The present disclosure provides a refrigerator that executes a rapid cooling function according to a use purpose of a user.

[0006]

A refrigerator provided by the present disclosure is a refrigerator having a storage compartment, and the refrigerator includes a rapid cooling fan that is provided at a ceiling surface of the storage compartment and discharges cool air, and a control unit that executes a rapid cooling function using the rapid cooling fan based on a rapid cooling time set by a user. In the refrigerator, the control unit is configured to stop rotation of the rapid cooling fan when a door of the storage compartment is opened during execution of the rapid cooling function. One candidate time is selected from a plurality of candidate times by the user as the input, and the one candidate time is set as the rapid cooling time. The rapid cooling function has a first mode in which the rapid cooling fan continues to rotate without stopping until execution of the rapid cooling function is completed and a second mode in which a period during which the rapid cooling fan stops occurs before execution of the rapid cooling function is completed, and each of the plurality of candidate times is associated with the first mode or the second mode.

BRIEF DESCRIPTION OF DRAWINGS

[0007]

FIG. 1 is a diagram illustrating an outline of a system for controlling a refrigerator.

FIG. 2 is an external view of refrigerator 100.

FIG. 3 is a cross-sectional view of refrigerator 100 as viewed from the right.

FIG. 4 is a diagram for explaining ice-making compartment 202 and

upper freezing compartment 203.

FIG. 5 is a diagram for explaining upper freezing compartment 203.

FIG. 6 is a diagram illustrating operation panel 600.

FIG. 7 is a flowchart illustrating processing executed by refrigerator 100.

FIG. 8 is a flowchart illustrating processing executed by refrigerator 100.

FIG. 9 is a flowchart illustrating processing executed by refrigerator 100.

DESCRIPTION OF EMBODIMENTS

CLAIMS

1. A refrigerator having a storage compartment, comprising:

a rapid cooling fan that is provided at a ceiling surface of the storage compartment and discharges cool air; and

a control unit that executes a rapid cooling function using the rapid cooling fan based on a rapid cooling time set by an input from a user,

wherein when a door of the storage compartment is opened during execution of the rapid cooling function, the control unit stops rotation of the rapid cooling fan,

wherein one candidate time is selected from a plurality of candidate times by the user as the input, and the one candidate time is set as the rapid cooling time,

wherein the rapid cooling function has

a first mode in which the rapid cooling fan continues to rotate without stopping until execution of the rapid cooling function is completed and

a second mode in which a period during which the rapid cooling fan stops occurs before execution of the rapid cooling function is completed, and

each of the plurality of candidate times is associated with the first mode or the second mode.

2. The refrigerator according to claim 1, wherein

a shortest candidate time among the plurality of candidate times corresponds to the second mode, and

a remaining candidate time of the plurality of candidate times corresponds to the first mode.

~~2~~3. The refrigerator according to claim 1 or 2, wherein when the opened door of the storage compartment is closed, the control unit restarts the stopped rotation of the rapid cooling fan.

~~3~~4. The refrigerator according to any one of claims 1 ~~or 2~~to 3, wherein

the refrigerator has another storage compartment different from the storage compartment, and

the control unit stops rotation of the rapid cooling fan when a door of the other storage compartment is opened during execution of the rapid cooling function.

~~4~~5. The refrigerator according to claim ~~3~~4, wherein when the opened door of the other storage compartment is closed, the control unit restarts the stopped rotation of the rapid cooling fan.

~~5~~6. The refrigerator according to any one of claims 1 to ~~4~~5, further comprising:

a freezing compartment; and

a freezing compartment duct that supplies cool air to the freezing compartment,

wherein a back surface of the storage compartment includes a discharge port through which at least a portion of the cool air is supplied from the freezing compartment duct, and

the storage compartment includes a cool air passage on the ceiling surface, the cool air passage guiding the cool air, discharged from the discharge port, to the rapid cooling fan.

~~6. The refrigerator according to any one of claims 1 to 5, wherein one candidate time is selected from a plurality of candidate times by the user as the input, and the one candidate time is set as the rapid cooling time.~~

~~7. The refrigerator according to claim 6, wherein~~

~~the rapid cooling function has~~

~~a first mode in which the rapid cooling fan continues to rotate without stopping until execution of the rapid cooling function is completed and~~

~~a second mode in which a period during which the rapid cooling fan stops occurs before execution of the rapid cooling function is completed, and~~

~~each of the plurality of candidate times is associated with the first mode or the second mode.~~

~~8. The refrigerator according to claim 7, wherein~~

~~a shortest candidate time among the plurality of candidate times corresponds to the second mode, and~~

~~a remaining candidate time of the plurality of candidate times corresponds to the first mode.~~

~~9~~7. The refrigerator according to any one of claims 1 to ~~8~~6, wherein

an uppermost portion of the refrigerator includes a refrigerating compartment, and

an ice-making compartment and the storage compartment are provided side by side below the refrigerating compartment.

~~10~~8. The refrigerator according to any one of claims 1 to ~~9~~7, wherein the storage compartment is maintained in a freezing temperature zone.