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(54) ICE MAKER AND REFRIGERATOR

EISBEREITER UND KÜHLSCHRANK

MACHINE À GLAÇONS ET RÉFRIGÉRATEUR

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Description

TECHNICAL FIELD

[0001] The present invention relates to the field of household appliance and in particular to an ice maker and a refrigerator.

BACKGROUND

[0002] Conventional manual ice makers comprise door manual ice makers, cabinet shelf manual ice makers and cabinet drawer manual ice makers. The first two types of ice makers both have fixed mounting positions and are not prone to contamination from the external; the cabinet drawer-type manual ice maker is generally placed freely in the cabinet. When ice is retrieved, an ice making and removing structure on top of an ice bin needs to be opened. At this time, it is necessary to find a clean position for the ice making and removing structure to complete retrieval of ice; meanwhile, the probability that the ice making and removing structure is contaminated is greatly increased.

[0003] In addition, a conventional ice shovel can only act to shovel ice and cannot act as a water-filling cup, and a water-filling cup needs to be additionally provided. In this way, the function of the ice shovel is made limited; both the ice shovel and the water-filling cup need to be configured, thereby increasing the cost in use.

[0004] US 2005/241329 A1 discloses an ice-cube making device for use in a refrigerated cabinet, wherein the ice-cube making device is attachable to a freezer liner and includes a mechanism for extracting ice by applying a twisting torque to one or more ice-cube trays.

[0005] US 2,846,855 A, US 3,147,603 A, CN 2757064 Y and DE 10 2009 046021 A1 also disclose subject matter related to the present invention.

SUMMARY

[0006] An object of the present invention is to provide an ice maker and a refrigerator to facilitate access to ice and avoids contaminating the ice making and removing structure.

[0007] To achieve one of the above objects of the present invention, there is provided an ice maker according to the appended independent claim 1.

[0008] As compared with the prior art, the present invention has the following advantageous effects: with the technical solution being employed, since the bracket is rotatably disposed on the ice bin via a rotating shaft, the bracket is operable to drive the ice making box to rotate relative to the ice bin to open or close the ice bin. When ice needs to be taken, the bracket drives the ice making box to rotate relative to the ice bin, thereby exposing an inner cavity of the ice bin so that ice can be taken. Furthermore, it is unnecessary to find another place to place the ice making and removing structure, which not only

facilitates access to the ice and but also avoids contaminating the ice making and removing structure.

[0009] Further, as compared with the prior art, the above technical solutions of the present invention have the following advantageous effects: the ice shovel has the accommodating cavity for accommodating water, at least one of sides forming the accommodating cavity is provided with the ice shoveling portion, and the ice shoveling portion is used to shovel ice. Therefore, the ice shovel may be used to shovel ice, and also used as a container for filling water so that the function of the ice shovel is extended and the cost is reduced.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010]

FIG. 1 is a perspective view of an ice maker according to a specific embodiment of the present invention; FIG. 2 is a perspective view of the ice maker in FIG. 1 when an ice-making upper cover and an ice shovel are removed;

FIG. 3 is a perspective view of the ice maker in FIG. 1 when an ice making and removing structure rotates by a certain angle relative to an ice bin and the ice shovel is removed;

FIG. 4 is a perspective view of the ice making and removing structure in the ice maker in FIG. 3;

FIG. 5 is a perspective view of an ice bin in the ice maker of FIG. 3;

FIG. 6 is a perspective view of the ice bin of FIG. 5 as viewed in another direction;

FIG. 7 is a perspective view of the ice maker of FIG. 1 as viewed in another direction;

FIG. 8 is a perspective view of the ice shovel in the ice maker in FIG. 1;

FIG. 9 is a perspective view of the ice shovel of FIG. 8 as viewed in another direction;

FIG. 10 is a perspective view of the ice shovel of FIG. 8 as viewed in a further direction;

FIG. 11 is a perspective view of the ice shovel of FIG. 8 as viewed in a further direction.

DETAILED DESCRIPTION

[0011] The present invention will be described in detail below in conjunction with specific embodiments shown in the figures.

[0012] In the depictions of the specific embodiments of the present invention, directional or positional relationship as indicated by terms such as "up", "down", "front", "rear", "left", "right", "vertical", "horizontal", "bottom", "in" and "out" is based on the directional or positional relationship shown in the figures usually with reference to the normal in-use state of the refrigerator, and does not indicate that the designated position or element must be in a specific direction.

[0013] Moreover, it should be appreciated that al-

though the terms such as "first" and "second" may be used to describe various elements or structures herein, the described objects should not be limited by the above terms. The above terms are only used to distinguish the described objects from each other. For example, a first side portion may also be referred to as a second side portion, and also the second side portion may also be referred to as the first side portion, which does not depart from the extent of protection of the present invention.

[0014] A specific embodiment provided by the present invention discloses a refrigerator comprising a cabinet and a door connected to the cabinet, wherein the cabinet defines a storage space, and the door is operable to open or close at least part of the storage space. The storage space may comprise a plurality of storage components whose number and structural forms may be configured according to different needs. The storage components usually comprise a refrigerating chamber and a freezing chamber.

[0015] The refrigerator further comprises an ice maker. The ice maker is an independent ice maker and is disposed in the storage component. Specifically, the ice maker is placed in a drawer in the storage component. In the present preferred embodiment, the ice maker is a manual ice maker. Certainly, the ice maker may also set to an electric ice maker.

[0016] As shown in FIG. 1 through FIG. 7, the ice maker comprises an ice bin 10 for receiving ice cubes, and an ice making and removing structure 11 rotatably provided in the ice bin 10. The ice making and removing structure 11 comprises a bracket 12 disposed in the ice bin 10 and an ice making box 14 disposed in the bracket 12. According to the present invention, the bracket 12 is rotatably disposed in the ice bin 10 via a rotating shaft 16, and the bracket 12 is operable to drive the ice making box 14 to rotate relative to the ice bin 10 to open or close the ice bin 10. In addition, the ice making box 14 is driven to rotate relative to the bracket 12 between an ice making position and an ice turning position, and the ice making box 14 defines a plurality of ice making cells. Water may be filled into the plurality of ice-making cells to make ice.

[0017] According to the present invention, since the bracket 12 is rotatably disposed on the ice bin 10 via the rotating shaft 16, the bracket 12 is operable to drive the ice making box 14 to rotate relative to the ice bin 10 to open or close the ice bin 10. When ice needs to be taken, the bracket 12 drives the ice making box 14 to rotate relative to the ice bin 10, thereby exposing an inner cavity of the ice bin 10, so that ice can be taken. Furthermore, it is unnecessary to find another place to place the ice making and removing structure 11, which not only facilitates access to the ice and but also avoids contaminating the ice making and removing structure 11.

[0018] Further, the ice making and removing structure 11 has a first state and a second state relative to the ice bin 10. In the first state, the bracket 12 drives the ice making box 14 to rotate relative to the ice bin 10. In the second state, the bracket 12 together the ice making box

14 can be removed from the ice bin 10. This arrangement not only facilitates the installation of the ice making and removing structure 11, but also allows the entire ice making and removing structure 11 to be removed from the ice bin 10 according to specific needs.

[0019] The ice bin 10 is provided with a fitting hole 18, the rotating shaft 16 is fitted in the fitting hole 18, the rotating shaft 16 has a flat square portion, and the fitting hole 18 has an opening 20 whose opening width is smaller than a diameter of the rotating shaft 16 and larger than the width at the flat square portion. As such, when the flat portion aligns with the position of the opening 20, the ice making and removing structure 11 can be removed from the ice bin 10. Specifically, when the ice making and removing structure 11 completely covers the ice bin 10, the flat square portion aligns with the position of the opening 20, and the bracket 12 together with the ice making box 14 can be removed from the ice bin 10 at this time. Such an arrangement is convenient for identification and operation. When the ice making and removing structure 11 is rotated relative to the ice bin 10 from a state in which the ice making and removing structure 11 completely covers the ice bin 10, the ice making and removing structure 11 cannot be removed from the ice bin 10, making the structure more reliable and the operation more convenient.

[0020] Further, a rotation axis of the bracket 12 is perpendicular to a rotation axis of the ice making box 14, which makes the ice maker structurally more compact. In the present preferred embodiment, the ice maker is a manual ice maker. Specifically, the bracket 12 is provided with a knob 22 for manual operation, and a movement conversion mechanism (not shown) provided between the knob 22 and the ice making box 14. The knob 22 is operable to cause the movement conversion mechanism to drive the ice making box 14 to rotate, thereby enabling the ice making box 14 to achieve the switching between the ice making position and the ice turning position. When in the ice making position, the ice making cells open upwards, and water may be filled into the ice making cells to make ice. When in the ice turning position, the ice making cells open downward, that is, faces towards the inside of the ice bin 10, so that ice cubes fall off into the ice bin 10. In addition, the knob 22 and the rotating shaft 16 are provided at opposite ends of the bracket 12.

[0021] The ice making and removing structure 11 further comprises an ice-making upper cover 24 movably disposed on the bracket 12, and the ice-making upper cover 24 is operable to move relative to the bracket 12 to fully open the ice making box 14 or at least partially cover the ice making box 14. The ice-making upper cover 24 is provided with an opening 26 for water filling. Certainly, the ice-making upper cover 24 may not be provided with the opening 26 for water filling. When water needs to be filled, the ice-making upper cover 24 is moved relative to the bracket 12 to open the ice making box 14 to fill water.

[0022] In the present preferred embodiment, the ice-

making upper cover 24 is slidably disposed on the bracket 12. Certainly, the ice-making upper cover 24 may also be configured to be rotatably connected to the bracket 12, or connected to the bracket 12 in a connection manner such as snap-fitting.

[0023] With further reference to FIG. 8 through FIG. 11, the ice maker further comprises an ice shovel 28. Specifically, the ice shovel 28 is provided in the ice bin 10, the ice shovel 28 has an accommodating cavity 29 for accommodating water, at least one of sides forming the accommodating cavity 29 is provided with an ice shoveling portion 30, and the ice shoveling portion 30 protrudes from other sides forming the accommodating cavity to shovel the ice.

[0024] According to the present invention, the ice shovel 28 is used to shovel ice, and also used as a container for filling water so that the function of the ice shovel 28 is extended and the cost is reduced.

[0025] In addition, an ice shovel positioning structure 32 is provided on the ice bin 10 to position the ice shovel 28 in the ice bin 10, thereby preventing the ice shovel 28 from slipping down when the ice making and removing structure 11 rotates relative to the ice bin 10. Specifically, the ice shovel positioning structure 32 comprises a stop rib 34 disposed in the ice bin 10, and the ice shoveling portion 30 abuts against the stop rib 34. Further, the ice shovel 28 further comprises a holding portion 36, the ice shovel positioning structure 32 further comprises a groove 38 provided on one of the side walls of the ice bin 10, and the holding portion 36 fits in the groove 38 and is received in the groove 38. In addition, the stop rib 34 is parallel to the side wall provided with the groove 38.

[0026] The ice bin 10 comprises a bottom wall 40 facing the ice making box 14, a first side wall 42, a second side wall 44, a third side wall 46 and a fourth side wall 48 extending from the bottom wall 40 to the same side of the bottom wall 40, wherein the first side wall 42, the second side wall 44, the third side wall 46 and the fourth side wall 48 are sequentially connected. The groove 38 is provided on the first side wall 42, the second side wall 44 and the fourth side wall 48 are both provided with the fitting hole 18, and the fitting hole 18 is disposed closer to the third side wall 46.

[0027] A supporting portion 58 is disposed in the ice bin 10. When the bracket 12 and the ice making box 14 close the ice bin 10, the bracket 12 is supported by the supporting portion 58, and a shock-absorbing pad (not shown) is provided between the bracket 12 and the supporting portion 58. After the ice is taken out, when the bracket 12 drives the ice making box 14 to rotate relative to the ice bin 10 to close the ice bin 10, the shock-absorbing pad may greatly reduce the closing noise generated.

[0028] Specifically, the second side wall 44 and the fourth side wall 48 both have the supporting portion 58 extending toward the inner side of the ice bin 10, and the shock-absorbing pad is provided between both sides of the bracket 12 and the two supporting portions 58. The

shock-absorbing pads are disposed on the bracket 12, and set as silicone shock-absorbing pads. Preferably, the silicone shock-absorbing pads are adhered to the bracket 12.

[0029] In addition, when the ice shovel 28 is placed in the ice bin 10, the opening of the accommodating cavity 29 faces the bottom wall 40. A back side of the holding portion 36 is provided with a hollow portion 50, which not only reduces the manufacturing cost, but also facilitates taking out the ice shovel 28 when the ice shovel 28 is needed.

[0030] The ice shovel 28 is provided with a flow guide portion 52 for facilitating water filling. The flow guide portion 52 is used to control the water flow and prevent the water from splashing to other places. Specifically, the ice shovel 28 comprises a first side portion 54 and a second side portion 56 adjacent to the first side portion 54, an ice shoveling portion 30 is provided on the first side portion 54, and the flow guide portion 52 is disposed at the junction of the first side portion 54 and the second side portion 56.

Claims

1. An ice maker, wherein the ice maker comprises an ice bin (10) for receiving ice cubes, and an ice making and removing structure (11) rotatably provided in the ice bin (10), the ice making and removing structure (11) comprises a bracket (12) rotatably disposed in the ice bin (10) via a rotating shaft (16), and an ice making box (14) disposed in the bracket (12), the bracket (12) is operable to drive the ice making box (14) to rotate relative to the ice bin (10) to open or close the ice bin (10), the ice making box (14) is driven to rotate relative to the bracket (12) between an ice making position and an ice turning position, and the ice making box (14) defines a plurality of ice making cells, when the ice making box (14) is in the ice making position, the opening of the ice making cells faces upwards; and when the ice box (14) is in the ice turning position, the opening of the ice making cells faces the inside of the ice bin (10),

characterized in that the ice maker further comprises an ice shovel (28) and a holding portion (36), and the ice shovel (28) has an accommodating cavity (29) for accommodating water, at least one of sides forming the accommodating cavity (29) is provided with an ice shoveling portion (30), and the ice shoveling portion (30) protrudes from other sides forming the accommodating cavity (29) to shovel the ice, the ice bin (10) is provided with an ice shovel positioning structure (32) to position the ice shovel (28) in the ice bin (10), the ice shovel positioning structure (32) comprises a stop rib (34) disposed in the ice bin (10), and a groove

- (38) provided on one of the side walls of the ice bin (10), and the ice shoveling portion (30) abuts against the stop rib (34), and the holding portion (36) fits in the groove (38) and is received in the groove (38), and the ice bin (10) comprises a bottom wall (40) facing the ice making box (14), and an opening of the accommodating cavity (29) faces the bottom wall (40) when the ice shovel (28) is placed in the ice bin (10).
2. The ice maker according to claim 1, wherein the ice making and removing structure (11) has a first state and a second state relative to the ice bin (10), wherein in the first state, the bracket (12) drives the ice making box (14) to rotate relative to the ice bin (10), and wherein in the second state, the bracket (12) together the ice making box (14) can be removed from the ice bin (10).
 3. The ice maker according to claim 2, wherein the ice bin (10) is provided with a fitting hole (18), the rotating shaft (16) is fitted in the fitting hole (18), the rotating shaft (16) has a flat square portion, and the fitting hole (18) has an opening (20) whose opening width is smaller than a diameter of the rotating shaft (16) and larger than the width at the flat square portion.
 4. The ice maker according to claim 3, wherein when the ice making and removing structure (11) completely covers the ice bin (10), the flat square portion aligns with the position of the opening (20), and the bracket (12) together with the ice making box (14) can be removed from the ice bin (10) at this time.
 5. The ice maker according to claim 1, wherein a rotation axis of the bracket (12) is perpendicular to a rotation axis of the ice making box (14).
 6. The ice maker according to claim 1, wherein the bracket (12) is provided with a knob (22), and a movement conversion mechanism provided between the knob (22) and the ice making box (14), the knob (22) is operable to cause the movement conversion mechanism to drive the ice making box (14) to rotate, and the knob (22) and the rotating shaft (16) are disposed at both opposed ends of the bracket (12).
 7. The ice maker according to claim 1, wherein the ice making and removing structure (11) further comprises an ice-making upper cover (24) movably disposed on the bracket (12), and the ice-making upper cover (24) is operable to move relative to the bracket (12) to fully open the ice making box (14) or at least partially cover the ice making box (14).
 8. The ice maker according to claim 7, wherein the ice-making upper cover (24) is slidably disposed on the

bracket (12), and the ice-making upper cover (24) is provided with an opening (26) for filling water.

9. The ice maker according to claim 1, wherein a supporting portion (58) is disposed in the ice bin (10), the bracket (12) is supported by the supporting portion when the bracket (12) and the ice making box (14) close the ice bin (10), and a shock-absorbing pad is provided between the bracket (12) and the supporting portion (58).
10. A refrigerator, comprising a cabinet defining a storage space, and a door connected to the cabinet to open or close at least part of the storage space, wherein the refrigerator further comprises the ice maker according to any of claims 1-9.

Patentansprüche

1. Eisbereiter, wobei der Eisbereiter einen Eisbehälter (10) zur Aufnahme von Eiswürfeln und eine drehbar im Eisbehälter (10) angeordnete Eisbereitungs- und Eisentnahmestruktur (11) aufweist, die Eisbereitungs- und Eisentnahmestruktur (11) eine drehbar über eine Drehwelle (16) im Eisbehälter (10) angeordnete Halterung (12) und einen in der Halterung (12) angeordneten Eisbereitungskasten (14) aufweist, die Halterung (12) derart betätigbar ist, den Eisbereitungskasten (14) anzutreiben, sich relativ zum Eisbehälter (10) zu drehen, um den Eisbehälter (10) zu öffnen oder zu schließen, der Eisbereitungskasten (14) derart angetrieben ist, dass er sich relativ zur Halterung (12) zwischen einer Eisherstellungsposition und einer Eiswende-Position dreht, und der Eisbereitungskasten (14) eine Mehrzahl von Eisbereitungszellen definiert, und die Öffnung der Eisbereitungszellen nach oben zeigt, wenn sich der Eisbereitungskasten (14) in der Eisbereitungsposition befindet; und die Öffnung der Eisbereitungszellen zur Innenseite des Eisbehälters (10) zeigt, wenn sich der Eisbereitungskasten (14) in der Eiswende-Position befindet,

dadurch gekennzeichnet, dass der Eisbereiter ferner eine Eisschaufel (28) und einen Halteabschnitt (36) aufweist und die Eisschaufel (28) einen Aufnahmeraum (29) zur Aufnahme von Wasser aufweist, mindestens eine der Seiten, die den Aufnahmeraum (29) ausbilden, mit einem Eisschaufelabschnitt (30) versehen ist, und der Eisschaufelabschnitt (30) von den anderen den Aufnahmeraum (29) ausbildenden Seiten hervorsteht, um das Eis zu schaufeln, der Eisbehälter (10) mit einer Eisschaufel-Positionierungsstruktur (32) versehen ist, um die Eisschaufel (28) im Eisbehälter (10) zu positionieren, die Eisschaufel-Positionierungsstruktur

- (32) eine im Eisbehälter (10) angeordnete Anschlagrippe (34) und eine an einer der Seitenwände des Eisbehälters (10) vorgesehene Nut (38) aufweist, und der Eisschaufelabschnitt (30) an der Anschlagrippe (34) anliegt, und der Halteabschnitt (36) in die Nut (38) angepasst und in der Nut (38) aufgenommen ist, und der Eisbehälter (10) eine Bodenwand (40) aufweist, die dem Eisbereitungskasten (14) zugewandt ist, und eine Öffnung des Aufnahmeraums (29) der Bodenwand (40) zugewandt ist, wenn die Eisschaufel (28) in den Eisbehälter (10) platziert ist.
2. Eisbereiter nach Anspruch 1, wobei die Eisbereitungs- und Eisentnahmestruktur (11) einen ersten und einen zweiten Zustand in Bezug auf den Eisbehälter (10) aufweist, wobei im ersten Zustand die Halterung (12) den Eisbereitungskasten (14) dazu antreibt, sich relativ zum Eisbehälter (10) zu drehen, und wobei im zweiten Zustand die Halterung (12) zusammen mit dem Eisbereitungskasten (14) aus dem Eisbehälter (10) entfernt werden kann.
3. Eisbereiter nach Anspruch 2, wobei der Eisbehälter (10) mit einem Passloch (18) versehen ist, die Drehwelle (16) in das Passloch (18) eingepasst ist, die Drehwelle (16) einen flachen quadratischen Abschnitt aufweist und das Passloch (18) eine Öffnung (20) aufweist, deren Öffnungsweite kleiner als ein Durchmesser der Drehwelle (16) und größer als die Breite des flachen quadratischen Abschnitts ist.
4. Eisbereiter nach Anspruch 3, wobei, wenn die Eisbereitungs- und Eisentnahmestruktur (11) den Eisbehälter (10) vollständig abdeckt, der flache quadratische Abschnitt mit der Position der Öffnung (20) ausgerichtet ist und die Halterung (12) zusammen mit dem Eisbereitungskasten (14) zu diesem Zeitpunkt aus dem Eisbehälter (10) entfernt werden kann.
5. Eisbereiter nach Anspruch 1, wobei eine Drehachse der Halterung (12) senkrecht zu einer Drehachse des Eisbereitungskastens (14) ist.
6. Eisbereiter nach Anspruch 1, wobei die Halterung (12) mit einem Knopf (22) und einem zwischen dem Knopf (22) und dem Eisbereitungskasten (14) vorgesehenen Bewegungsumwandlungsmechanismus versehen ist, wobei der Knopf (22) derart betätigbar ist, den Bewegungsumwandlungsmechanismus anzutreiben, um den Eisbereitungskasten (14) in Drehung zu versetzen, und der Knopf (22) und die Drehwelle (16) an beiden gegenüberliegenden Enden der Halterung (12) angeordnet sind.
7. Eisbereiter nach Anspruch 1, wobei die Eisbereitungs- und Eisentnahmestruktur (11) ferner eine Eisbereitungs-Oberabdeckung (24) aufweist, die beweglich an der Halterung (12) angeordnet ist, und die Eisbereitungs-Oberabdeckung (24) derart betätigbar ist, sich relativ zur Halterung (12) zu bewegen, um den Eisbereitungskasten (14) vollständig zu öffnen oder den Eisbereitungskasten (14) zumindest teilweise abzudecken.
8. Eisbereiter nach Anspruch 7, wobei die Eisbereitungs-Oberabdeckung (24) verschiebbar auf der Halterung (12) angeordnet ist und die Eisbereitungs-Oberabdeckung (24) zur Eisbereitung mit einer Öffnung (26) zum Einfüllen von Wasser versehen ist.
9. Eisbereiter nach Anspruch 1, wobei ein Stützabschnitt (58) in dem Eisbehälter (10) angeordnet ist, die Halterung (12) von dem Stützabschnitt (58) gestützt ist, wenn die Halterung (12) und der Eisbereitungskasten (14) den Eisbehälter (10) verschließen, und ein stoßdämpfendes Polster zwischen der Halterung (12) und dem Stützabschnitt (58) vorgesehen ist.
10. Kühlschrank, der einen Schrank, welcher einen Lagerraum definiert, und eine Tür aufweist, die mit dem Schrank verbunden ist, um mindestens einen Teil des Lagerraums zu öffnen oder zu schließen, wobei der Kühlschrank ferner den Eisbereiter nach einem der Ansprüche 1 bis 9 aufweist.

Revendications

1. Machine à glaçons, dans laquelle la machine à glaçons comprend un bac à glaçons (10) pour recevoir des glaçons, et une structure de fabrication et de retrait de glaçons (11) disposée en rotation dans le bac à glaçons (10), la structure de fabrication et de retrait de glaçons (11) comprend un support (12) disposé en rotation dans le bac à glaçons (10) par le biais d'un arbre rotatif (16), et un compartiment de fabrication de glaçons (14) disposé dans le support (12), le support (12) étant utilisable pour entraîner le compartiment de fabrication de glaçons (14) à tourner par rapport au bac à glaçons (10) pour ouvrir ou fermer le bac à glaçons (10), le compartiment de fabrication de glaçons (14) étant entraîné à tourner par rapport au support (12) entre une position de fabrication de glaçons et une position de retournement de glaçons, et le compartiment de fabrication de glaçons (14) définit une pluralité de cellules de fabrication de glaçons, lorsque le compartiment de fabrication de glaçons (14) est dans la position de fabrication de glaçons, l'ouverture des cellules de fabrication de glaçons est tournée vers le haut ; et lorsque le compartiment à glaçons (14) est en position de retournement de glaçons, l'ouverture des cellules de fabrication de glaçons fait face à l'intérieur

du bac à glaçons (10),

caractérisée en ce que la machine à glaçons comprend en outre une pelle à glaçons (28) et une partie de maintien (36) et la pelle à glaçons (28) présente une cavité de réception (29) pour recevoir de l'eau, au moins l'un des côtés formant la cavité de réception (29) est pourvu d'une partie de pelletage de glaçons (30) et la partie de pelletage de glaçons (30) fait saillie depuis d'autres côtés formant la cavité de réception (29) pour pelleter les glaçons, le bac à glaçons (10) est pourvu d'une structure de positionnement de pelle à glaçons (32) pour positionner la pelle à glaçons (28) dans le bac à glaçons (10), la structure de positionnement de pelle à glaçons (32) comprend une nervure de butée (34) disposée dans le bac à glaçons (10) et une rainure (38) ménagée sur l'une des parois latérales du bac à glaçons (10) et la partie de pelletage de glaçons (30) bute contre la nervure de butée (34) et la partie de maintien (36) s'insère dans la rainure (38) et est reçue dans la rainure (38) et le bac à glaçons (10) comprend une paroi inférieure (40) faisant face au compartiment de fabrication de glaçons (14) et une ouverture de la cavité de réception (29) fait face à la paroi inférieure (40) lorsque la pelle à glaçons (28) est placée dans le bac à glaçons (10).

2. Machine à glaçons selon la revendication 1, dans laquelle la structure de fabrication et de retrait de glaçons (11) présente un premier état et un second état par rapport au bac à glaçons (10), dans laquelle, dans le premier état, le support (12) entraîne le compartiment de fabrication de glaçons (14) à tourner par rapport au bac à glaçons (10) et dans laquelle, dans le second état, le support (12) et le compartiment de fabrication de glaçons (14) peuvent être retirés du bac à glaçons (10).
3. Machine à glaçons selon la revendication 2, dans laquelle le bac à glaçons (10) est pourvu d'un trou de montage (18), l'arbre rotatif (16) est monté dans le trou de montage (18), l'arbre rotatif (16) présente une partie carrée plate et le trou de montage (18) présente une ouverture (20) dont la largeur d'ouverture est plus petite qu'un diamètre de l'arbre rotatif (16) et plus grande que la largeur au niveau de la partie carrée plate.
4. Machine à glaçons selon la revendication 3, dans laquelle, lorsque la structure de fabrication et de retrait de glaçons (11) recouvre complètement le bac à glaçons (10), la partie carrée plate s'aligne sur la position de l'ouverture (20), et le support (12) ainsi que le compartiment de fabrication de glaçons (14) peuvent être retirés du bac à glaçons (10) à ce mo-

ment.

5. Machine à glaçons selon la revendication 1, dans laquelle un axe de rotation du support (12) est perpendiculaire à un axe de rotation du compartiment de fabrication de glaçons (14).
6. Machine à glaçons selon la revendication 1, dans laquelle le support (12) est pourvu d'un bouton (22) et d'un mécanisme de conversion de mouvement disposé entre le bouton (22) et le compartiment de fabrication de glaçons (14), le bouton (22) peut être utilisé pour amener le mécanisme de conversion de mouvement à entraîner le compartiment de fabrication de glaçons (14) à tourner, et le bouton (22) et l'arbre rotatif (16) sont disposés aux deux extrémités opposées du support (12).
7. Machine à glaçons selon la revendication 1, dans laquelle la structure de fabrication et de retrait de glaçons (11) comprend en outre un couvercle supérieur de fabrication de glaçons (24) disposé de manière mobile sur le support (12) et le couvercle supérieur de fabrication de glaçons (24) peut être utilisé pour se déplacer par rapport au support (12) pour ouvrir complètement le compartiment de fabrication de glaçons (14) ou pour couvrir au moins partiellement le compartiment de fabrication de glaçons (14).
8. Machine à glaçons selon la revendication 7, dans laquelle le couvercle supérieur de fabrication de glaçons (24) est disposé de manière coulissante sur le support (12) et le couvercle supérieur de fabrication de glaçons (24) est pourvu d'une ouverture (26) pour le remplissage d'eau.
9. Machine à glaçons selon la revendication 1, dans laquelle une partie de support (58) est disposée dans le bac à glaçons (10), le support (12) est supporté par la partie de support lorsque le support (12) et le compartiment de fabrication de glaçons (14) ferment le bac à glaçons (10), et un coussinet amortisseur est prévu entre le support (12) et la partie de support (58).
10. Réfrigérateur, comprenant une armoire définissant un espace de stockage, et une porte reliée à l'armoire pour ouvrir ou fermer au moins une partie de l'espace de stockage, dans lequel le réfrigérateur comprend en outre la machine à glaçons selon l'une quelconque des revendications 1-9.

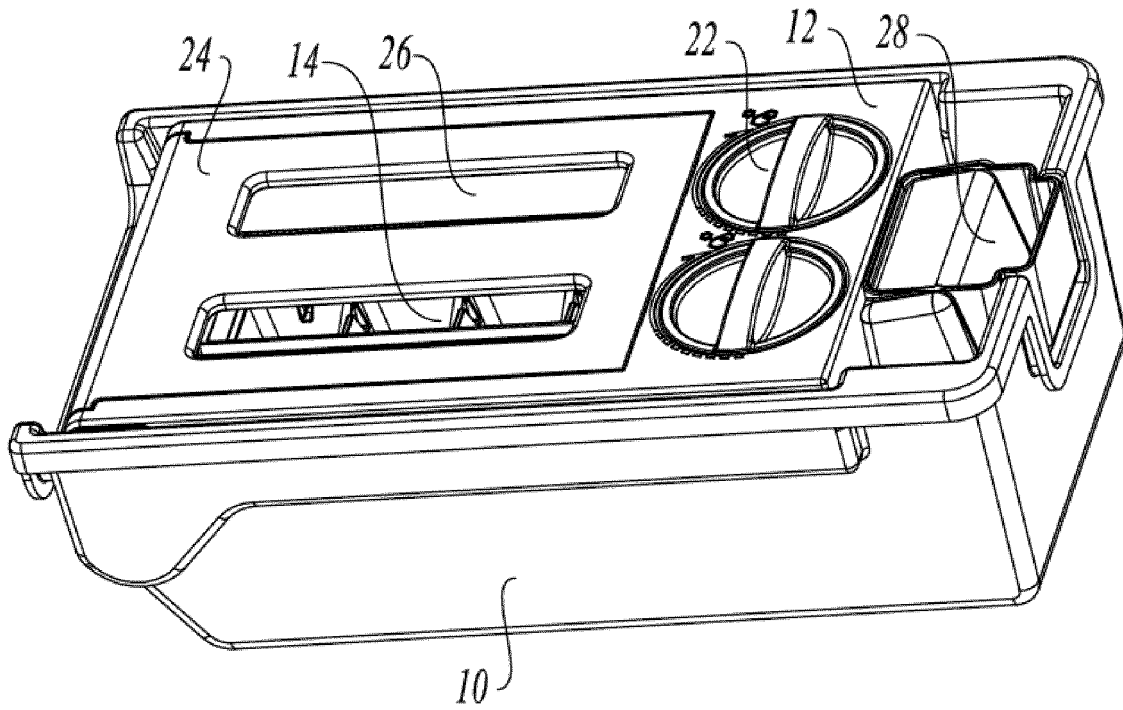


FIG. 1

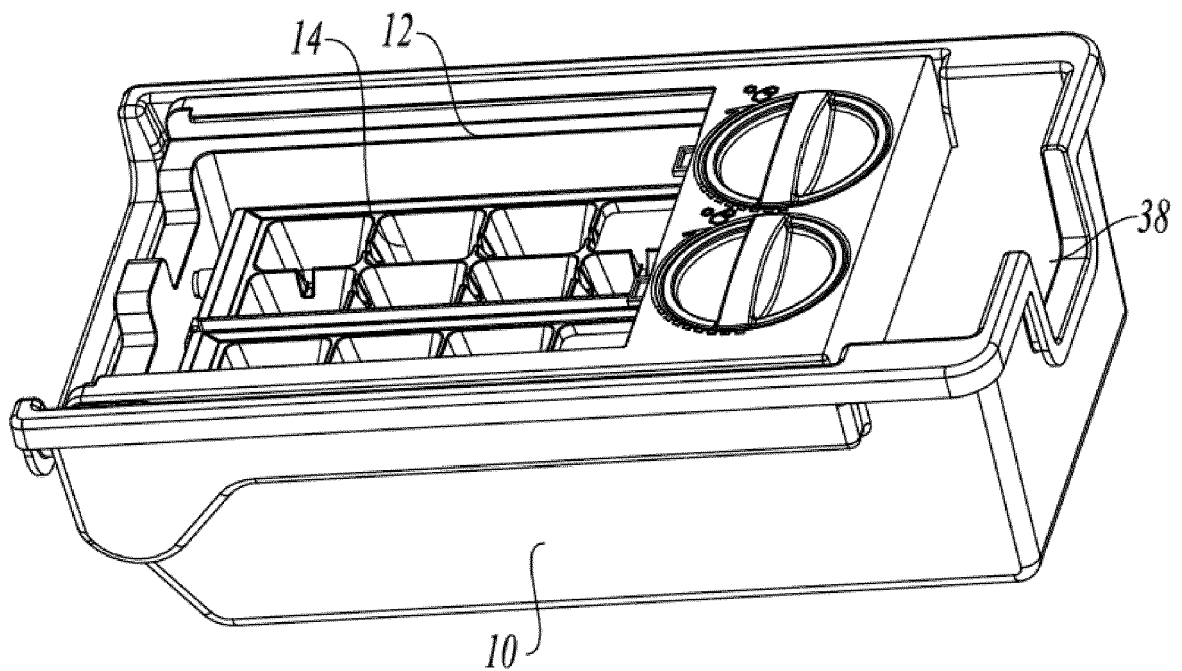


FIG. 2

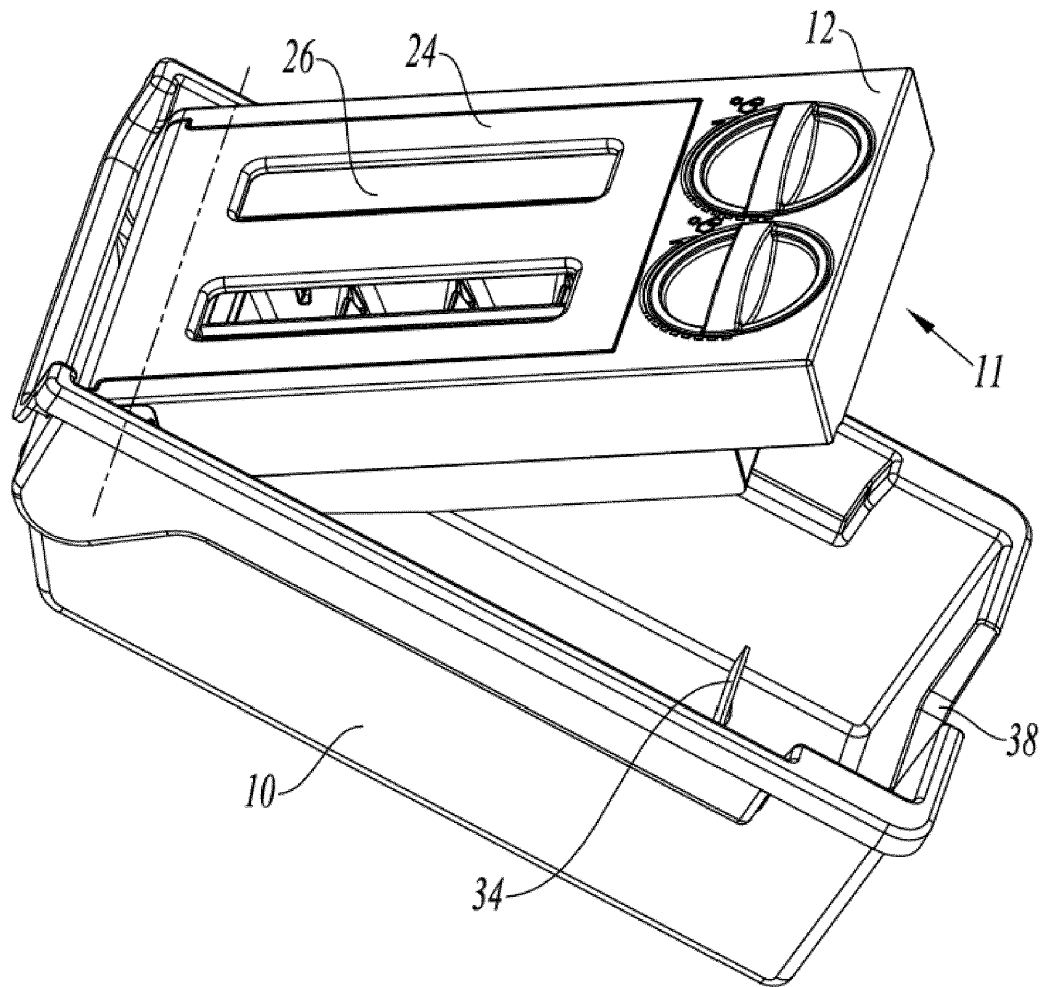


FIG. 3

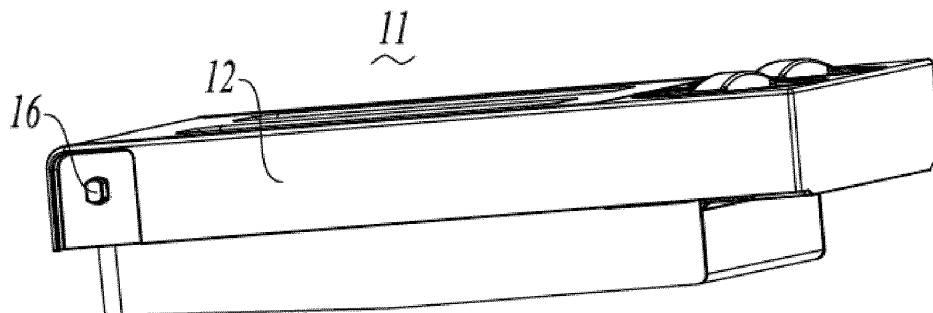


FIG. 4

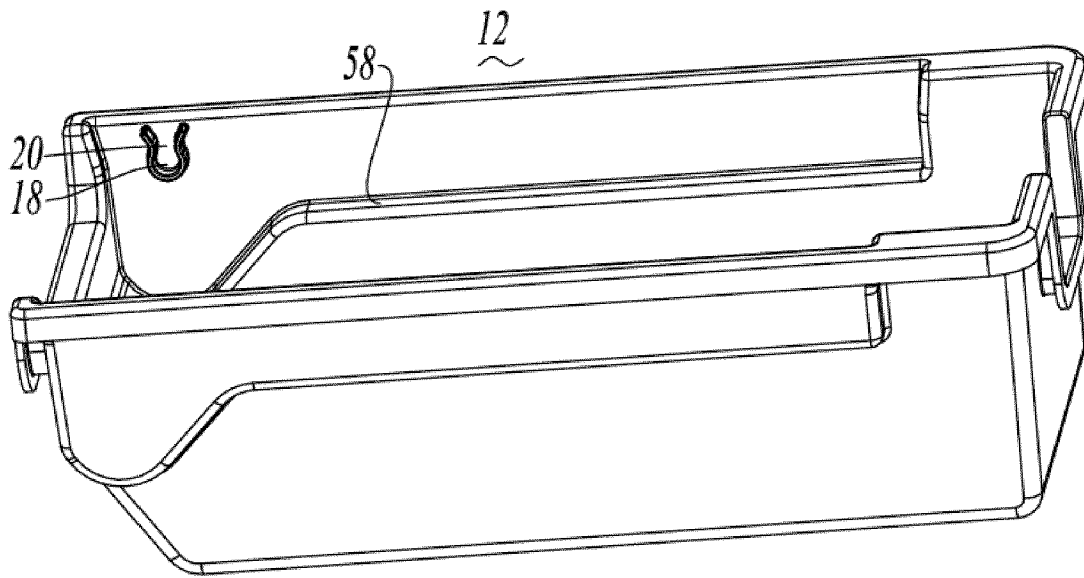


FIG. 5

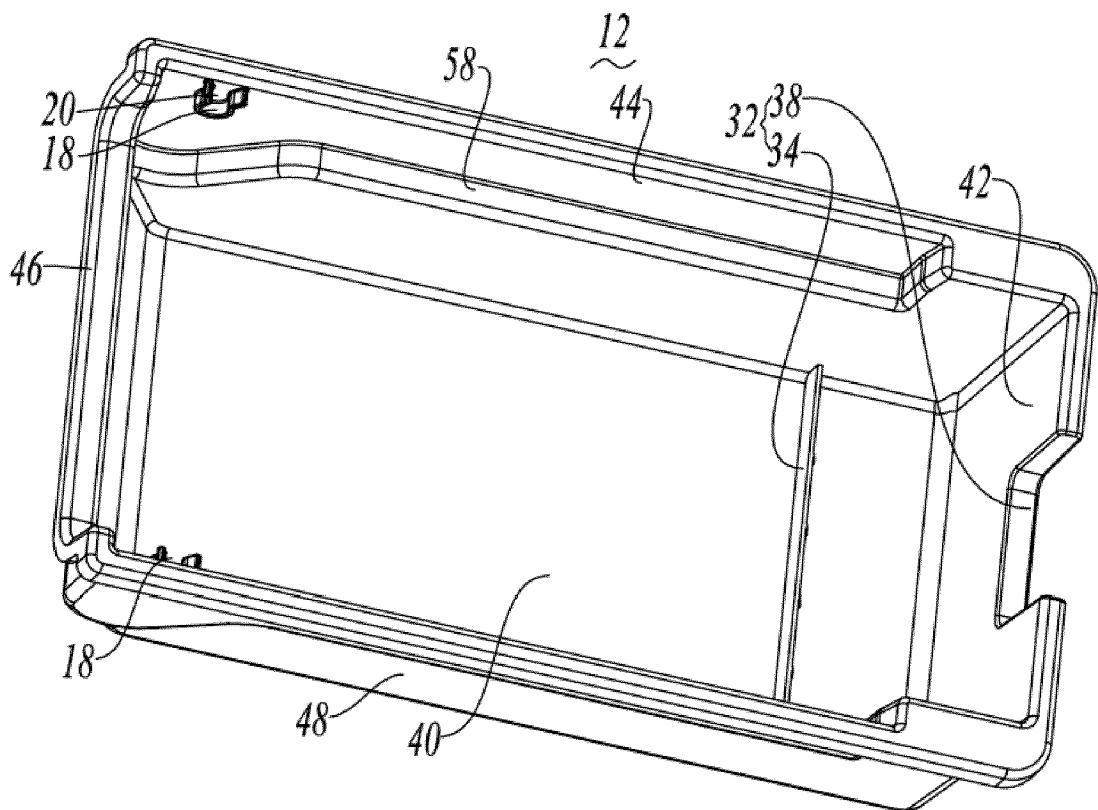


FIG. 6

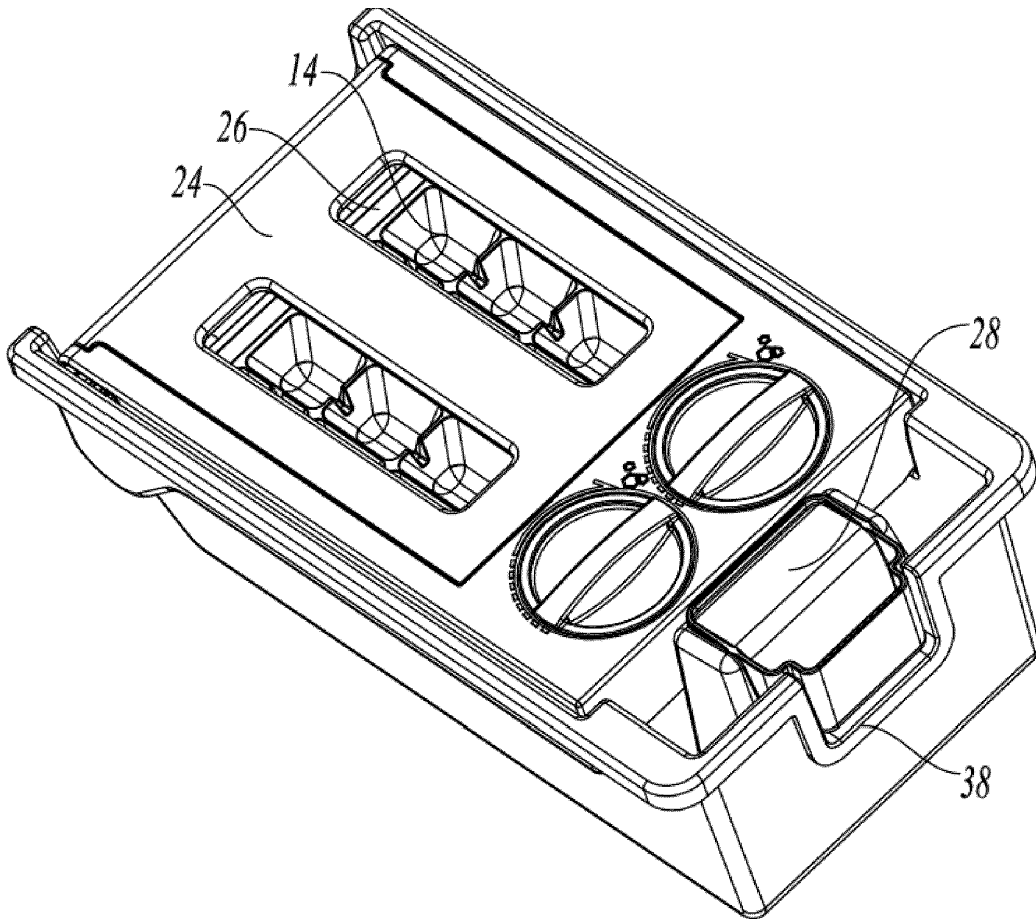


FIG. 7

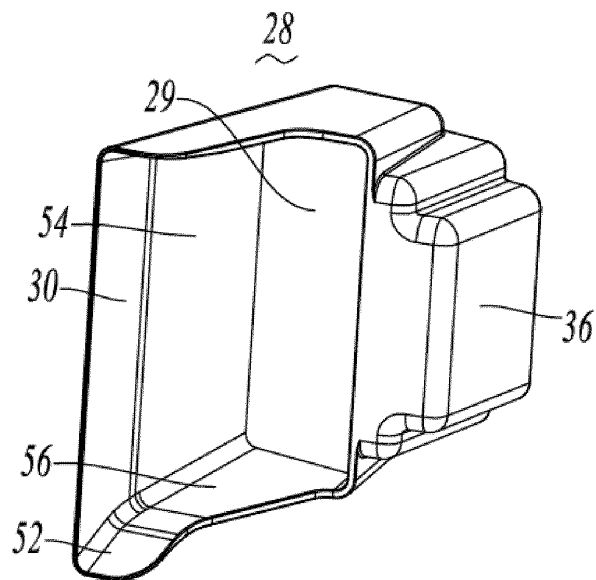


FIG. 8

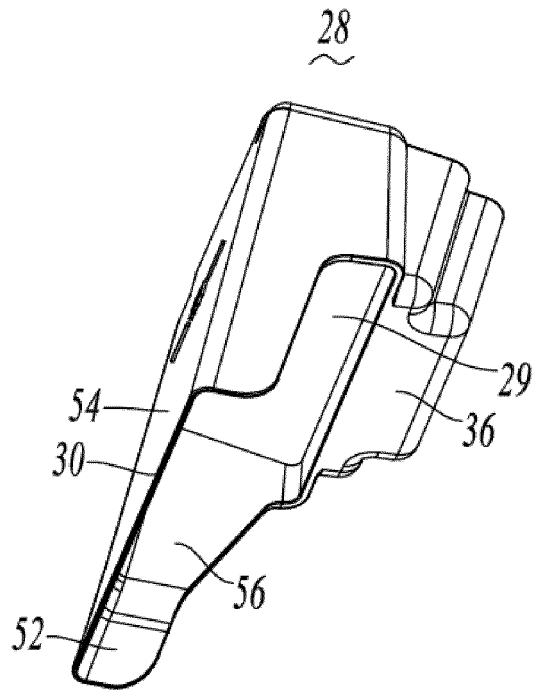


FIG. 9

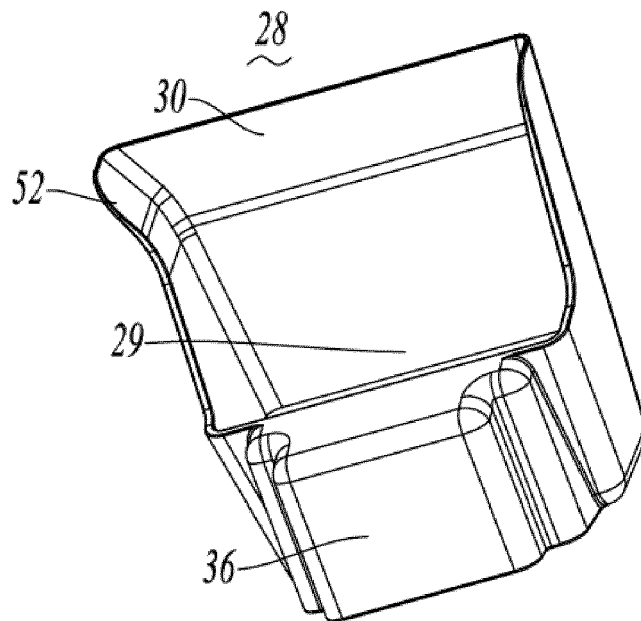


FIG. 10

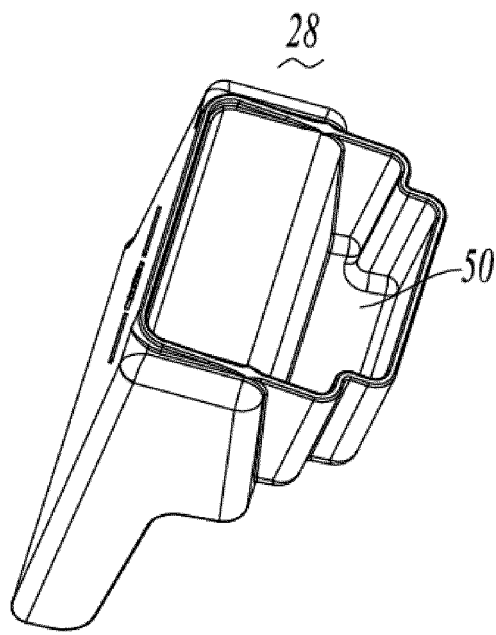


FIG. 11

REFERENCES CITED IN THE DESCRIPTION

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