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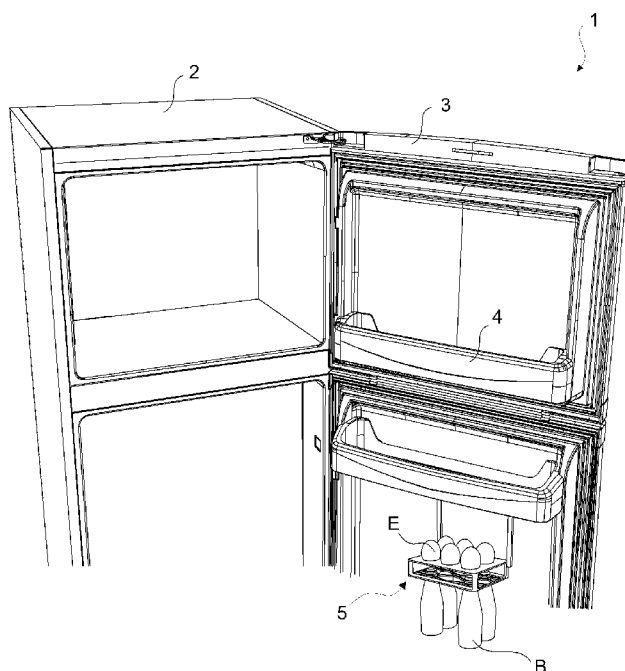
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(54) Title: A COOLING DEVICE COMPRISING A MOVABLE HOLDER

Figure 1



(57) Abstract: The present invention relates to a cooling device (1) comprising a body (2) wherein the objects to be cooled are placed, at least one door (3) providing access into the body (2), at least one shelf (4) disposed at the inner side of the door (3) whereon the objects desired to be stored are placed and at least one holder (5) mounted to the door (3) so as to come upon the lower side of the shelf (4), and wherein the holder (5) can support the bottles (B) and the eggs (E) by being changed to different positions on the door (3) as per need.

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Description**A COOLING DEVICE COMPRISING A MOVABLE HOLDER**

- [0001] The present invention relates to a cooling device comprising a movable holder that is disposed on the door.
- [0002] The cooling devices, preferably refrigerators, comprise egg trays that provide storing the eggs placed therein and bottle holders whereon the bottles are secured. These egg trays and bottle holders are generally disposed in special sections that are formed on the shelves on the door and decrease the usable area of the shelves. Moreover, particularly the egg trays prevent other objects to be stored thereon when not in use due to its holed structure. In the state of the art, egg trays that can be removed from the shelf are provided but these egg trays either get lost or are damaged when taken out of the cooling device. Furthermore, in the state of the art, for the aim of utilizing the cooling device space efficiently, storage containers are provided which present flexible usage volumes enabling storage of both eggs and other items. The bottle holders, disposed at the lower side of the shelves and used particularly for supporting the soda bottles, are designed in order to provide the bottle to be stored in suspended form by partially clasp from the neck of the bottle.
- [0003] In the state of the art International Patent Application No. WO2009083357, a cooling device is described that comprises a bottle holder used selectively for supporting or for holding bottles located at the lower side of the door shelf. In this embodiment, the bottle holder is folded under the shelf when not in use, prevented from occupying space.
- [0004] In the state of the art Korean Patent Application No. KR20090121029, a cooling device is described which has a bottle holder disposed under the shelf of the body. The bottles are placed from the mouth to the holes on the holder and suspended there.
- [0005] In the state of the art Chinese Patent Document No. CN100464146, a cooling device is described that comprises a bottle holder disposed under the door shelf and wherefrom the bottles can be suspended. In this embodiment, the bottle holder is fastened to the base of the shelf or to the

door.

- [0006] In the state of the art European Patent Application No. EP1591732, a cooling device is described comprising an egg tray and a shelf that is detachably mounted on the door whereon tin cans can be placed. When tin cans are placed on the shelf, the egg tray is disposed on the tin cans. In this embodiment, the base of the egg tray is seated on the tin cans without a gap therebetween.
- [0007] The aim of the present invention is the realization of a cooling device comprising a holder, whereon both eggs and bottles can be placed and that prevents hindering the utilization of other shelves by moving on the door when not in use.
- [0008] In the cooling device realized in order to attain the aim of the present invention, explicated in the first claim and the respective claims thereof, a holder is disposed on the door. The holder comprises a first plate and a second plate that extend parallel to one another. At least one housing is disposed on the first plate wherein the eggs are placed. The second plate comprises an inlet opening that is wider than the mouth portion of the bottle and a securing opening that is narrower than the mouth portion of the bottle.
- [0009] In an embodiment of the present invention, extensions are located at the ends of both lateral sides of the holder that are close to the door. These extensions provide the holder to be mounted to the door by being attached to a casing disposed on the door. Thus, the holder can also be mounted in cooling devices wherein mounting the holder thereon is not possible and hence flexibility of use is provided.
- [0010] In a version of this embodiment, the holder is rotatably mounted to the casing. The holder is attached to the casing by means of the extensions at the ends of the long sides of the first plate or the second plate facing the door and can rotate around this side. In this embodiment, the holder can either be at a first position or a second position.
- [0011] In the first position, the holder is perpendicular to the door. While in this position, eggs can be placed on the housings and also bottles can be suspended to the second plate. When storing eggs on the first plate is not

required, the holder can be changed to the second position by being rotated. In the second position, the holder extends parallel to the door. In this position, the bottles can be secured on the second plate so as to be perpendicular to the door.

- [0012] In another embodiment of the present invention, the holder is mounted to the casing in a sliding manner. The extensions that extend outwards from the lateral sides of the holder, are disposed into the channel-shaped casing and the elevation of the holder on the door can be changed by means of the movement of the extension inside the casing. In this embodiment, the holder, besides being in the first position wherein both eggs and bottles can be placed thereon, can be in a third position, it is changed to by being slid from the first position and resting against the bottom of the shelf. When the holder is in the third position, bottles can be placed thereon since the second plate is perpendicular to the door.
- [0013] In an embodiment of the present invention, the holder is mounted on the casing both slidably and rotatably. Thus, the holder can be disposed in all of the three positions on the door and provides ease of utilization.
- [0014] In another embodiment of the present invention, a distance is provided between the first plate and the second plate, as much as the total of the portion of the egg suspended from the first plate and the portion of the bottle projecting upwards from the second plate. Thus, the eggs and the bottles are placed easily in the holder and the space occupied by the holder is optimized.
- [0015] In another embodiment of the present invention, the holder is almost as deep as the shelf. Thus, the holder, when changed to the third position, does not project outwards from the level of the shelf. Furthermore, when the door is closed, the holder is prevented from bumping the objects inside the body.
- [0016] In another embodiment of the present invention, at least two arms are disposed on the second plate. In this embodiment, the inlet opening and the securing opening remain between the arms. The arms extend along the second plate. In the preferred version of this embodiment, there are two pairs of arms on the second plate and two securing openings and one

inlet opening between each pair of arms. The inlet opening is arranged in the middle of the securing openings, and after the bottle is inserted through the inlet opening, it is seated on one of the securing openings by sliding to the right or left.

[0017] In another embodiment of the present invention, the housing is shaped like a hole. In the preferred version of this embodiment, there are three housings in each row, six in total.

[0018] In another embodiment of the present invention, the housing is shaped like a recess.. In this embodiment, the housing extends from the first plate towards the second plate.

[0019] In another embodiment of the present invention, the width of the holder is the same as that of the shelf. Thus, the area beneath the shelf is used effectively.

[0020] By means of the present invention, the eggs and the bottles can be stored on a single holder. The holder, when required, provides the shelves located around it to be used more effectively by being folded or slid.

[0021] The cooling device realized in order to attain the aim of the present invention is illustrated in the attached figures, where:

[0022] Figure 1 – is the perspective view of a cooling device.

[0023] Figure 2 – is the perspective view of the holder and the casing.

[0024] Figure 3 – is the view of the holder, the casing and the shelf before the holder is mounted to the casing.

[0025] Figure 4 – is the perspective view of the holder, the casing and the shelf when the holder is in the first position.

[0026] Figure 5 – is the perspective view of the holder, the casing and the shelf when the holder is in the second position.

[0027] Figure 6 – is the perspective view of the holder, the casing and the shelf when the holder is in the third position.

[0028] Figure 7 – is the front view of the bottle and the holder.

[0029] The elements illustrated in the figures are numbered as follows:

1. Cooling device
2. Body
3. Door

4. Shelf
5. Holder
6. First plate
7. Housing
8. Second plate
9. Inlet opening
10. Securing opening
11. Casing
12. Extension
13. Arm

[0030] The cooling device (1) comprises a body (2) wherein the objects to be cooled are placed, at least one door (3) providing access into the body (2), at least one shelf (4) disposed at the inner side of the door (3) whereon the objects desired to be stored are placed and at least one holder (5) mounted to the door (3) so as to come upon the lower side of the shelf (4) (Figure 1).

[0031] The holder (5) comprises,

- a first plate (6) having at least one housing (7) wherein the eggs (E) are placed and
- a second plate (8) that extends under the first plate (6), almost parallel to the first plate (6) and providing the bottles (B) to be placed thereon, having at least one inlet opening (9) the width of which is greater than the width of the mouth portion of the bottle (B) and at least one securing opening (10) the width of which is smaller than the width of the mouth portion of the bottle (B).

[0032] When the bottle (B) is desired to be placed on the second plate (8), the mouth of the bottle (B) is inserted through the inlet opening (9) and the bottle (B) is moved such that the lid portion is aligned with the securing opening (10). During this process, the neck portion of the bottle (B) is at the level of the second plate (8) and the lid portion is between the first plate (6) and the second plate (8). When the bottle (B) comes to the securing position, it is released slowly and the lid is provided to be seated on the surface of the second plate (8) (Figure 2, Figure 7).

- [0033] The cooling device (1) of the present invention furthermore comprises a casing (11) that is disposed on the door (3) and at least one extension (12) situated on the holder (5) that provides the holder (5) to be mounted to the casing (11). The extensions (12) are preferably disposed at the ends of each lateral side of the holder (5) close to the door (3). Thus, the holder (5) can also be mounted to cooling devices (1) with the door (3) surface not suitable for mounting the holder (5).
- [0034] In an embodiment of the present invention, the holder (5) is mounted to the casing (11) in a rotatable manner. In this embodiment, the holder (5) is mounted to the casing (11) from the side of the first plate (6) or the second plate (8) facing the door (3) and rotates around this side. Thus, the holder (5) is folded, thereby prevented from occupying space inside the cooling device (1) when not in use.
- [0035] In another embodiment of the present invention, the holder (5) can be brought to two different positions:
- a first position (P1) whereat it is positioned perpendicularly to the door (3), and it can carry both the eggs (E) placed on the housings (7) and also the bottles (B) placed on the second plate (8) and
 - a second position (P2), it is changed to from the first position (P1) by being rotated and it is positioned parallel to the door (3).
- [0036] The holder (5) is changed to the first position (P1) wherein the housings (7) can be accessed from the outside when eggs (E) are desired to be placed thereon. In this position, the first and second plates (6, 8) are in a position perpendicular to the door (3) and while the eggs (E) are placed into the first plate (6), the bottles (B) can be suspended to the second plate (8). The holder (5) is rotated to be changed to the second position (P2) when not required to be used. The holder (5) enables long objects to be placed on the shelf (4) thereunder when in the second position (P2). Furthermore, the holder (5) can also hold the bottles (B) placed on the second plate (8) such that the mouths of the bottles (B) face the door (3) when in the second position (P2) (Figure 4, Figure 5).
- [0037] In another embodiment of the present invention, the holder (5) is slidably mounted to the casing (11). In this embodiment, the extensions (12)

disposed on the lateral sides of the first plate (6) are fitted into the preferably channel-shaped casing (11). Thus, the holder (5) can move in the upward and downward directions on the casing (11) and its vertical position on the door (3) can be changed.

[0038] In another embodiment of the present invention, the holder (5) is in a third position (P3), it is changed to from the first position (P1) by being slid upwards, it is disposed under the base of the shelf (4) without any gap therebetween and wherein it can hold the bottles (B) placed on the second plate (8). The user, when not requiring placing eggs (E) on the holder (5), changes the holder (5) from the first position (P1) to the third position (P3) by sliding and rests against the base of the shelf (4) above. Consequently, long objects can be placed on the shelf (4) below the holder (5). Furthermore, if desired, bottles (B) can be placed on the second plate (8) when the holder (5) is in the third position (P3) (Figure 6).

[0039] In another embodiment of the present invention, the holder (5) is mounted to the casing (11) so as to be able to slide and rotate. The holder (5), mounted to the casing (11) by means of the extensions (12) disposed on the lateral sides of the first plate (6), can be changed to the second position (P2) from the first position (P1) by being folded when desired and changed to the third position (P3) from the first position (P1) by being slid when desired. In this embodiment, the holder (5) can be in each of the three positions (P1, P2, P3).

[0040] In another embodiment of the present invention, a distance is provided between the first plate (6) and the second plate (8) almost as much as the total of the portion of the egg (E) suspended down from the first plate (6) after placed into the housing (7) and the portion of the bottle (B) inserted into the inlet opening (9). Thus, bottles (B) can be suspended from the second plate (8) even when the housings (7) are filled with eggs (E). Furthermore, the thickness of the holder (5) is optimized and provided to occupy less space on the door (3).

[0041] In another embodiment of the present invention, the depth of the holder (5) is almost the same as the depth of the shelf (4). Thus, the holder (5) seems like a section of the shelf (4) when changed to the third position

(P3). Furthermore, since the holder (5) does not project out from the level of the shelf (4), it cannot be viewed by the user when looking from above. Accordingly, the esthetic appearance of the cooling device (1) is improved (Figure 6).

[0042] In another embodiment of the present invention, the cooling device (1) comprises at least two arms (13) disposed on the second plate (8), that extend along the second plate (8) such that the inlet opening (9) and the securing opening (10) remain therebetween. The mouth of the bottle (B) is inserted through the inlet opening (9) and pushed between the arms (13) towards the securing opening (10). By means of the flexible structure of the arms (13), the bottle (B) is seated in the securing opening (10) by moving easily between the arms (13) and remains suspended with the pressure exerted on the arms (13) by the lid of the bottle (B). In this embodiment, the arms (13) are preferably produced from plastic material. In the preferred version of this embodiment, two pairs of arms (13) are disposed on the second plate (8). Two securing openings (10) and one inlet opening (9) in the middle of the securing openings (10) are located between the arms (13) in each pair of arms (13). After the mouth of the bottle (B) is inserted from the inlet opening (9), the bottle (B) is seated into one of the securing openings (10) by being pushed to the right or left (Figure 7).

[0043] In another embodiment of the present invention, the housing (7) is shaped like a hole. Thus, the production of the holder (5) is simplified and production costs decrease. In this embodiment, preferably two rows of housings (7) are arranged on the first plate (6) (Figure 2, Figure 3, Figure 5).

[0044] In another embodiment of the present invention, the housing (7) is shaped like a recess extending from the first plate (6) towards the second plate (8). Thus, the egg (E) can be placed in the housing (7) regardless of its size and prevented from falling down.

[0045] In another embodiment of the present invention, the holder (5) extends along the shelf (4). Thus, a great number of eggs (E) and bottles (B) can be placed on the holder (5).

[0046] By means of the present invention, the eggs (E) and the bottles (B) can be placed on a holder (5) disposed on the door (3) and the necessity for forming a special section on the shelves (4) in the body (2) and/or on the door (3) for the eggs (E) and/or the bottles (B) is eliminated. The holder (5), when not used, is changed to a position that does not affect the use of the shelf (4) underneath by rotational and/or sliding motion and provides the inner space of the cooling device (1) to be used more efficiently. Furthermore, the holder (5) cannot be seen by the user when in the second or third position (P2, P3) and the esthetic unity of the cooling device (1) is protected.

[0047] It is to be understood that the present invention is not limited to the embodiments disclosed above and a person skilled in the art can easily introduce different embodiments. These should be considered within the scope of the protection postulated by the claims of the present invention.

Claims

1. A cooling device (1) **comprising** a body (2) wherein the objects to be cooled are placed, at least one door (3) providing access into the body (2), at least one shelf (4) disposed at the inner side of the door (3) whereon the objects desired to be stored are placed and at least one holder (5) mounted to the door (3) so as to come upon the lower side of the shelf (4), **characterized by** the holder (5) having
 - a first plate (6) having at least one housing (7) wherein the eggs (E) are placed and
 - a second plate (8) that extends under the first plate (6), almost parallel to the first plate (6), and providing the bottles (B) to be placed thereon, having at least one inlet opening (9) the width of which is greater than the width of the mouth portion of the bottle (B), and at least one securing opening (10) the width of which is smaller than the width of the mouth portion of the bottle (B).
2. A cooling device (1) as in Claim 1, **characterized by** at least one casing (11) that is disposed on the door (3) and at least one extension (12) situated on the holder (5) that provides the holder (5) to be mounted to the casing (11).
3. A cooling device (1) as in Claim 2, **characterized by** the holder (5) that is mounted to the casing (11) in a rotatable manner.
4. A cooling device (1) as in any one of the above Claims, **characterized by** the holder (5) having a first position (P1) wherein it is positioned perpendicularly to the door (3), it can hold both the eggs (E) placed on the housings (7) and also the bottles (B) placed on the second plate (8), and a second position (P2) it is changed to from the first position (P1) by being rotated and it is positioned parallel to the door (3).
5. A cooling device (1) as in Claim 2 or 4, **characterized by** the holder (5) that is slidably mounted to the casing (11).
6. A cooling device (1) as in Claim 5, **characterized by** the holder (5) having a third position (P3), it is changed to from the first position (P1) by being slid upwards, wherein it is positioned so that there remains no gap between the base of the shelf (4) thereabove and the first plate (6) and wherein it can carry the bottles (B) placed on the second plate (8).
7. A cooling device (1) as in any one of the Claims 2 to 6, **characterized by** the

holder (5) that is mounted to the casing (11) so as to be able to slide and rotate.

8. A cooling device (1) as in any one of the above Claims, **characterized by** the second plate (8) having a distance between the first plate (6) and itself almost as much as the total of the portion of the egg (E) suspended down from the first plate (6) after being placed into the housing (7) and the portion of the bottle (B) inserted into the inlet opening (9).
9. A cooling device (1) as in any one of the above Claims, **characterized by** the holder (5) having almost the same depth as the depth of the shelf (4).
10. A cooling device (1) as in any one of the above Claims, **characterized by** at least two arms (13) disposed on the second plate (8), that extend along the second plate (8) such that the inlet opening (9) and the securing opening (10) remain therebetween.
11. A cooling device (1) as in any one of the above Claims, **characterized by** the hole-shaped housing (7).
12. A cooling device (1) as in any one of the Claims 1 to 8, **characterized by** the recess-shaped housing (7) extending from the first plate (6) towards the second plate (8).
13. A cooling device (1) as in Claim 1 or 2, **characterized by** the holder (5) that extends along the shelf (4).

Figure 1

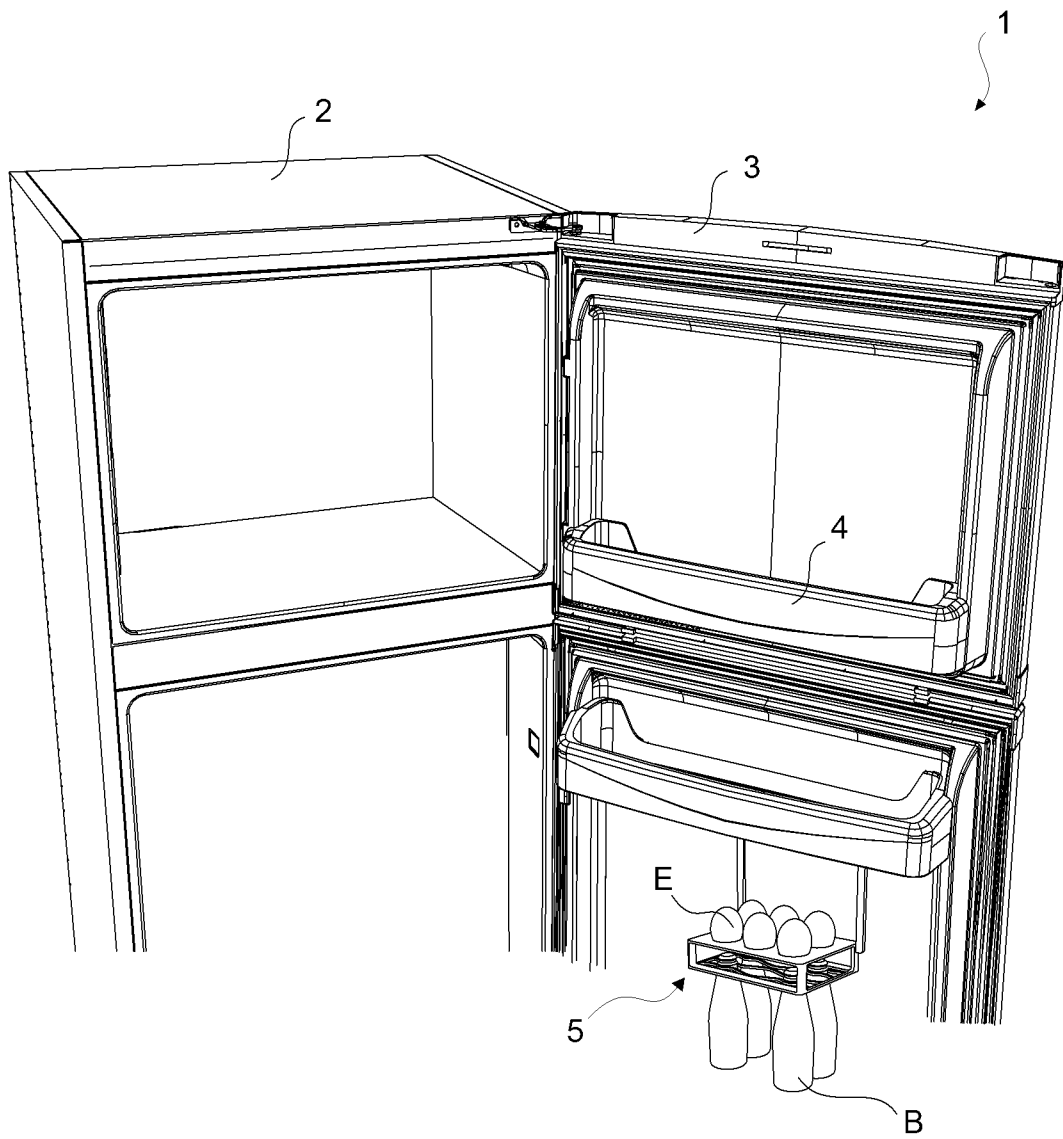


Figure 2

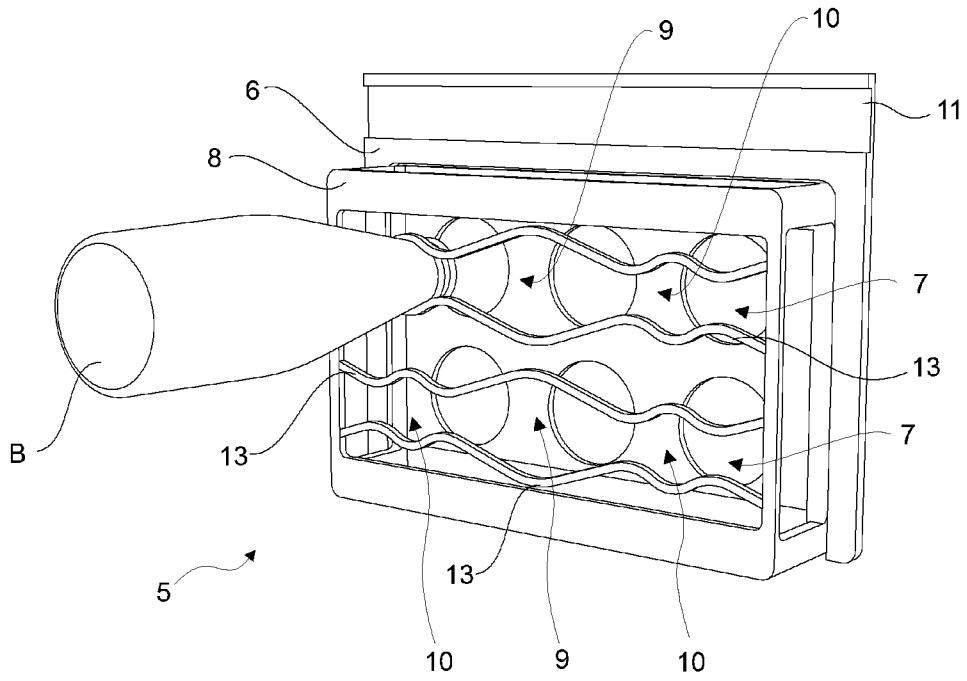


Figure 3

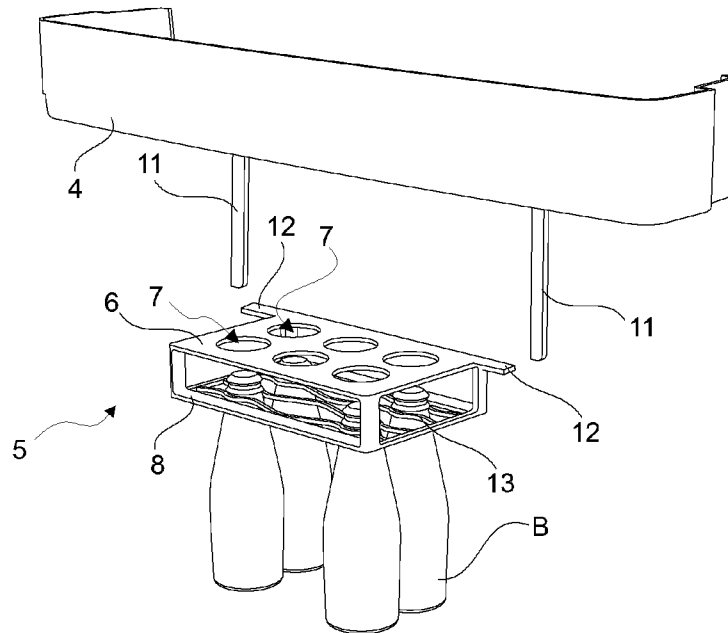


Figure 4

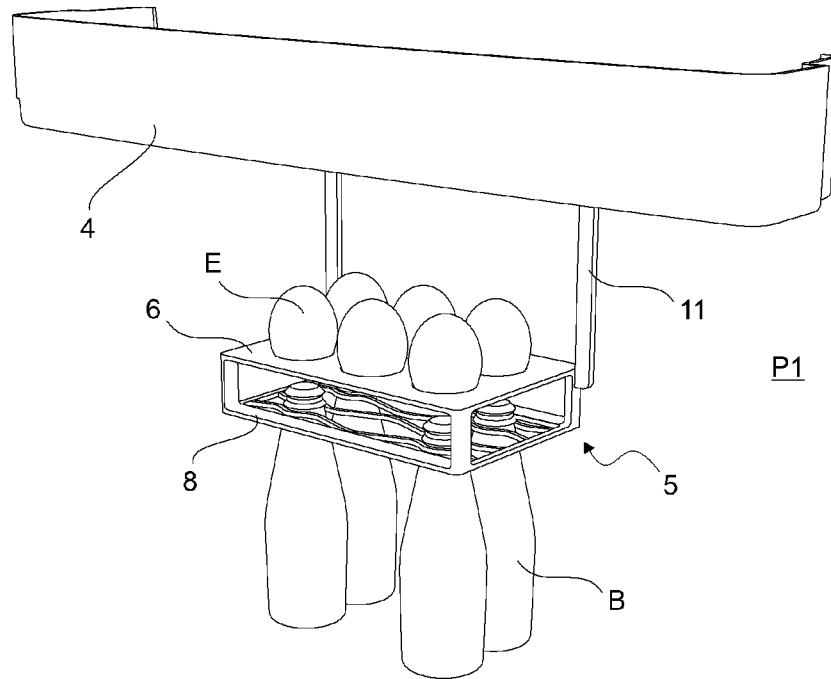


Figure 5

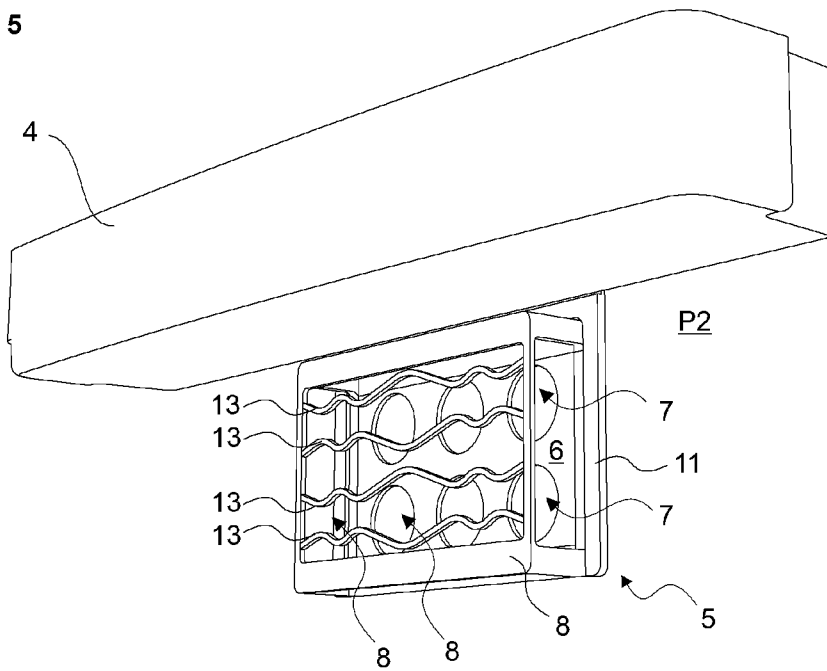


Figure 6

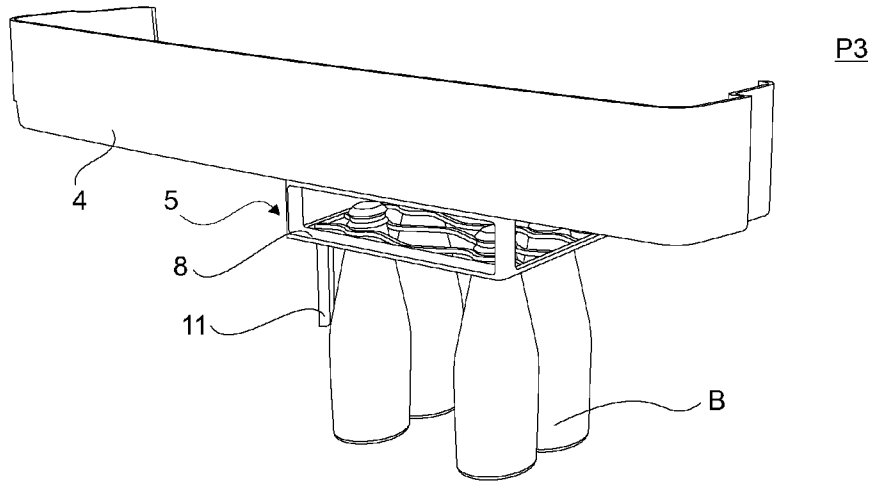


Figure 7

