CLAIMS

[Claim 1]

A refrigerator, comprising

a storage compartment set at a temperature higher than temperatures of ones of other compartments of the refrigerator that surround the storage compartment, the storage compartment being for storing an item,

wall portions defining the storage compartment each having a vacuum thermal insulator,

a cool-air outlet and a cool-air return inlet being formed in a storage-compartment inner wall of a rear-face wall portion of the storage compartment,

the vacuum thermal insulator disposed in the rear-face wall portion of the storage compartment not overlapping back projected planes of the cool-air outlet and the cool-air return inlet,

the cool-air outlet being located at a corner of the storage-compartment inner wall,

the cool-air return inlet being located at an other corner of the storage-compartment inner wall that is diagonal to the corner at which the cool-air outlet is located.

[Claim 2]

The refrigerator of claim 1, wherein

a refrigerator compartment, an ice-making compartment, a temperature switchable compartment, a vegetable compartment, and a freezer compartment are arranged in this order from a top of the refrigerator, and

the storage compartment comprises the vegetable compartment.

[Claim 3]

The refrigerator of claim 1, wherein

the storage compartment comprises a vegetable compartment, and

the other compartments comprise any set of a freezer compartment, an ice-making compartment, a chilled compartment, a preservation compartment at a

temperature lower than a temperature zone of the vegetable compartment, and a temperature switchable compartment that is switchable to a temperature zone lower than the temperature zone of the vegetable compartment.

[Claim 4]

The refrigerator of any one of claims 1 to 3, wherein

two side wall portions of an entire box body of the refrigerator each have the vacuum thermal insulator, each of the two side wall portions including each of side wall portions of the storage compartment and a corresponding one of side wall portions of the other compartments, and

the vacuum thermal insulator is disposed in each of a ceiling wall portion, a bottom wall portion, the rear-face wall portion, and a door wall portion of the storage compartment.

[Claim 5]

The refrigerator of any one of claims 1 to 4, comprising

a cooler provided behind the storage compartment,

wherein in the rear-face wall portion of the storage compartment, the vacuum thermal insulator is disposed between the storage-compartment inner wall and the cooler.

[Claim 6]

The refrigerator of claim 5, wherein

the rear-face wall portion of the storage compartment includes an air passage disposed between the storage-compartment inner wall and the cooler, the air passage allowing cool air to flow from the cooler to one or more of compartments in the refrigerator, and

the air passage is provided on a front projected plane of the cooler.

[Claim 7]

The refrigerator of claim 6, wherein the vacuum thermal insulator disposed between the storage-compartment inner wall and the cooler in the rear-face wall portion of the storage compartment has a size to separate the cooler and the air

passage from the storage compartment in a range larger than front projected planes of the cooler and the air passage.

[Claim 8]

A refrigerator, comprising:

a storage compartment set at a temperature higher than temperatures of ones of other compartments of the refrigerator that surround the storage compartment, the storage compartment being for storing an item;

a cooler provided behind the storage compartment;

a rear-face wall portion provided between a storage-compartment inner wall and the cooler; and

a vacuum thermal insulator provided in the rear-face wall portion,

a cool-air outlet and a cool-air return inlet being formed in the storage-compartment inner wall of the rear-face wall portion of the storage compartment,

the vacuum thermal insulator disposed in the rear-face wall portion of the storage compartment not overlapping back projected planes of the cool-air outlet and the cool-air return inlet,

the cool-air outlet being located at a corner of the storage-compartment inner wall,

the cool-air return inlet being located at an other corner of the storage-compartment inner wall that is diagonal to the corner at which the cool-air outlet is located.

[Claim 9]

The refrigerator of claim 8, wherein

the storage compartment comprises a vegetable compartment, and

the other compartments comprise any set of a freezer compartment, an ice-making compartment, a chilled compartment, a preservation compartment at a temperature lower than a temperature zone of the vegetable compartment, and a temperature switchable compartment that is switchable to a temperature zone lower than the temperature zone of the vegetable compartment.

[Claim 10]

The refrigerator of claim 8 or 9, wherein the vacuum thermal insulator is disposed in a wall portion partitioning a space into the storage compartment and the ones of the other compartments of the refrigerator that surround the storage compartment.

[Claim 11]

The refrigerator of any one of claims 1 to 10, wherein the vacuum thermal insulator comprises one rectangular plate.

[Claim 12]

The refrigerator of any one of claims 1 to 11, wherein the vacuum thermal insulator disposed in the rear-face wall portion of the storage compartment is installed to have a vertical side substantially parallel to a vertical direction and a horizontal side substantially parallel to a horizontal direction, and not to overlap either ones of vertical projected regions of the cool-air outlet and the cool-air return inlet or horizontal projected regions of the cool-air outlet and the cool-air return inlet.

[Claim 13]

The refrigerator of any one of claims 5 to 12, comprising

an electric part configured to control opening and closing of a plurality of air passages,

wherein the electric part is stored in a rear-face wall portion of one of the other compartments that are at higher positions than a position of the storage compartment.

[Claim 14]

The refrigerator of any one of claims 1 to 13, wherein in the storage compartment, a thermal heater is provided in any of wall portions defining the storage compartment.

[Claim 15]

The refrigerator of any one of claims 4 to 14, wherein in the storage compartment, a radiation pipe is provided in any of wall portions defining the storage

compartment, the radiation pipe allowing refrigerant for use in the cooler to flow through and reject heat.

[Claim 16]

The refrigerator of any one of claims 1 to 15, wherein the cool-air outlet allows, into the storage compartment, either one of cool air that returns from one of the other compartments around the storage compartment, the one of the other compartments being for storing an item at a temperature lower than a temperature of the storage compartment or low-temperature cool air that is cooled in the cooler to be blown.

[Claim 17]

The refrigerator of claim 16, wherein the storage compartment includes a cool-air amount control mechanism configured to control an amount of cool air blown out of the cool-air outlet.