lower one of the storage compartments is high and the temperature of the upper one of the storage compartments is low, natural convection between the partition wall and the door occurs and causes heat transfer between the storage compartments. It is therefore hard to control the temperature of each of the storage compartments.

[0005]

The present disclosure is applied to solve the above problem, and relates to a refrigerator in which a single door is provided for at least two storage compartments and which can reduce occurrence of heat transfer between the storage compartments with a simple mechanism.

Solution to Problem

[0006]

A refrigerator according to an embodiment of the present disclosure includes: a housing in which a storage space for storage of material is provided, the housing having an opening that is provided in a front of the housing and is configured to allow the material to be moved into and out of the storage space; a partition wall dividing an interior of the storage space into an upper space and a lower space; and a door provided in front of the storage space and configured to open and close the opening. In the storage space, a plurality of storage compartments are defined by the housing and the partition wall. The plurality of storage compartments include a first storage compartment located above the partition wall and a second storage compartment provided below the partition wall. A temperature of the first storage compartment is set higher than a temperature of the second storage compartment. The door is provided as a single door configured to open and close the first storage compartment and the second storage compartment at the same time, and the door has an upper protrusion ~~protruding~~ and a lower protrusion that protrude from a surface of the door that is adjacent to the storage space. When the door is in a closed state, in the housing, a gap is provided between the partition wall and the door, ~~and~~ between the partition wall and the upper protrusion, and between the partition wall and the lower protrusion, the gap causing the first storage compartment and the second storage compartment to communicate with each other. When the door is in the closed state, the upper protrusion is located above the partition wall, with a gap provided between the upper protrusion and the partition

wall~~, and extends rightward and leftward in a direction of extension of the partition wall as viewed in head-on view, and a distal end side of the upper protrusion in a protruding direction overlaps with the partition wall as viewed in top plan view~~. When the door is in the closed state, the lower protrusion is located below the partition wall, with the gap provided between the lower protrusion and the partition wall. The upper protrusion and the lower protrusion extend rightward and leftward as viewed in head-on view, protrude in a depth direction of the housing as viewed in top plan view, and have respective distal end portions that overlap with the partition wall as viewed in top plan view. To the distal end portion of the upper protrusion, packing is attached, the packing being located between the upper protrusion and the partition wall. To the distal end portion of the lower protrusion, lower packing is attached, the lower packing being located between the lower protrusion and the partition wall.

Advantageous Effects of Invention

[0007]

The refrigerator according to the embodiment of the present disclosure includes the first storage compartment provided above the partition wall, and the second storage compartment provided below the partition wall. The temperature of the first storage compartment is set higher than the temperature of the second storage compartment. The door is a single door configured to open and close the first storage compartment and the second storage compartment at the same time, and has the upper protrusion protruding from the surface of the door that is adjacent to the storage space. When the door is in the closed state, the upper protrusion is located above the partition wall, with the gap provided between the upper protrusion and the partition wall, and extends rightward and leftward in the direction of extension of the partition wall as viewed in head-on view, and the distal end side of the upper protrusion in the protruding direction overlaps with the partition wall as viewed in top plan view. Because of provision of the upper protrusion, the refrigerator may increase~~s~~ resistance against cold air that flows between upper and lower storage compartments, thereby reducing transfer of cold air. In the refrigerator, the temperature of a first freezer compartment at an upper position is set higher than the temperature of a second freezer compartment at a lower position. Therefore, between

the first freezer compartment and the second freezer compartment, circulation of cold air between the storage compartments that would be caused by natural convection hardly occurs. Thus, even in the case where the refrigerator is a refrigerator that includes a single door for two storage compartments, that is, for the first freezer compartment and the second freezer compartment, the refrigerator can reduce heat transfer between the storage compartments with temperature setting between the storage compartments and a simple configuration, that is, the presence of the upper protrusion.

Brief Description of Drawings