CLAIMS

[Claim 1]

A refrigerator, comprising:

a body comprising a refrigerator compartment, a freezer compartment provided below the refrigerator compartment, and a storage compartment provided between the refrigerator compartment and the freezer compartment, the storage compartment being configured to have a temperature range set higher than a temperature range of the freezer compartment and having a rear storage-compartment wall at a rear of the storage compartment;

a cooler disposed behind the storage compartment in an air passage between the rear storage-compartment wall and a rear body wall at a rear of the body and configured to cool air inside the body, and

a compressor disposed below the cooler,

wherein the body comprises:

a refrigerator-compartment return port through which air in the refrigerator compartment returns to the cooler;

a storage-compartment return port through which air in the storage compartment returns to the cooler; and

a freezer-compartment return port through which air in the freezer compartment returns to the cooler along an air passage provided in the rear storage-compartment wall,

wherein the refrigerator-compartment return port and the storage-compartment return port are provided below a lower end of the cooler, and

wherein the freezer-compartment return port is provided at a part within a range between the lower end of the cooler and an upper end of the cooler.

[Claim 2]

The refrigerator of claim 1,

wherein the refrigerator-compartment return port is provided on one side surface side of the body, and

wherein the storage-compartment return port is provided on an other side surface side of the body.

[Claim 3]

The refrigerator of claim 1 or 2,

wherein the cooler comprises a fin unit in which a plurality of fins arranged with intervals in a lateral direction to form a plurality of stages in a vertical direction, and

wherein a fin pitch being a distance between the fins of the fin unit is larger in lower stages than in upper stages.

[Claim 4]

The refrigerator of claim 1 or 2,

wherein the cooler comprises:

a tube part in which one or more heat transfer tubes are disposed in a plurality of rows in a vertical direction; and

a fin unit in which a plurality of fins through which the heat transfer tubes in one or two rows run are disposed to form a plurality of stages in the vertical direction, and

wherein a fin pitch being a distance between the fins of the fin unit is larger in lower stages than in upper stages.

[Claim 5]

The refrigerator of claim 3 or 4,

wherein the fin unit has two types of distance between the plurality of fins, and

wherein the fin pitch is relatively large in at least one of the lower stages.

[Claim 6]

The refrigerator of claim 5, wherein the freezer-compartment return port faces a lower part of the fin unit, the lower part being located below a part in which the fin pitch is relatively small.

[Claim 7]

The refrigerator of any one of claims 3 to 6, further comprising a transfer heater provided in close contact with the fins and configured to heat the fins.

[Claim 8]

The refrigerator of any one of claims 1 to 7, further comprising a heater provided below the cooler in the air passage between the rear storage-compartment wall and the rear body wall, and configured to defrost the cooler.

[Claim 9]

The refrigerator of any one of claims 1 to 8, further comprising a cold air separation plate provided in a freezer-compartment air returning passage at a part at least below the cooler, one end of the freezer-compartment air returning passage being a freezer-compartment inlet formed above the freezer compartment and an other end being the freezer-compartment return port, the cold air separation plate being configured to prevent an inflow of freezer-compartment return cold air into a lower part of the cooler, the freezer-compartment return cold air flowing out through the freezer-compartment return port.

[Claim 10]

The refrigerator of claim 9, wherein the cold air separation plate is made of a metal.

[Claim 11]

The refrigerator of any one of claims 1 to 10, further comprising a bypass air passage formed in at least one of the rear storage-compartment wall and the rear body wall, and configured to pass therethrough

refrigerator-compartment return cold air flowing out through the refrigerator-compartment return port, and

storage-compartment return cold air flowing out through the storage-compartment return port.