CLAIMS

[Claim 1]

A refrigerator comprising:

a plurality of storage compartments;

a cooling chamber configured to generate cooling air for cooling the plurality of storage compartments;

a primary air passage configured to communicate between the cooling chamber and each of the plurality of storage compartments;

a primary fan configured to blow the cooling air, through the primary air passage, from the cooling chamber to each of the plurality of storage compartments;

a plurality of opening and closing devices configured to open and close between the primary air passage and each of the plurality of storage compartments;

a secondary air passage provided separately from the primary air passage and configured to communicate between the cooling chamber and one of the plurality of storage compartments;

a secondary fan configured to blow the cooling air, through the secondary air passage, from the cooling chamber to the one of the plurality of storage compartments; and

a controller configured to control actions of the primary fan, the plurality of opening and closing devices, and the secondary fan,

wherein the controller executes

a first operation mode in which the plurality of opening and closing devices are opened, the primary fan is driven, the secondary fan is stopped, and cooling air is blown into each of the plurality of storage compartments using the primary fan; and

a second operation mode in which one of the plurality of opening and closing devices, the one of the plurality of opening and closing devices being configured to open and close between the primary air passage and the one of the plurality of storage compartments, is closed, an other one of the plurality of opening and closing devices, the other one of the plurality of opening and closing devices being configured to open and close between the primary air passage and an other one of the plurality of storage compartments, are opened, the primary fan and the secondary fan are driven, and cooling air is blown into

the other one of the plurality of storage compartments using the primary fan and into the one of the plurality of storage compartments using the secondary fan.

[Claim 2]

The refrigerator of claim 1, wherein an air volume of the primary fan in the first operation mode is greater than a total air volume of the primary fan and the secondary fan in the second operation mode.

[Claim 3]

The refrigerator of claim 1 or 2, wherein in the second operation mode, the controller controls a rotation speed of the secondary fan based on a temperature in the one of the plurality of storage compartments.

[Claim 4]

The refrigerator of any one of claims 1 to 3, wherein in the second operation mode, the controller controls a rotation speed of the primary fan based on a temperature of air suctioned by the primary fan.

[Claim 5]

The refrigerator of any one of claims 1 to 4, wherein in the first operation mode, the controller controls a rotation speed of the primary fan based on a temperature of air suctioned by the primary fan.

[Claim 6]

The refrigerator of any one of claims 1 to 5, further comprising a refrigeration cycle for generating cooling air in the cooling chamber,

wherein the controller controls a rotation speed of a compressor in the refrigeration cycle such that a refrigerant evaporating temperature in the refrigeration cycle becomes closer to a target evaporating temperature.

[Claim 7]

The refrigerator of any one of claims 1 to 6, wherein the secondary fan is smaller in size than the primary fan.

[Claim 8]

The refrigerator of any one of claims 1 to 7, wherein the secondary fan is disposed in a higher temperature environment than the primary fan.

[Claim 9]

The refrigerator of claim 8, wherein a distance between the secondary fan and the cooling chamber is longer than a distance between the primary fan and the cooling chamber.