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21 October 2025

The Commissioner of Patents
IP Australia
PO Box 200
WODEN ACT 2606

FB Rice ref: 541290AU
Contact: Matt Adams
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LG Electronics Inc.
Australian Patent Application 2023282311
Entitled: Refrigerator

Dear Commissioner

For and on behalf of LG Electronics Inc. of 128, Yeoui-daero, Yeongdeungpo-gu, Seoul 07336, Republic of Korea, we provide the following submissions in response to the first examination report.

Proposed amendments

Leave of the Commissioner is requested to amend the specification in accordance with the accompanying Statement of Proposed Amendments. We *attach* a marked up copy of the proposed amendments indicating where additions and/or deletions have been made to the specification.

Response to examination report

Novelty and inventive step

The examiner rejects claim 1 as lacking novelty in light of WO 2024/028770 (D1) and/or KR 20120040891 (D2). The remaining claims are rejected as making no patentable contribution over the prior art.

The applicant proposes to amend claim 1 to read as follows:

1. A refrigerator comprising:

a cabinet including a refrigerating compartment having an open front surface; and

a refrigerating compartment door configured to open and close the refrigerating compartment,

wherein the refrigerating compartment door comprises:

a first door rotatably mounted on the cabinet, and

a second door provided in front of the first door;

wherein the first door comprises:

an ice-making chamber formed as a recess into the first door from a rear surface of the first door ~~defined in the first door~~ (40) and accommodating an ice maker therein for making ice,

an ice-making chamber door for opening and closing an opened rear surface of the ice-making chamber,

a door storage portion formed as a recess into the first door from a front surface of the first door ~~provided in front of the ice-making chamber (50)~~ and configured to receive items through an open front surface of the first door to be stored therein;

a supply duct formed above the ice-making chamber, the supply duct passing through the first door and being configured to supply cold air from the refrigerating compartment to the door storage portion so as to bypass the ice-making chamber from above; and

a discharge duct formed below the ice-making chamber, the discharge duct passing through the first door and being configured to discharge cold air from the door storage portion to the refrigerating compartment so as to bypass the ice-making chamber from below, and

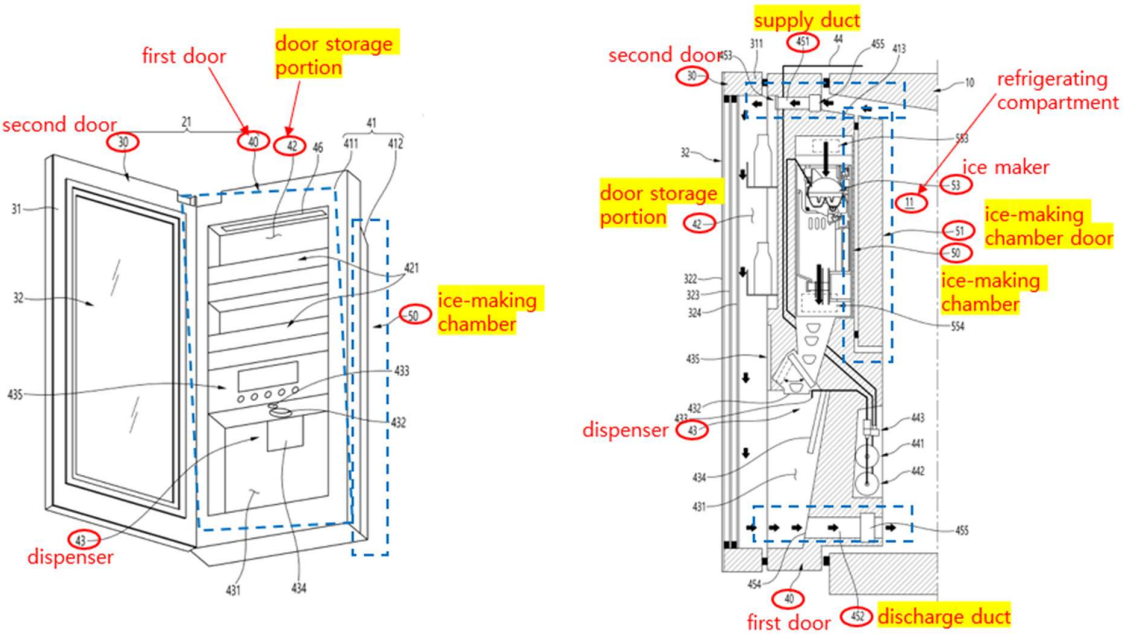
wherein the door storage portion is provided in front of the ice-making chamber and the second door is configured to open and close the door storage portion ~~rotate for opening and closing the open front surface of the first door~~.

Claim 1 is directed to a refrigerator comprising: a cabinet including a refrigerating compartment having an open front surface; and a refrigerating compartment door configured to open and close the refrigerating compartment. The refrigerating compartment door comprises a first door rotatably mounted on the cabinet, and a second door provided in front of the first door.

The claim is amended to recite that the first door comprises: an ice-making chamber formed as a recess into the first door from a rear surface of the first door and accommodating an ice maker therein for making ice, an ice-making chamber door for opening and closing an opened rear surface of the ice-making chamber, a door storage portion formed as a recess into the first door from a front surface of the first door and configured to receive items through an open front surface of the first door to be stored therein, a supply duct formed above the ice-making chamber, the supply duct passing through the first door and being configured to supply cold air from the refrigerating compartment to the door storage portion so as to bypass the ice-making chamber from above, and a discharge duct formed below the ice-making chamber, the discharge duct passing through the first door and being configured to discharge cold air from the

door storage portion to the refrigerating compartment so as to bypass the ice-making chamber from below.

The claim is further amended to recite that the door storage portion is provided in front of the ice-making chamber and the second door is configured to open and close the door storage portion.



Figures reproduced from applicant's specification

As shown in the above drawings, the refrigerator of amended claim 1 is configured such that an ice-making chamber (50) recessed into the first door (40) from a rear surface of the first door is formed. An ice-making chamber door (51) is provided for opening and closing an opened rear surface of the ice-making chamber (50).

Further, a door storage portion (42) is formed as a recess into the first door (40) from a front surface of the first door (40). A second door (30) provided in front of the first door (40), the second door configured to open and close the door storage portion (42).

Accordingly, the ice-making chamber (50) and the door storage portion (42) are independently separated in the front-rear direction of the first door (40).

Therefore, when the second door (30) is opened, none of the components, including the ice-making chamber (50) and the ice maker (53) therein, are exposed, and only the door storage portion (42) is exposed. Thus, even if the second door (30) is frequently opened and closed for storing items in the door storage portion (42), cold air loss inside the ice-making chamber (50) can be prevented, thereby preventing deterioration of ice-making and ice-storing performance.

In addition, the door storage portion (42) is provided with a supply duct (451) and a discharge duct (452) passing through the first door (40), so that cold air can be supplied and discharged between the refrigerating compartment (11) and the door storage portion (42).

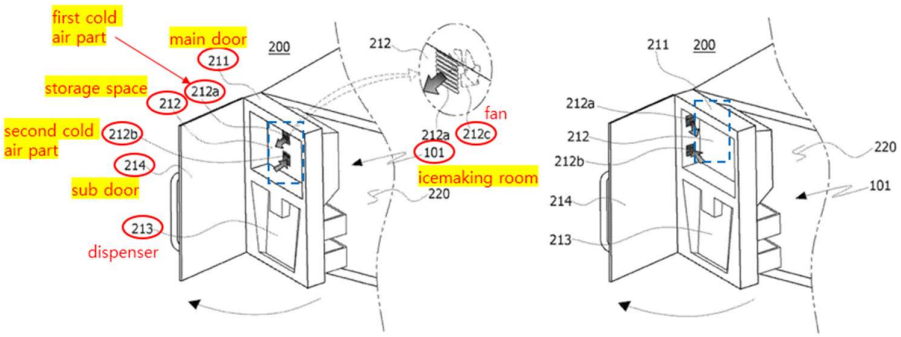
The supply duct is formed above the ice-making chamber. The supply duct passes through the first door and is configured to supply cold air from the refrigerating compartment to the door storage portion so as to bypass the ice-making chamber from above.

The discharge duct is formed below the ice-making chamber. The discharge duct passes through the first door and is configured to discharge cold air from the door storage portion to the refrigerating compartment so as to bypass the ice-making chamber from below.

Accordingly, the door storage portion (42) can be maintained at the same temperature as the refrigerating compartment (11), providing an advantage of an additional low-temperature storage space for storing food.

Furthermore, in the refrigerator of amended claim 1, the door storage portion (42) is disposed in front of the ice-making chamber (50). A supply duct (451) and a discharge duct (452) are formed to pass through the first door above and below the ice-making chamber, respectively, so that cold air from the refrigerating compartment (11) is supplied to the door storage portion (42) and air from the door storage portion (42) is discharged to the refrigerating compartment (11) while bypassing the ice-making chamber (50).

Due to this structure, the door storage portion (42) can maintain the same storage temperature as the refrigerating compartment (11), and the ice-making chamber (50) can independently maintain its own temperature. Accordingly, the ice-making quality and ice-making efficiency in the ice-making chamber (50) are improved, and there is an advantage of preventing the stored ice from melting.

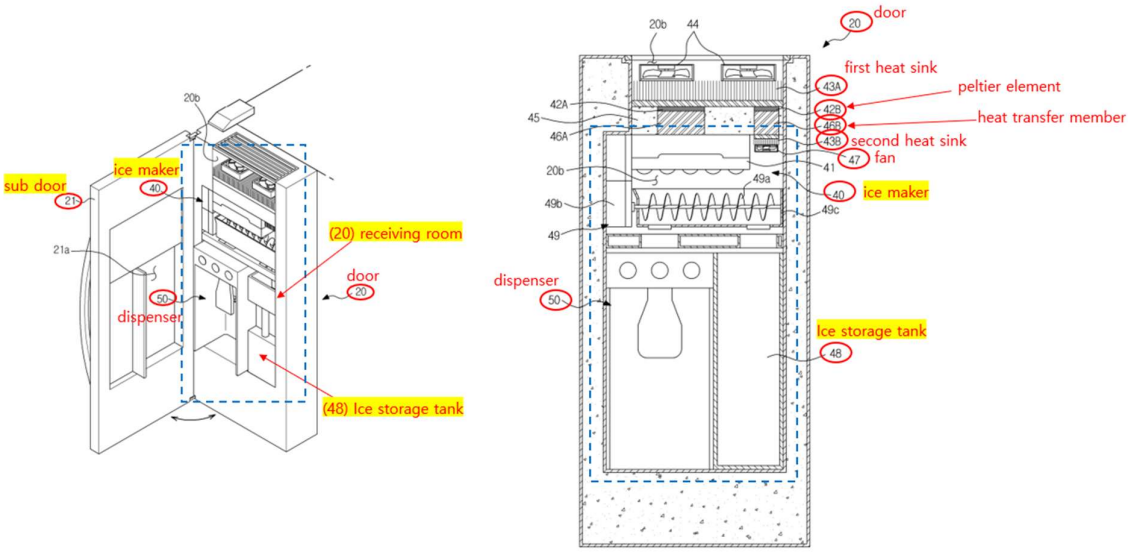


Drawings for D1

The apparatus of D1 differs from the refrigerator of amended claim 1 in the structure of the duct through which cold air is supplied.

in D1, the storage space (212) and the ice-making room (101) are in communication with each other through a first cold air part (212a) and a second cold air part (212b), so that cold air circulates between the storage space (212) and the ice-making room (101).

In such a structure, the temperature of the storage space (212) may become excessively low, which can cause a problem of overcooling of stored food. In particular, due to the circulation of cold air between the storage space (212) and the ice-making room (101), the ice-making performance and efficiency of the ice-making room (101) may be significantly reduced, and when air from the storage space (212) flows into the ice-making room (101), ice inside the ice-making room (101) may melt and adhere to each other, causing operational problems.



Drawings for D2

In the apparatus described in D2, the front surface of the door (20) is recessed, and within the recessed front space both the ice-making compartment (20a) and the dispenser (50) ice storage tank (15) are arranged. Moreover, no space for storing food is substantially provided at the front surface of the door (20). Accordingly, no configuration for supplying cold air from the refrigerator compartment to the front surface of the door (20) is arranged, nor is there any motivation to provide such a configuration.

Furthermore, when the sub-door (21) is opened, the entire front surface of the door (20) is exposed, and all of the components on the front surface of the door (20), including the ice maker (40), are exposed. Therefore, when the sub-door (21) is opened, the cold air in the space where the ice maker (40) is located is lost, thereby deteriorating ice-making performance or causing the ice to melt.

In addition, the sub-door (21) has a structure that does not shield the dispenser (50) and the ice storage tank (48), and these components remain accessible even when the sub-door (21) is closed.

Moreover, the recessed space of the door (20) does not include any configuration for air circulation with the refrigerator compartment (11), and considering the arrangement of the ice

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maker (40), such a structure cannot be implemented. Accordingly, separate thermoelectric elements (43A, 42B, 46B, 43B) are arranged inside the door (20) for ice-making.

Therefore, it cannot be readily derived from D2 to provide the arrangement of an ice-making compartment and a door storage compartment within a first door, nor the cold air supply and discharge structure between the door storage compartment and the refrigerator compartment, as in the refrigerator of amended claim 1.

We invite the examiner to reconsider and withdraw this rejection.

Postponement of acceptance

We now withdraw the request for postponement of acceptance of this application.

We submit that this application is now in order for acceptance.

Yours faithfully
FB Rice

Registered Patent Attorney