CLAIMS

[Claim 1]

A refrigerator comprising:

a chilled compartment whose temperature is capable of being set in a range from a first upper limit to a first lower limit;

a versatile compartment whose temperature is capable of being set to a second lower limit, the second lower limit being lower than the first lower limit;

a first partition wall separating the chilled compartment and the versatile compartment from each other;

a cooler configured to generate cool air;

a cooler compartment accommodating the cooler;

a versatile-compartment flow passage connecting the cooler compartment and the versatile compartment to each other and allowing the cool air generated by the cooler to flow therethrough; and

a chilled-compartment return flow passage connecting the cooler compartment and the chilled compartment to each other and allowing the cool air flowing out of the chilled compartment to flow therethrough,

wherein the first partition wall has a first ventilation opening providing communication between the chilled compartment and the versatile compartment,

wherein the cool air flows into the versatile compartment through the versatile-compartment flow passage,

wherein the cool air flows into the chilled compartment from the versatile compartment through the first ventilation opening,

wherein the cool air in the chilled compartment flows into the cooler compartment through the chilled-compartment return flow passage,

wherein the chilled compartment and the versatile compartment are arranged next to each other in a horizontal direction, and

wherein the chilled compartment and the versatile compartment are covered by one door capable of being opened and closed.

[Claim 2]

The refrigerator of claim 1, further comprising:

a temperature sensor provided in the chilled compartment,

wherein the first ventilation opening is provided with a first-ventilation-opening damper capable of opening and closing the first ventilation opening, and

wherein the first-ventilation-opening damper opens and closes based on a temperature sensed by the temperature sensor and a set temperature of the chilled compartment.

[Claim 3]

The refrigerator of claim 2, wherein the first-ventilation-opening damper is set to a closed state when the temperature sensed by the temperature sensor is lower than the set temperature of the chilled compartment.

[Claim 4]

The refrigerator of any one of claims 1 to 3, further comprising:

a refrigerator compartment; and

a refrigerator-compartment flow passage connecting the cooler compartment and the refrigerator compartment to each other,

wherein the cooler includes a first cooler and a second cooler,

wherein the cooler compartment is provided with a dividing wall separating the first cooler and the second cooler from each other,

wherein cool air generated by the first cooler flows into the refrigerator compartment through the refrigerator-compartment flow passage, and

wherein cool air generated by the second cooler flows into the versatile compartment through the versatile-compartment flow passage.

[Claim 5]

The refrigerator of claim 1, further comprising:

a freezer compartment;

a second partition wall separating the chilled compartment and the freezer compartment from each other; and

a freezer-compartment flow passage connecting the cooler compartment and the freezer compartment to each other and allowing the cool air generated by the cooler to flow therethrough,

wherein a temperature in the freezer compartment is capable of being set to a temperature lower than the second lower limit for the versatile compartment,

wherein the second partition wall has a second ventilation opening providing communication between the chilled compartment and the freezer compartment,

wherein the cool air flows into the freezer compartment through the freezer-compartment flow passage,

wherein the cool air flows into the chilled compartment from the versatile compartment through the first ventilation opening and from the freezer compartment through the second ventilation opening, and

wherein the cool air in the chilled compartment flows into the cooler compartment through the chilled-compartment return flow passage.

[Claim 6]

The refrigerator of claim 5, wherein the freezer compartment is covered by the one door.

[Claim 7]

The refrigerator of claim 5 or 6, further comprising:

a temperature sensor provided in the chilled compartment,

wherein the first ventilation opening is provided with a first-ventilation-opening damper capable of opening and closing the first ventilation opening,

wherein the second ventilation opening is provided with a second-ventilation-opening damper capable of opening and closing the second ventilation opening, and

wherein at least one of the first-ventilation-opening damper and the second-ventilation-opening damper opens and closes based on a temperature sensed by the temperature sensor and a set temperature of the chilled compartment.

[Claim 8]

The refrigerator of claim 7, wherein at least one of the first-ventilation-opening damper and the second-ventilation-opening damper is set to a closed state when the

temperature sensed by the temperature sensor is lower than the set temperature of the chilled compartment.

[Claim 9]

The refrigerator of any one of claims 5 to 8, further comprising;

a refrigerator compartment; and

a refrigerator-compartment flow passage connecting the cooler compartment and the refrigerator compartment to each other,

wherein the cooler includes a first cooler and a second cooler,

wherein the cooler compartment is provided with a dividing wall separating the first cooler and the second cooler from each other,

wherein cool air generated by the first cooler flows into the refrigerator compartment through the refrigerator-compartment flow passage, and

wherein cool air generated by the second cooler is divided into versatile-compartment supply cool air and freezer-compartment supply cool air, the versatile-compartment supply cool air flowing through the versatile-compartment flow passage and into the versatile compartment, the freezer-compartment supply cool air flowing through the freezer-compartment flow passage and into the freezer compartment.

[Claim 10]

The refrigerator of any one of claims 1 to 3 and 5 to 8, further comprising:

a refrigerator compartment;

a refrigerator-compartment flow passage connecting the cooler compartment and the refrigerator compartment to each other and allowing the cool air generated by the cooler to flow therethrough;

a chilled-compartment air outlet provided in the chilled compartment and providing communication between the refrigerator-compartment flow passage and the chilled compartment; and

a temperature sensor provided in the chilled compartment,

wherein the chilled-compartment air outlet is provided with a chilled-compartment damper capable of opening and closing the chilled-compartment air outlet, and

wherein the chilled-compartment damper opens and closes based on a temperature sensed by the temperature sensor and a set temperature of the chilled compartment.

[Claim 11]

The refrigerator of claim 10, wherein the chilled-compartment damper is set to an open state when the temperature sensed by the temperature sensor is higher than the set temperature of the chilled compartment, and

wherein the cool air flowing through the refrigerator-compartment flow passage flows into the chilled compartment through the chilled-compartment air outlet.

[Claim 12]

The refrigerator of any one of claims 1 to 11, further comprising:

a refrigerator compartment provided above the chilled compartment;

a refrigerator-compartment partition wall provided between the refrigerator compartment and the chilled compartment;

an automatic ice maker; and

a water tank configured to store water to be used in the automatic ice maker,

wherein the refrigerator-compartment partition wall has a recess facing in a direction from the chilled compartment toward the refrigerator compartment, and

wherein the water tank is placed in the recess.

[Claim 13]

The refrigerator of any one of claims 1 to 12, wherein the one door is a swing door or a drawer panel.

[Claim 14]

The refrigerator of claim 5, further comprising:

a housing including the chilled compartment, the versatile compartment, the freezer compartment, and the cooler compartment,

wherein the one door is provide in front of the housing, and

wherein the first ventilation opening is disposed in a lower front portion of the first partition wall.

[Claim 15]

The refrigerator of claim14, wherein the cool air in the chilled compartment flows into the chilled-compartment return flow passage through a chilled-compartment return port, and

wherein the chilled-compartment return port is disposed to a rear surface of the chilled compartment at a position diagonal to the first ventilation opening and the second ventilation opening.

[Claim 16]

The refrigerator of any one of claims 1 to 15, wherein the first upper limit is 3 degrees C.

[Claim 17]

The refrigerator of any one of claims 1 to 16, wherein the first lower limit is -3 degrees C.