CLAIMS

[Claim 1]

A refrigerator comprising:

a thermal insulation box body including an inner box, an outer box, and a thermal insulator installed in a space between the inner box and the outer box;

a machine compartment that is formed by a lower portion of a rear face of the thermal insulation box body recessing inward and in which a compressor is disposed;

a cooler compartment that is formed in the thermal insulation box body above the machine compartment and in which a cooler that generates cool air is disposed;

a water receiver provided below the cooler in the cooler compartment and receiving water from the cooler;

a drain passage having an inlet provided at the water receiver, passing through a thermal insulation wall interposed between the cooler compartment and the machine compartment to cause the cooler compartment and the machine compartment to communicate with each other, and having an outlet protruding into the machine compartment; and

a passage heater provided on the inlet side of the drain passage and installed in the thermal insulation wall,

wherein a cross-sectional shape of the inlet of the drain passage is an elliptical or oval shape, the drain passage on the inlet side has a shape in which a sectional area decreases and a central position of a cross section approaches the rear face side in a downstream direction, and

the drain passage is integrally formed from the inlet to the outlet.

[Claim 2]

The refrigerator of claim 1, wherein the drain passage has a wall face vertically extending on the rear face side or a part of the rear face side in a plan view.

[Claim 3]

The refrigerator of claim 1, wherein an inclination angle of the outlet of the drain passage is an angle of depression equal to or larger than 7 degrees relative to a depth horizontal direction.

[Claim 4]

The refrigerator of any one of claims 1 to 3, wherein the drain passage is integrally formed with the water receiver.

[Claim 5]

The refrigerator of any one of claims 1 to 4, further comprising a defrosting unit melting frost on the cooler with a heater or high-temperature refrigerant.

[Claim 6]

The refrigerator of any one of claims 1 to 5, further comprising a water tray installed below the outlet in the machine compartment,

wherein a heating pipe is disposed inside the water tray.

[Claim 7]

The refrigerator of any one of claims 1 to 6, further comprising a first storage compartment formed in the thermal insulation box body,

wherein the water receiver and the drain passage are formed by extending a floor face of the first storage compartment to the cooler compartment, and are disposed in positions lower than the floor face.

[Claim 8]

The refrigerator of claim 7, further comprising a second storage compartment formed below the first storage compartment and in front of the machine compartment, and set to a temperature lower than that of the first storage compartment,

wherein the thermal insulation wall is a bottom wall of the first storage compartment and a wall portion forming the machine compartment of the thermal insulation box body.