There has been such a refrigerator in which food stored inside the storage compartment is rapidly cooled (Refer to, for example, Patent Literature 1).

Citation List

Patent Literature

[0005]

Patent Literature 1: Japanese Unexamined Patent Application Publication No. 5-187756

Summary of Invention

Technical Problem

[0006]

In the aforementioned method in the related art, however, since the cool-air return passage through which the cool air in the refrigerator compartment is returned to the cool-air introduction passage and the passage through which the cool air in the storage compartment is returned to the cool-air introduction passage are connected to each other, a sudden temperature change in the cool air is generated when the cool air that flows in the cool-air return passage and the cool air that flows in the passage merge together during rapid cooling in the storage compartment, and frost is easily generated at a merging portion of the cool air. There has been a problem in that, when the cool-air return passage or the passage is narrowed in width or closed due to such generation of frost, circulation of the cool air inside the refrigerator is obstructed and the entirety of the refrigerator is thus not cooled.

[0007]

Embodiments of the present disclosure seek to provide a refrigerator that may include a storage compartment to be set to a refrigerating temperature zone and in which a cooling target is to be preserved and a storage compartment settable to a minus temperature zone, and that may perform stable temperature control by preventing formation of frost in a cool-air return passage connecting the storage compartment to be set to a refrigerating temperature zone and a cooler chamber to each other and a cool-air return passage connecting the storage compartment settable to a minus temperature zone and the

cooler chamber to each other and by preventing clogging of the cool-air return passages by formed frost.

Solution to Problem

[0008]

A refrigerator according to an embodiment of the present disclosure includes: a box body having an opening port in a front surface of the box body and including a first storage compartment to be set to a refrigerating temperature zone and a second storage compartment located higher than the first storage compartment, the second storage compartment being to be set to a freezing temperature zone; a door attached to the front surface of the box body, the door opening or closing the opening port; a partition dividing the first storage compartment and the second storage compartment from each other vertically; a third storage compartment provided lower than the partition and provided in an uppermost portion inside the first storage compartment, the third storage compartment being settable to a minus temperature zone; a heater provided inside the partition; a first return air passage provided inside the partition and disposed higher than the heater to cover an upper surface of the heater and through which return cool air in the first storage compartment is returned to a cooler chamber; and a second return air passage provided inside the partition and disposed left or right of the heater and extends along a corresponding one of a left side surface and a right side surface of the heater and through which return cool air in the third storage compartment is returned to the cooler chamber. The first return air passage and the second return air passage are air passages independent from each other, and the first return air passage and the second return air passage are partitioned from each other by a heat insulator. An area of the upper surface of the heater is larger than each of an area of the left side surface of the heater and an area of the right side surface of the heater. A region in which the upper surface and the first return air passage overlap each other in a top view of the partition is larger than a region in which either one of the left side surface and the right side surface and the second return air passage overlap each other in a side view of the partition.

Advantageous Effects of Invention

[0009]

When the refrigerator according to an embodiment of the present disclosure is used, a sudden temperature change due to merging of cool air, the sudden temperature change occurring in the related art at a connection portion where a cool-air return passage connecting a storage compartment to be set to a refrigerating temperature zone and a cooler chamber to each other is connected to a cool-air return passage connecting a storage compartment settable to a minus temperature zone and the cooler chamber to each other, is prevented. Therefore, frost formation and clogging caused by frost formation may be prevented in the cool-air return passage connecting the storage