.

[0061] As can already be seen from Fig. 2 to Fig. 4 and as shown in Fig. 5 in more detail, the first food receiving

unit (14) is movably retained at the first carrier (22) and the second carrier (23) and can thus be pulled out and pushed in relative thereto in the depth direction and thus in the z direction.

[0062] As can further be seen in Fig. 5, the retaining device (15) comprises an operating element (24), which is arranged at the second carrier (23). The size adjustment of the retaining device (15) can in particular be initiated by pressing the operating element (24).

[0063] As shown with regard thereto in Fig. 6, in this embodiment the retaining device (15) has a spring element (25) which is coupled to the operating element (24). Besides, the retaining device (15) features a latching element (26) which according to the embodiment has a first latching tooth (27), a second latching tooth (28) and a third latching tooth (29). These three latching teeth (27, 28 and 29) respectively engage into a latching recess of a latching unit (33), which form a first latching reception (30). In dependence on the number of latching teeth of the latching element (26), a latching reception can also comprise a smaller or larger number of latching recesses. By way of example, a first latching recess (31) and a second latching recess (32) of the first latching reception (30) are indicated with reference signs. The latching unit (33) is formed at the shelf (9). It is in particular formed at the first frame part (18). In particular, this first frame part (18) features a groove (34) (Fig. 5) which is open to the inside and thus towards the opposite third frame part (20). In particular, the second carrier (23) engages into this groove (34) and is guided therein.

[0064] It is in particular also envisaged that a corresponding latching unit is formed in the opposite third frame part (20) and corresponding coupling is provided, as illustrated and explained in Fig. 6.

[0065] In Fig. 6 a first engaged state between the latching element (26) and the latching unit (33) is formed, whereby also a first size of the retaining device (15) is adjusted. Thus, according to the illustration of Fig. 6, also a first size level is realized. In this engaged state it is envisaged that the spring element (25) presses the latching element (26) into the latching unit (33) such that this interlocked or engaged state is additionally stabilized. Therein, the prestressing force generated by the spring element (25) acts outwards in the direction of the latching element (26) such that this latching element (26) is pressed as it were into the latching unit (33) at the first latching reception (30).

[0066] At this first size level the first food receiving unit (14) can be held by the retaining device (15).

[0067] In order to release the retaining device (15) and the adjusted size level shown in Fig. 6, the operating element (24) is operated, in particular pressed. Thus, the spring element (25) is acted on so that as a result of this impact the latching element (26) is then automatically removed from the interlocked state with the latching unit (33), as shown below in Fig. 7.

[0068] It is moreover provided that the operating element (24), which is then also arranged in the second

carrier (23) with a housing, is configured to receive the latching element (26). As shown in Fig. 7, said latching element (26) is thus lowered into the second carrier (23) or into the operating element (24). As a result, a change of position of the carrier (23) in relation to the shelf (9) is enabled in the x direction so that in this respect a second size level can be adjusted, specifically a reduction of the receiving space (17), so that subsequently for example the second food receiving unit (16) can be accommodated. Subsequent to the attainment of this desired adjusted size level again a latching between the latching element (26) and the latching unit (33) is performed.

[0069] Fig. 7 further shows by way of example a second latching reception (36) with latching recesses into which the latching element (26) engages for the adjustment of a second size level of the retaining device (15). Due to the number of the latching teeth (27, 28, 29) of the latching element (26) formed in this embodiment, the second latching reception (36) is presently also formed with three latching recesses, of which by way of example a first latching recess (37) and a second latching recess (38) of the second latching reception (36) are indicated with reference signs.

[0070] As can be seen, the distance between the first latching reception (30) and the second latching reception (36) along the latching unit (33), which is formed by a toothed rack (39), can only be covered by a displacement of the latching element (26) relative to the latching unit (33).

[0071] Fig. 8 shows an exemplary representation of an embodiment in which the operating element (24) is shown in cross section from the opposite side. It can be provided that here a cam element (35) is present, which is moved through operation of the operating element (24), wherein in consequence of the movement of the cam element (35) the latching element (26) is raised or lowered and thus the coupled or decoupled state with the latching unit (33) achieved.

[0072] It can be provided that here likewise a spring element (25) is present and that the spring element (25) automatically enables the restoration of the operating element (24) into the basic state and/or effects the operation of the cam element (35) in dependence on the operation of the operating element (24).

List of reference signs

[0073]

- | | |
|---|----------------------------|
| 1 | domestic cooling appliance |
| 2 | housing |
| 3 | inner container |
| 4 | interior |
| 5 | first drawer |
| 6 | second drawer |
| 7 | door |
| 8 | door rack |
| 9 | shelf |

- | | |
|-------|---|
| 10 | plate |
| 11 | frame |
| 12 | upper side |
| 13 | underside |
| 5 14 | first food receiving unit |
| 15 | retaining device |
| 16 | second food receiving unit |
| 17 | receiving space |
| 18 | first frame part |
| 10 19 | second frame part |
| 20 | third frame part |
| 21 | fourth frame part |
| 22 | first carrier |
| 23 | second carrier |
| 15 24 | operating element |
| 25 | spring element |
| 26 | latching element |
| 27 | first latching tooth |
| 28 | second latching tooth |
| 20 29 | third latching tooth |
| 30 | first latching reception |
| 31 | first latching recess of the first latching reception |
| 32 | second latching recess of the first latching reception |
| 25 33 | latching unit |
| 34 | groove |
| 35 | cam element |
| 36 | second latching reception |
| 30 37 | first latching recess of the second latching reception |
| 38 | second latching recess of the second latching reception |
| 39 | toothed rack |

Claims

- | | |
|----|--|
| 1. | Domestic cooling appliance (1) having at least an interior (4), which is delimited by the walls of an inner container (3) and configured to receive food, and with a shelf (9), which is arranged in the interior (4), and with a food receiving unit, which is attached to the shelf (9) by means of a retaining device (15), characterized in that the retaining device (15) is size adjustable and in a first size adjustment configured to receive a first food receiving unit (14) having a first size and in a second size adjustment configured to receive a second food receiving unit (16) having a second size, which is different from the first size. |
| 2. | Domestic cooling appliance (1) according to claim 1, characterized in that the retaining device (15) has a first carrier (22) and a second carrier (23), at which in dependence on the current size adjustment of the retaining device (15) the first food receiving unit (14) or the second food receiving unit (16) is arranged and arranged movably in relation thereto. |

3. Domestic cooling appliance (1) according to claim 2, **characterized in that** the first carrier (22) is immovably arranged at the shelf (9).
4. Domestic cooling appliance (1) according to claim 2 or 3, **characterized in that** for the size adjustment of the retaining device (15) the second carrier (23) is arranged at the shelf (9) movably with regard to the shelf (9).
5. Domestic cooling appliance (1) according to any one of the preceding claims, **characterized in that** for the size adjustment the retaining device (15) is formed in discrete size levels and the first size adjustment is a first discrete size level and the second size adjustment is a second discrete size level.
6. Domestic cooling appliance (1) according to claim 5, **characterized in that** the retaining device (15) has a latching element (26) and at the shelf (9) a latching unit (33) with at least a first latching reception (30) and a second latching reception (36) is formed, wherein for the adjustment and fixation of the first size adjustment of the retaining device (15) the latching element (26) engages into the first latching reception (30) and for the adjustment and fixation of the second size adjustment of the retaining device (15) the latching element (26) engages into a second latching reception (36) reachable from the first latching reception (30) only through a relative displacement of the latching element (26) with regard to the latching unit (33).
7. Domestic cooling appliance (1) according to claim 6, **characterized in that** the latching element has at least a first latching tooth (27) and a second latching tooth (28).
8. Domestic cooling appliance (1) according to claim 6 or 7, **characterized in that** the first latching reception (30) and the second latching reception (36) form a toothed rack (39).
9. Domestic cooling appliance (1) according to any one of claims 6 to 8, **characterized in that** the engaged state of the latching element (26) with the first latching reception (30) or with the second latching reception (36) is maintained in prestressed condition by means of a spring element (25).
10. Domestic cooling appliance (1) according to claim 4 and any one of claims 6 to 9, **characterized in that** an operating element (24) is arranged at the second carrier (23), operation of which enables the disengagement of the latching element (26) from the first latching reception (30) or the second latching reception (36) and thus an alteration of the adjusted and fixated first or second size adjustment of the retaining device (15).
11. Domestic cooling appliance (1) according to claim 9 and 10, **characterized in that** the spring element (25) is coupled to the operating element (24) such and through operation of the operating element (24) the spring element (25) is operated such that the prestressed state of the latching element (26) in the first latching reception (30) or the second latching reception (36) is released and the latching element (26) is removed from the first latching reception (30) or the second latching reception (36) and lowered into the second carrier (23).
12. Domestic cooling appliance (1) according to any one of claims 6 to 11, **characterized in that** the shelf (9) features a plate (10) and a frame (11), which at least partially surrounds the plate (10), wherein the latching unit (33) is formed in the frame (11).
13. Domestic cooling appliance (1) according to any one of the preceding claims, **characterized in that** the size adjustability is a width adjustment of a receiving space (17) of the retaining device (15), which is configured to receive the first food receiving unit (14) or the second food receiving unit (16).
14. Domestic cooling appliance (1) according to any one of the preceding claims, **characterized in that** the first food receiving unit (14) or the second food receiving unit (16) are retained at the shelf (9) beneath said shelf (9) by the retaining device (15).
15. Domestic cooling appliance (1) according to any one of the preceding claims, **characterized in that** the first food receiving unit (14) is a trough or a bottle holder or the second food receiving unit (16) is a trough or a bottle holder.

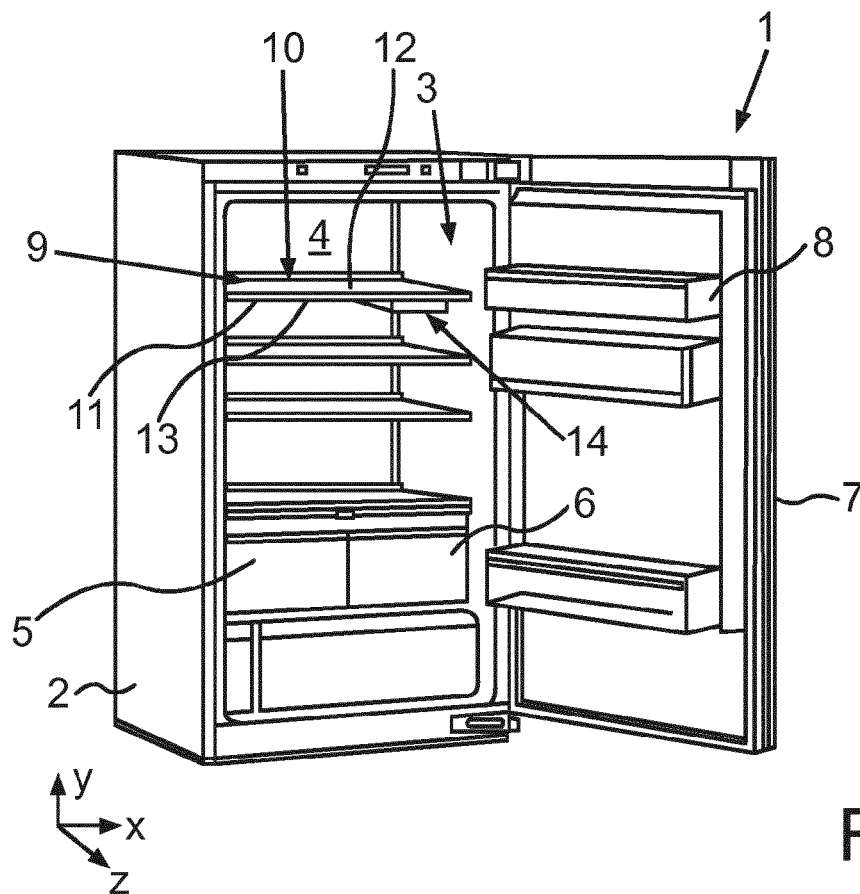


Fig.1

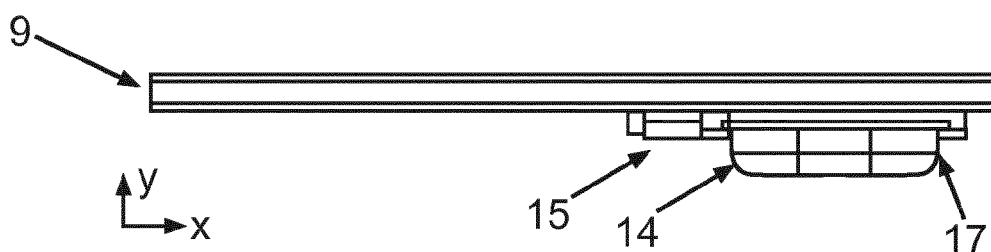


Fig.2

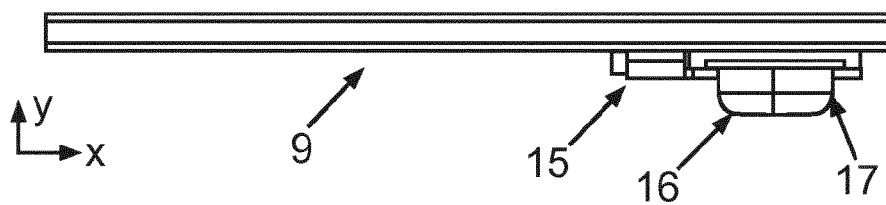


Fig.3

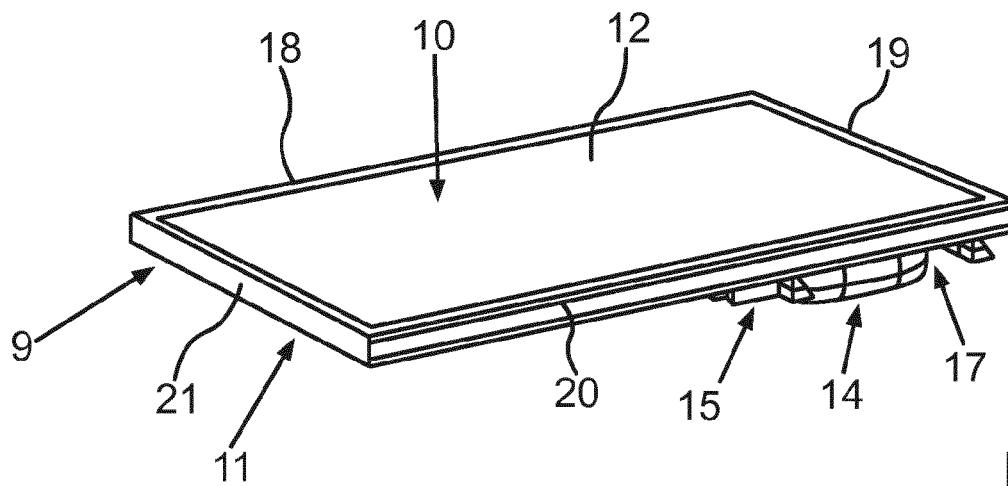


Fig.4

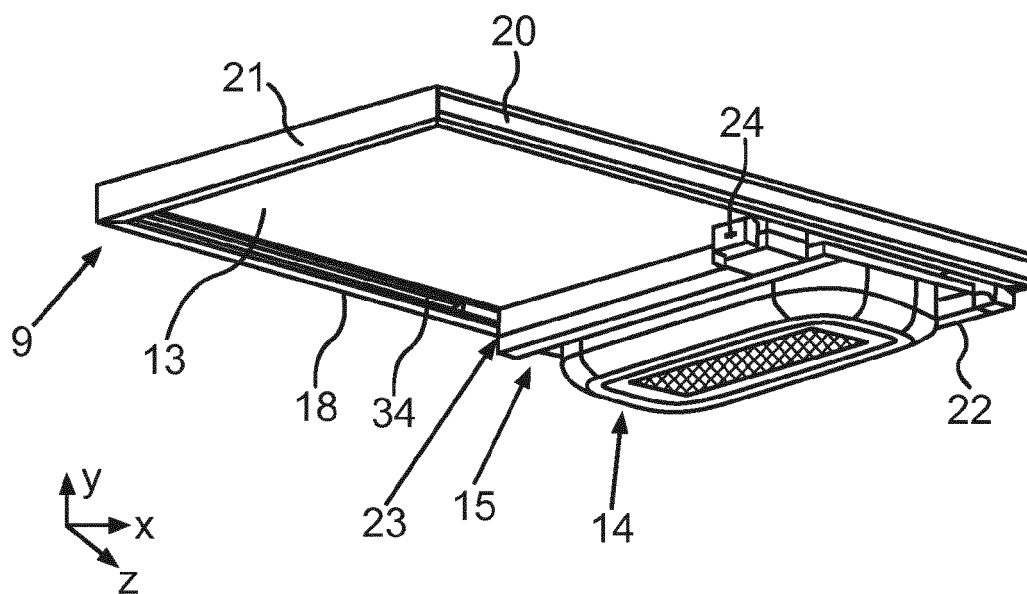


Fig.5

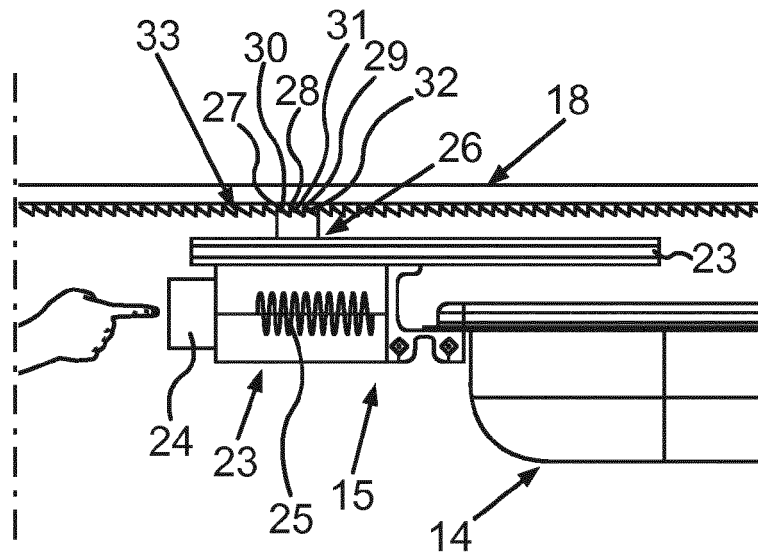


Fig.6

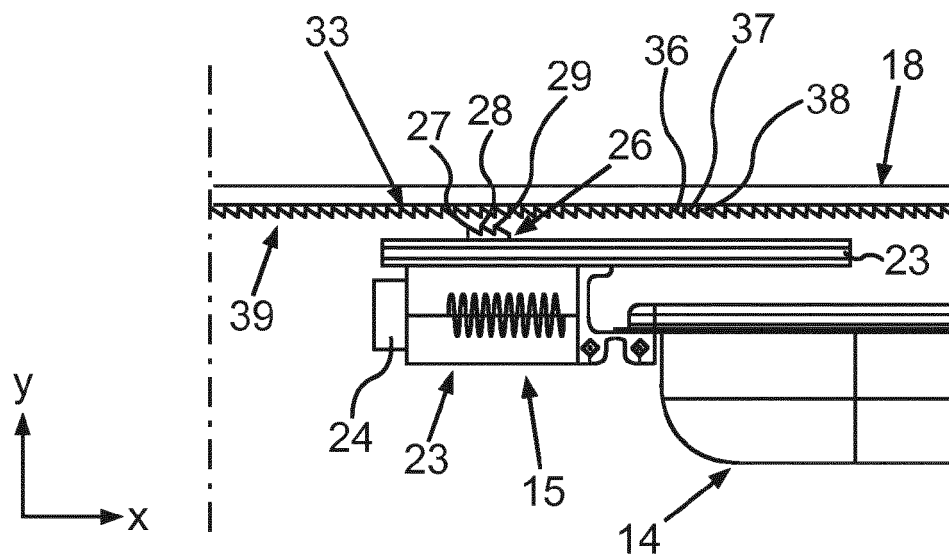


Fig.7

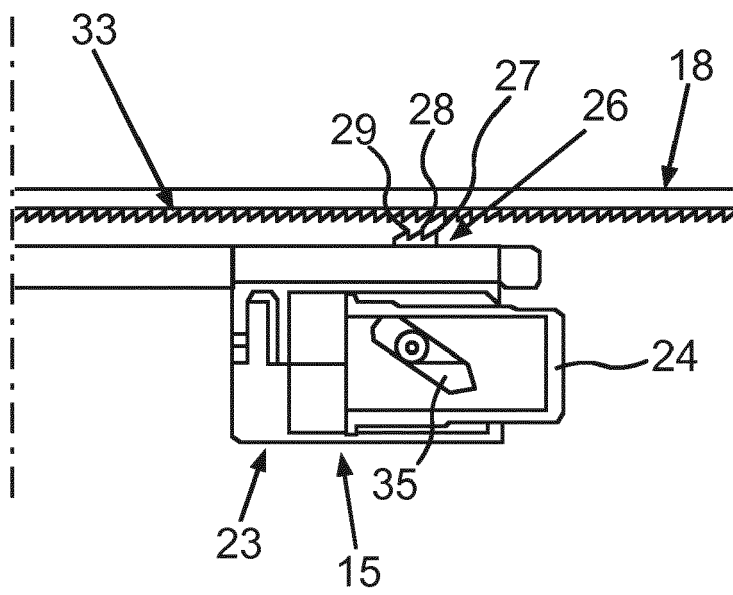


Fig.8



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Application Number
EP 16 18 2560

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			F25D A47B
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Place of search The Hague		Date of completion of the search 22 December 2016	Examiner Yousufi, Stefanie
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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