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(54) **A REFRIGERATOR COMPRISING AN ICE MAKING UNIT**

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RÉFRIGÉRATEUR COMPRENANT UNE UNITÉ DE FABRICATION DE GLACE

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Description

[0001] The present invention relates to a refrigerator comprising an ice making unit.

[0002] In refrigerators, during the ice making process, the water required for ice making is taken from a source, is poured into the ice cube tray and ice is created by benefiting from the heat transfer. Thus, the user may receive as much ice cubes as he/she wants at any time. The ice cube trays used in the ice making process are located in the freezing compartments of the refrigerators. In order to efficiently use the freezing compartment space, the ice cube trays are placed onto the freezing compartment door in some embodiments. In order to fill the ice cube tray situated on the freezing compartment door with water, the ice cube tray should be detached or the ice cube tray should be moved towards the water source. However, this process does not provide any ease of utilization and the water may overflow from the ice cube tray due to the movement of the ice cube tray. In the state of the art International Patent Application No. WO2011080227, a refrigerator is disclosed, wherein filling water into the ice tray is facilitated by means of a cartridge.

[0003] German Patent Application DE 10 2009 046 030 A1 discloses a refrigerator with a pivotable ice cube tray that is filled via a stationary dosing container.

[0004] The aim of the present invention is the realization of a refrigerator comprising an ice making unit wherein the water is easily filled into the ice cube tray and is prevented from overflowing from the ice cube tray during filling.

[0005] The refrigerator realized in order to attain the aim of the present invention, explicated in the first claim and the respective claims thereof comprises an ice making unit having at least one ice cube tray for making ice cubes, a water filling means providing the filling of the ice cube tray with water and a casing that encloses the water filling means and the ice cube tray. The water is transferred into the ice cube tray through an opening by means of the water filling means.

[0006] The water filling means can be changed to the open position by being rotated around the axis whereto it is connected on the casing and being moved away from the casing so as to allow the water to be easily filled therein and can be changed to the closed position so as to stay in the casing by being rotated in the opposite direction. After the water is filled, the water filling means is rotated towards the casing so as to contact the opening. When in the open position, the water filling means is filled with water and when in the closed position, the water therein is emptied into the ice cube tray. Thus, the water is poured into the ice cube tray without moving the ice cube tray, only with the movement of the water filling means.

[0007] In an embodiment of the present invention, the water filling means comprises at least one pin and the casing comprises at least two housings wherein the pin

is seated. The pin rotates freely in the housing so as to facilitate the movement of the water filling means. The pin forms the rotational axis during the movement of the water filling means between the closed position and the open position. By means of the pin and the housing, the movement of the water filling means is facilitated.

[0008] In an embodiment of the present invention, the water filling means comprises at least one protrusion and the casing comprises at least one stopper that limits the movement of the water filling means, against which the protrusion bears. The protrusion bears against the stopper and limits the movement of the water filling means in order to provide the controlled movement thereof and to prevent the water filling means from turning upside down while passing from the open position to the closed position, thus preventing the water therein from spilling.

[0009] In an embodiment of the present invention, the ice making unit comprises a lid that covers the top of the ice cube tray. By means of the lid, the water filled into the ice cube tray for making ice cubes is prevented from being agitated and spilling during the movement of the ice cube tray. Moreover, by means of the lid, a closed cool air circulation channel is formed on the ice cube tray and ice making process is accelerated by improving the heat transfer.

[0010] In an embodiment of the present invention, the ice making unit comprises at least one opening arranged on the lid. The water poured from the water filling means is poured into the ice cube tray through the opening. By means of the opening, the water is filled into the ice cube tray without opening the lid.

[0011] In an embodiment of the present invention, the ice cube tray comprises more than one cell wherein the water is filled for making ice cubes. By means of the cells, ice cubes in a determined shape, number and size can be obtained.

[0012] In an embodiment of the present invention, the refrigerator comprises a scale. The scale has a filling capacity equal to the total volume of the cells. Before being poured into the water filling means, the water is filled into the scale and measured, thus the water with a volume equal to the total volume of the cells is filled into the cells and the water is prevented from overflowing from the ice cube tray.

[0013] In an embodiment of the present invention, the water filling means comprises a discharge orifice and a plug situated in front of the discharge orifice and enabling the water to be filled into the water filling means without being spilled when the water filling means is in the open position. The plug prevents the water from flowing outside the opening while the water is being filled by closing the front of the discharge orifice.

[0014] In an embodiment of the present invention, the water filling means comprises a recess arranged on the discharge orifice, a first claw situated at one end of the plug and a second claw situated at the other end thereof. The water received into the water filling means is poured to the opening by means of the discharge orifice. While

the water filling means shifts to the open position by rotating, the second claw is seated into the recess with the rotational effect and the plug closes the discharge orifice. Thus, the water is provided to be filled into the water filling means without being spilled or leaking. After the water is filled, the plug rotates and opens the discharge orifice until the first claw catch onto the lid as a result of the movement performed by the water filling means while shifting to the closed position. In this embodiment, the volume of the water filling means is almost equal to the total volume of the cells or the level corresponding to the desired ice volume is marked on the water filling means. Thus, without requiring any additional scales, the volume of the water to be filled into the cells can be determined and/or controlled.

[0015] In an embodiment of the present invention, the lid is dome-shaped. Water splattering outside the cell due to any shock or vibration hits the lid. The water hitting the lid refills the cells with the effect of gravity and the shape of the lid curving towards the edges.

[0016] In an embodiment of the present invention, the lid comprises at least one thin, long gap arranged thereon. By means of the gap, the cool air leaks towards the cells and causes the water in the cell to cool and crystallize. The gap is narrow so as to prevent the water from overflowing from the cells.

[0017] In an embodiment of the present invention, the lid comprises at least one rib extending along the gap. By means of the inkpot-shaped rib situated on the surface of the gap facing the ice cube tray, water splattering from the cell due to any shock or vibration is guided back into the cell.

[0018] In an embodiment of the present invention, the casing comprises an ice cube drawer situated under the ice cube tray. The ice cube drawer receives the ice cubes falling down after the ice cube tray is twisted. Thus, ice cubes can be more easily taken.

[0019] In an embodiment of the present invention, the casing is shaped like a box. The box-shaped casing surrounds the ice cube tray and the ice cube drawer and serves as a bearing for the water filling means. Thus, a single-piece, rigid structure occupying less space is obtained.

[0020] In an embodiment of the present invention, the casing comprises an arm and an arm gear situated on the arm. In this embodiment, the ice cube tray comprises a gear. When the arm is rotated, the arm gear connected to the arm rotates and triggers the gear to rotate. When the gear rotates, the ice cube tray turns upside down and the ice cubes falls into the ice cube drawer with the effect of the gravity.

[0021] By means of the present invention, by moving the water filling means at least partially out of the casing, the water filling process is facilitated and the water is prevented from spilling outside the ice cube tray while being filled. Moreover, since water transfer is realized only with the movement of the water filling means without requiring the ice cube tray to move, water splashes due

to shocks and vibrations are prevented.

[0022] A refrigerator realized in order to attain the aim of the present invention is illustrated in the attached figures, where:

Figure 1 - is the partial view of a refrigerator.

Figure 2 - is the perspective view of the ice making unit related to an embodiment of the present invention.

Figure 3 - is the perspective view of the casing and the water filling means related to an embodiment of the present invention, when the water filling means is not mounted to the casing.

Figure 4 - is the exploded view of the ice making unit related to an embodiment of the present invention.

Figure 5 - is the perspective view of the ice making unit related to an embodiment of the present invention when the plug is open.

Figure 6 - is the view of detail A in Figure 5.

Figure 7 - is the perspective view of the ice making unit related to an embodiment of the present invention when the plug is closed.

Figure 8 - is the view of detail B in Figure 7.

[0023] The elements illustrated in the figures are numbered as follows:

1. Refrigerator
2. Ice cube tray
3. Cell
4. Lid
5. Opening
6. Water filling means
7. Casing
8. Ice making unit
9. Pin
10. Protrusion
11. Housing
12. Stopper
13. Scale
14. Discharge orifice
15. Recess
16. Plug
17. First claw
18. Second claw
19. Rib
20. Ice cube drawer
21. Arm
22. Arm gear
23. Gear
24. Gap

[0024] The refrigerator (1) comprises an ice making unit (8) having at least one ice cube tray (2) that comprises more than one cell (3) wherein water is filled for making ice cubes, a lid (4) that closes the top of the ice cube tray (2), at least one opening (5) arranged on the lid (4), a water filling means (6) providing the filling of the

cells (3) with water and a casing (7) that encloses the water filling means (6) and the ice cube tray (2). The water poured from the water filling means (6) fills into the cells (3) through the opening (5).

[0025] The water filling means (6) is mounted to the casing (7) so as to rotate around the axis where to it is connected, is changed to the open position by being rotated and by being moved away from the casing (7) so as to allow the water to be easily filled therein and is changed to the closed position so as to almost entirely stay in the casing (7) by being rotated towards the casing (7). After the water is filled, the water filling means (6) is pushed towards the casing (7) and almost aligns with the casing (7) and shifts from the open position to the closed position. The water filling means (6) moves independently from the ice cube tray (2), thus the water is poured into the ice cube tray (2) through the opening (5) by only moving the water filling means (6), without moving the ice cube tray (2).

[0026] In an embodiment of the present invention, the water filling means (6) comprises at least one pin (9) and the casing (7) comprises at least two housings (11) wherein the pin (9) rotates. The pin (9) moves by rotating inside the housing (11) while the water filling means (6) shifts from the closed position to the open position. The movement of the water filling means (6) is facilitated by means of the pin (9) and the housing (11).

[0027] In an embodiment of the present invention, the water filling means (6) comprises at least one protrusion (10) and the casing (7) comprises at least one stopper (12) against which the protrusion (10) bears. The width of the stopper (12) is almost equal to the diameter of the protrusion (10). The protrusion (10) bears against the stopper (12) and stops the rotational movement in order to provide the controlled movement of the water filling means (6) and to limit the rotation thereof while passing from the closed position to the open position. The movement of the water filling means (6) is controlled by means of the protrusion (10) and the stopper (12).

[0028] In an embodiment of the present invention, the ice making unit (8) comprises a lid (4) that covers the top of the ice cube tray (2). By means of the lid (4), the water in the ice cube tray (2) is prevented from overflowing and the ice cube tray (2) is enclosed.

[0029] In an embodiment of the present invention, the ice making unit (8) comprises at least one opening (5) arranged on the lid (4). The opening (5) allows the water to fill into the ice cube tray (2) without requiring the lid (4) to open.

[0030] In an embodiment of the present invention, the ice cube tray (2) comprises more than one cell (3) wherein the water is filled for making ice cubes. By means of the cells (3), ice cubes in a determined shape, size and number can be obtained.

[0031] In an embodiment of the present invention, the refrigerator (1) comprises a scale (13). The volume of the scale (13) is almost equal to the total volume of the cells (3). Before being poured into the water filling means

(6), the water is measured by means of the scale (13). By means of the scale (13), the cells (3) are filled with water as much as their volumes. Moreover, the water is prevented from overflowing from the ice cube tray (2) and formation of thin ice cubes with volumes smaller than the volume of the cell (3) is prevented.

[0032] In an embodiment of the present invention, the water filling means (6) comprises a discharge orifice (14) and a plug (16) situated in front of the discharge orifice (14) and enabling the water to be filled into the water filling means (6) without being spilled or leaking when the water filling means (6) is in the open position. The plug (16) closes the front of the discharge orifice (14) when the water filling means (6) is in the open position and enables the water to be filled into the water filling means (6) without being spilled.

[0033] In an embodiment of the present invention, the water filling means (6) comprises a recess (15) arranged on the discharge orifice (14), a first claw (17) situated at one end of the plug (16) and a second claw (18) situated at the other end thereof. The water leaves the water filling means (6) from the discharge orifice (14). While the water filling means (6) shifts to the open position by rotating, the second claw (18) is seated into the recess (15) and the plug (16) closes the discharge orifice (14) with the movement of the plug (16) opposite to the rotational movement of the water filling means (6). After the water is filled, with the movement of the water filling means (6) while shifting to the closed position, the plug (16) rotates and opens the front of the discharge orifice (14) until the first claw (17) bears against the lid (4). In this embodiment, the volume of the water filling means (6) is almost equal to the total volume of the cells (3) or the level allowing the water filling means (6) to be filled almost as much as the total volume of the cells (3) are marked on the water filling means (6). Since the water filling means (6) also serves as the scale (13), the need for using the scale (13) is eliminated.

[0034] In an embodiment of the present invention, the lid (4) is semi-circular. The water overflowing from the cell (3) due to any shock or vibration hits the lid (4) and refills the cells (3) due to the shape of the lid (4) curving towards the edges of the ice cube tray (2).

[0035] In an embodiment of the present invention, the lid (4) comprises at least one gap (24) arranged thereon. The gap (24) is preferably in form of a thin slit and extends along the lid (4). By means of the gap (24), the cool air fills the cells (3) and provides the water in the cells (3) to freeze.

[0036] In an embodiment of the present invention, the lid (4) comprises at least one rib (19) extending along the gap (24). By means of the curved protrusion-shaped rib (19) situated on the surface of the gap (24) facing the ice cube tray (2), it is facilitated for water splattering from the cell (3) due to any shock or vibration to be guided back into the cell (3) flowing over the surface of the rib (19) curved towards the cell (3).

[0037] In an embodiment of the present invention, the

casing (7) comprises an ice cube drawer (20) situated under the ice cube tray (2). The ice cubes taken out of the ice cube tray (2) fall into the ice cube drawer (20). By means of the ice cube drawer (20), ice cubes can be more easily taken.

[0038] In an embodiment of the present invention, the casing (7) is shaped like a box. By placing both the ice cube tray (2) and the ice cube drawer (20) into the box-shaped casing (7), a more compact and rigid structure is obtained.

[0039] In an embodiment of the present invention, the casing (7) comprises an arm (21) and an arm gear (22) situated on the arm (21). The ice cube tray (2) has a gear (23). When the arm (21) is rotated, the arm gear (22) connected to the arm (21) also rotates and makes the gear (23) rotate. With the gear (23) connected to the ice cube tray (2), the ice cube tray (2) almost entirely turns upside down, thus ice cubes fall into the ice cube drawer (20).

[0040] It is to be understood that the present invention is not limited by 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 refrigerator (1) comprising an ice making unit (8) having

- at least one ice cube tray (2) wherein water is filled for making ice cubes,
- a water filling means (6) providing the filling of the ice cube tray (2) with water and
- a casing (7) that encloses the ice cube tray (2), and when in a closed position the water filling means (6) almost entirely stays in the casing;

characterized by

- the water filling means (6) that is mounted to the casing (7) so as to rotate around an axis whereto it is connected, that is changed to an open position by being rotated and by being moved away from the casing (7) so as to allow the water to be easily filled therein and that is changed to the closed position so as to stay in the casing (7) by being rotated towards the casing (7), wherein the water therein is emptied into the ice cube tray in the closed position.

2. A refrigerator (1) as in Claim 1, **characterized by** the water filling means (6) comprising at least one pin (9) and by the casing (7) having at least two housings (11) wherein the pin (9) is rotatably fitted.

3. A refrigerator (1) as in Claim 1 or 2, **characterized by** the water filling means (6) comprising at least one protrusion (10) and by the casing (7) having at least one stopper (12) that limits the rotational movement of the water filling means (6) and against which the protrusion (10) bears.

4. A refrigerator (1) as in any one of the above claims, **characterized by** the ice making unit (8) comprising a lid (4) that covers the top of the ice cube tray (2).

5. A refrigerator (1) as in Claim 4, **characterized by** the ice making unit (8) comprising at least one opening (5) arranged on the lid (4).

6. A refrigerator (1) as in any one of the above claims, **characterized by** the ice cube tray (2) having more than one cell (3) wherein water is filled for making ice cubes.

7. A refrigerator (1) as in any one of the above claims, **characterized by** the water filling means (6) having a scale (13).

8. A refrigerator (1) as in Claim 6, **characterized by** the water filling means (6) that comprises a discharge orifice (14) and a plug (16) situated in front of the discharge orifice (14) and enabling the water to be filled into the water filling means (6) without being spilled or leaking when the water filling means (6) is in the open position.

9. A refrigerator (1) as in Claim 8, **characterized by** the water filling means (6) that comprises a recess (15) arranged on the discharge orifice (14), a first claw (17) situated at one end of the plug (16) and a second claw (18) situated at the other end thereof.

10. A refrigerator (1) as in Claim 4, **characterized by** the semi-circular lid (4).

11. A refrigerator (1) as in Claim 10, **characterized by** the lid (4) comprising at least one gap (24) arranged thereon.

12. A refrigerator (1) as in Claim 11, **characterized by** the lid (4) having at least one rib (19) that extends along the gap (24).

13. A refrigerator (1) as in any one of the above claims, **characterized by** the ice making unit (8) having an ice cube drawer (20) that is situated under the ice cube tray (2).

14. A refrigerator (1) as in any one of the above claims, **characterized by** the box-shaped casing (7).

15. A refrigerator (1) as in any one of the above claims,

characterized by the casing (7) having an arm (21) and an arm gear (22) situated on the arm (21) and by the ice cube tray (2) having a gear (23).

Patentansprüche

1. Kühlschrank (1), umfassend eine Eisherstellungseinheit (8), aufweisend

- wenigstens ein Eiswürfelfach (2), in das Wasser zum Herstellen von Eiswürfeln gefüllt wird,
- ein Wassereinfüllmittel (6), welches das Füllen des Eiswürfelfachs (2) mit Wasser ermöglicht, und
- ein Gehäuse (7), welches das Eiswürfelfach (2) einschließt, wobei das Wassereinfüllmittel (6) in einer geschlossenen Stellung nahezu vollständig im Gehäuse verbleibt;

dadurch gekennzeichnet, dass

- das Wassereinfüllmittel (6) derart am Gehäuse (7) angebracht ist, dass es sich um eine Achse dreht, mit der es verbunden ist, und in eine geöffnete Stellung geändert wird, indem es gedreht und vom Gehäuse (7) weg bewegt wird, damit Wasser leicht hineingefüllt werden kann, und das in die geschlossene Stellung geändert wird, damit es im Gehäuse (7) bleibt, indem es zum Gehäuse (7) hin gedreht wird, wobei das Wasser darin in der geschlossenen Stellung in das Eiswürfelfach entleert wird.

2. Kühlschrank (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** das Wassereinfüllmittel (6) wenigstens einen Stift (9) umfasst und das Gehäuse (7) wenigstens zwei Aufnahmen (11) aufweist, in denen der Stift (9) drehbar eingesetzt ist.
3. Kühlschrank (1) nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** das Wassereinfüllmittel (6) wenigstens einen Vorsprung (10) aufweist und das Gehäuse (7) wenigstens einen Anschlag (12) aufweist, der die Drehbewegung des Wassereinfüllmittels (6) begrenzt und an dem der Vorsprung (10) anliegt.
4. Kühlschrank (1) nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** die Eisherstellungseinheit (8) einen Deckel (4) umfasst, der die Oberseite des Eiswürfelfachs (2) abdeckt.
5. Kühlschrank (1) nach Anspruch 4, **dadurch gekennzeichnet, dass** die Eisherstellungseinheit (8) wenigstens eine Öffnung (5) umfasst, die an dem Deckel (4) angeordnet ist.

6. Kühlschrank (1) nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** das Eiswürfelfach (2) mehrere Zellen (3) aufweist, in die Wasser zum Herstellen von Eiswürfeln gefüllt wird.

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7. Kühlschrank (1) nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** das Wassereinfüllmittel (6) eine Waage (13) aufweist.

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8. Kühlschrank (1) nach Anspruch 6, **dadurch gekennzeichnet, dass** das Wassereinfüllmittel (6) eine Auslassöffnung (14) und einen Verschluss (16) aufweist, der vor der Auslassöffnung (14) angeordnet ist und es ermöglicht, dass Wasser in das Wassereinfüllmittel (6) gefüllt wird, ohne überzulaufen oder auszutreten, wenn das Wassereinfüllmittel (6) in der offenen Stellung ist.

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9. Kühlschrank (1) nach Anspruch 8, **dadurch gekennzeichnet, dass** das Wassereinfüllmittel (6) eine Vertiefung (15), die an der Auslassöffnung (14) angeordnet ist, eine erste Klaue (17), die an einem Ende des Verschlusses (16) angeordnet ist, und eine zweite Klaue (18) umfasst, die an dem zweiten Ende davon angeordnet ist.

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10. Kühlschrank (1) nach Anspruch 4, **dadurch gekennzeichnet, dass** der Deckel (4) halbkreisförmig ist.

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11. Kühlschrank (1) nach Anspruch 10, **dadurch gekennzeichnet, dass** der Deckel (4) wenigstens einen Spalt (24) aufweist, der daran angeordnet ist.

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12. Kühlschrank (1) nach Anspruch 11, **dadurch gekennzeichnet, dass** der Deckel (4) wenigstens eine Rippe (19) aufweist, die sich am Spalt (24) entlang erstreckt.

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13. Kühlschrank (1) nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** die Eisherstellungseinheit (8) eine Eiswürfelflade (20) aufweist, die unter dem Eiswürfelfach (2) angeordnet ist.

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14. Kühlschrank (1) nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** das Gehäuse (7) kastenförmig ist.

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15. Kühlschrank (1) nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** das Gehäuse (7) einen Arm (21) und ein Armzahnrad (22) aufweist, das an dem Arm (21) angeordnet ist, und dass das Eiswürfelfach (2) ein Zahnrad (23) aufweist.

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Revendications

1. Un réfrigérateur (1) comprenant une unité de fabrication de glace (8) présentant

- au moins un bac à glaçons (2) dans lequel l'eau est remplie pour fabriquer les glaçons,
 - un moyen de remplissage d'eau (6) qui assure le remplissage du bac à glaçons (2) avec l'eau et
 - une enveloppe (7) qui enferme le bac à glaçons (2) et en position fermée le moyen de remplissage d'eau (6) reste presque entièrement dans l'enveloppe,

caractérisé par

- le moyen de remplissage d'eau (6) qui est monté à l'enveloppe (7) de manière à tourner autour d'axe auquel il est relié, qui est changé à une position ouverte en étant tournée et en étant éloigné de l'enveloppe (7) de manière à permettre à l'eau d'y être remplie facilement et qui est changé à la position fermée de manière à rester dans l'enveloppe (7) en étant tourné vers l'enveloppe (7), où l'eau, qui y est contenue, est vidée dans le bac à glaçons dans la position fermée.

2. Un réfrigérateur (1) selon la Revendication 1, **caractérisé par** le moyen de remplissage d'eau (6) comprenant au moins une goupille (9) et par l'enveloppe (7) présentant au moins deux logements (11) dans lesquels la goupille (9) est placée de manière rotative.
3. Un réfrigérateur (1) selon la Revendication 1 ou 2, **caractérisé par** le moyen de remplissage d'eau (6) comprenant au moins une protubérance (10) et par l'enveloppe (7) présentant au moins une butée (12) qui limite le mouvement de rotation du moyen de remplissage d'eau (6) et sur laquelle la protubérance (10) s'appuie.
4. Un réfrigérateur (1) selon l'une quelconque des revendications précédentes, **caractérisé par** l'unité de fabrication de glace (8) comprenant un couvercle (4) qui recouvre le haut du bac à glaçons (2).
5. Un réfrigérateur (1) selon la Revendication 4, **caractérisé par** l'unité de fabrication de glace (8) comprenant au moins une ouverture (5) qui est arrangée sur le couvercle (4).
6. Un réfrigérateur (1) selon l'une quelconque des revendications précédentes, **caractérisé par** le bac à glaçons (2) présentant plus d'une cellule (3) dans laquelle l'eau est remplie pour fabriquer des glaçons.

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7. Un réfrigérateur (1) selon l'une quelconque des revendications précédentes, **caractérisé par** le moyen de remplissage d'eau (6) présentant une balance (13).

8. Un réfrigérateur (1) selon la Revendication 6, **caractérisé par** le moyen de remplissage d'eau (6) qui comprend un orifice d'évacuation (14) et un bouchon (16) qui est situé devant l'orifice d'évacuation (14) et qui permet le remplissage de l'eau dans le moyen de remplissage d'eau (6) sans étant renversée ou fuite lorsque le moyen de remplissage d'eau (6) est dans la position ouverte.

9. Un réfrigérateur (1) selon la Revendication 8, **caractérisé par** le moyen de remplissage d'eau (6) qui comprend un évidement (15) arrangé sur l'orifice d'évacuation (14), un premier crochet (17) situé à une extrémité du bouchon (16) et un deuxième crochet (18) situé à l'autre extrémité de celui-ci.

10. Un réfrigérateur (1) selon la Revendication 4, **caractérisé par** le couvercle semi-circulaire (4).

11. Un réfrigérateur (1) selon la Revendication 10, **caractérisé par** le couvercle (4) comprenant au moins un espace (24) arrangé sur celui-ci.

12. Un réfrigérateur (1) selon la Revendication 11, **caractérisé par** le couvercle (4) présentant au moins une nervure (19) qui s'étend le long de l'espace (24).

13. Un réfrigérateur (1) selon l'une quelconque des revendications précédentes, **caractérisé par** l'unité de fabrication de glace (8) présentant un tiroir à glaçons (20) qui est situé au-dessous du bac à glaçons (2).

14. Un réfrigérateur (1) selon l'une quelconque des revendications précédentes, **caractérisé par** l'enveloppe (7) en forme de boîte.

15. Un réfrigérateur (1) selon l'une quelconque des revendications précédentes, **caractérisé par** l'enveloppe (7) présentant un bras (21) et une roue dentée de bras (22) située sur le bras (21) et par le bac à glaçons (2) présentant une roue dentée (23).

Figure 1

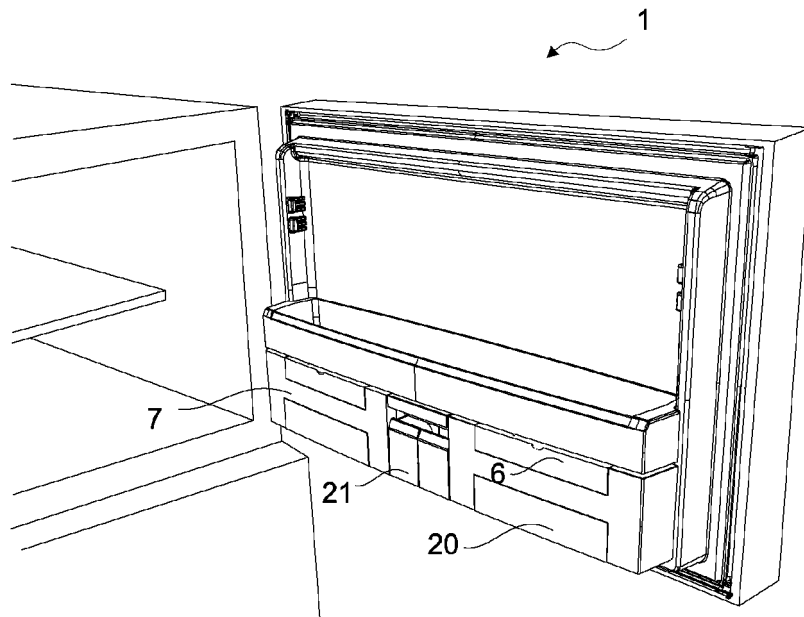


Figure 2

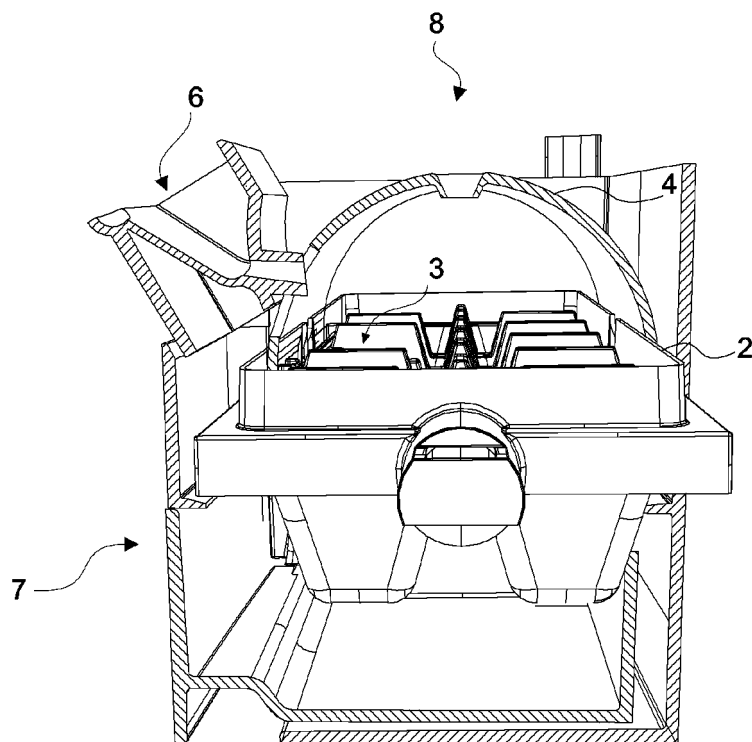


Figure 3

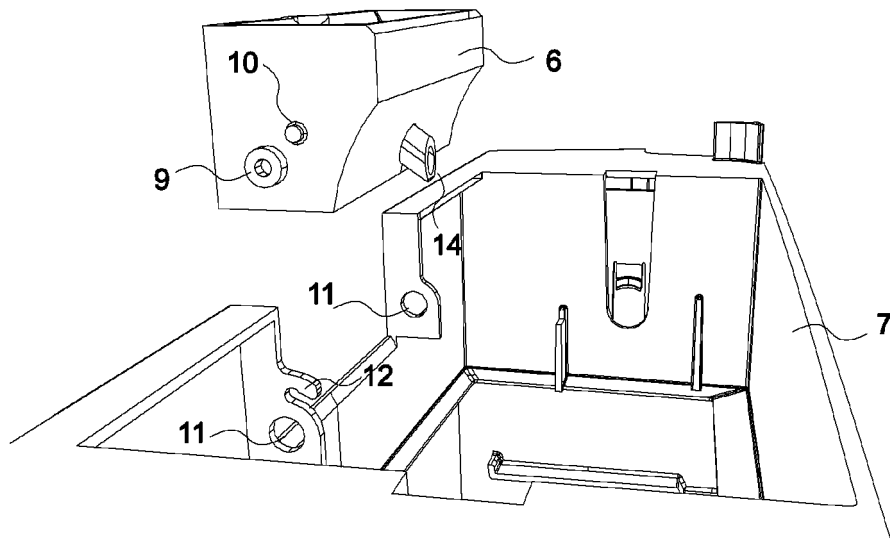


Figure 4

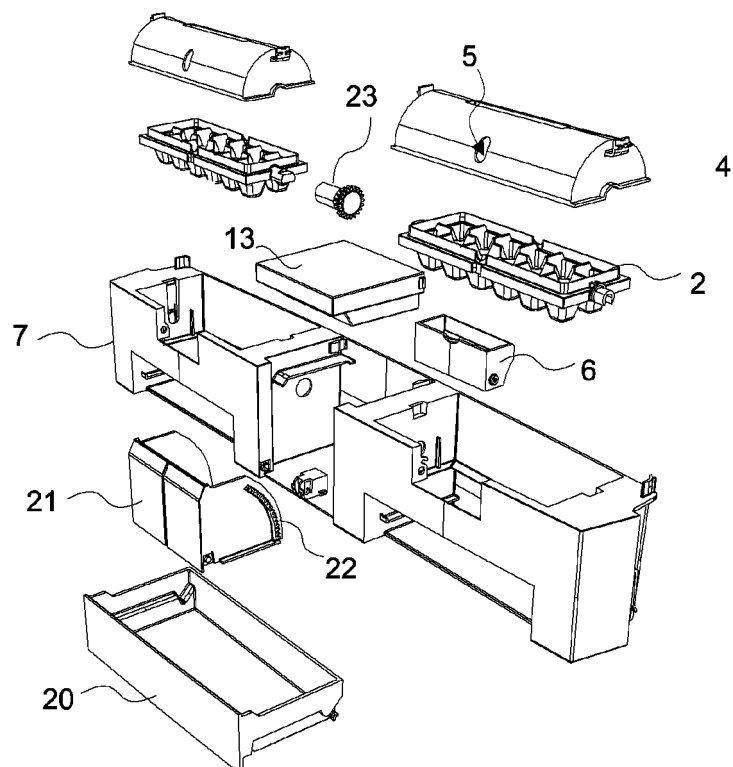


Figure 5

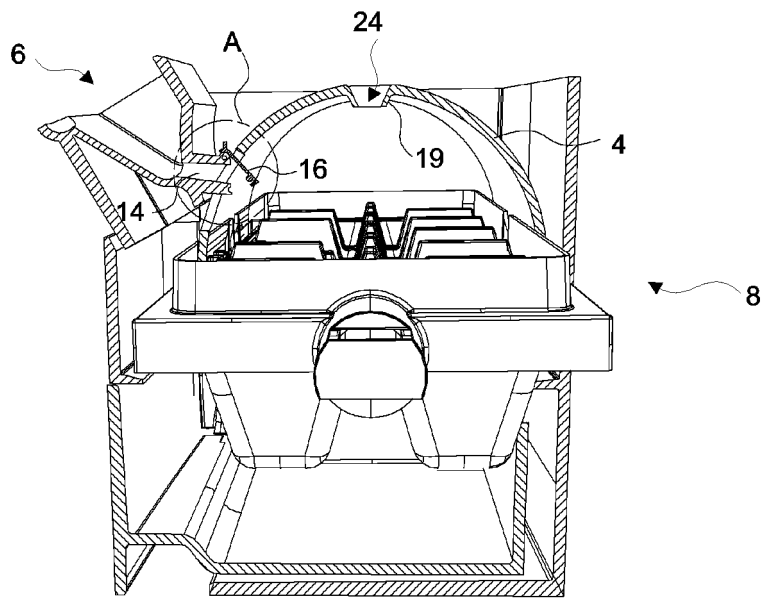


Figure 6

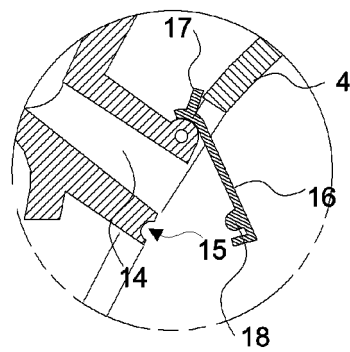


Figure 7

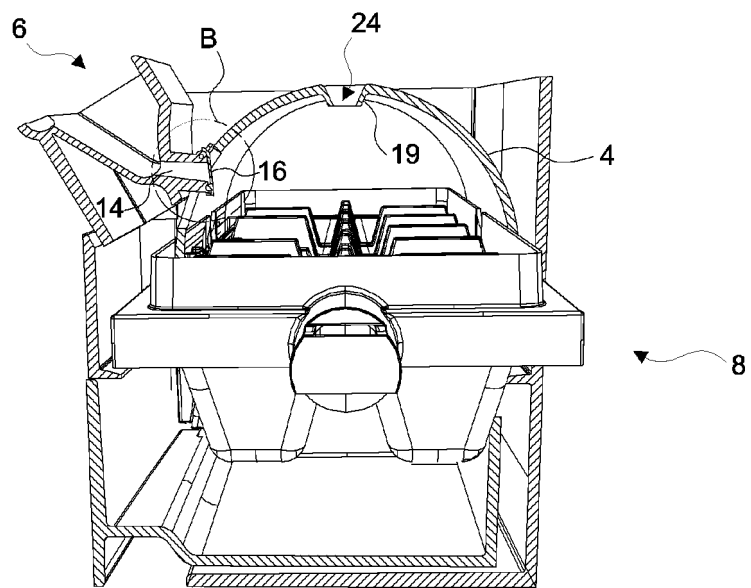
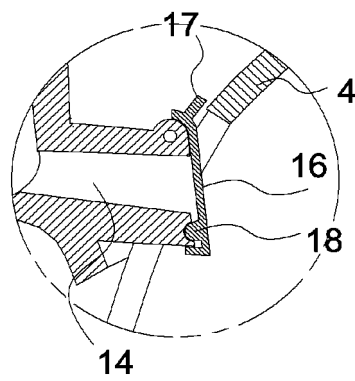


Figure 8



REFERENCES CITED IN THE DESCRIPTION

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