opposed to the first inner side surface side; and a support structure arranged below the storage case in the storage compartment, and configured to guide the storage case to travel in the depth direction and to restrain the storage case from moving in a direction of pressing the storage case by the elastic member.

Advantageous Effects of Invention

[0008]

In the refrigerator according to one embodiment of the present invention, owing to action of the elastic member, the storage case is pressed from the first inner side surface side to the second inner side surface side opposed to the first inner side surface side so that the storage case and the support structure come into contact with each other. Thus, lateral movement of the storage case is restrained. Therefore, the refrigerator according to the present invention can prevent the storage case from laterally rattling when the storage case is moved forward and backward.

Brief Description of Drawings

[0009]

[Fig. 1] Fig. 1 is a schematic front view for illustrating a refrigerator according to an embodiment of the present invention.

[Fig. 2] Fig. 2 is a view for illustrating a refrigerating compartment of the refrigerator according to the embodiment of the present invention seen from a front side of the refrigerator.

[Fig. 3] Fig. 3 is a perspective view for illustrating a storage case, a water tank, and other components of the refrigerator according to the embodiment of the present invention.

[Fig. 4] Fig. 4 is a perspective view for illustrating the refrigerator according to the embodiment of the present invention from which the storage case is dismounted.

[Figs. 5] Figs. 5 are top views for illustrating the storage case and an elastic member of the refrigerator according to the embodiment of the present invention.

[Fig. 6] Fig. 6 is a sectional view taken along the line X-X of Fig. 3.

member 102 so as to serve as a recess configured to receive the elastic member 8 when the elastic member 8 is bent and deformed. The recessed portion 102A is formed so as to correspond to a position of fixing a fixing portion 8A. The recessed portion 102A is formed so as to be recessed from the storage case 6 side to the partition member 102 side. For example, the recessed portion 102A is formed at a connecting position between the fixing portion 8A and a pressing portion 8B that are described later.

[0021]

[Configurations of Storage Case 6 and Elastic Member 8]

Figs. 5A and 5B are top views for illustrating the storage case 6 and the elastic member 8 of the refrigerator according to the present embodiment. Fig. 6 is a sectional view taken along the line X-X of Fig. 3. Fig. 7 is a sectional view taken along the line Y-Y of Fig. 3. Fig. 5A is an illustration of a state in which the storage case 6 is fully closed and the pressing portion 8B enters into a concave portion 6C3. Similarly to Fig. 5A, Fig. 5B is an illustration of a state in which the pressing portion 8B enters into the concave portion 6C3. In Fig. 5B, an angle θ1 of the pressing portion 8B of the elastic member 8 and an angle θ2 of a curved surface 6C1 of the concave portion 6C3 are schematically illustrated. Fig. 7 is an illustration of an open state of the storage case 6. With reference to Figs. 5 to Fig. 7, the storage case 6 and the elastic member 8 are described in detail.

[0022]

(Storage Case 6)

The storage case 6 includes a bottom surface portion 6A forming a bottom surface, a side surface portion 6B connected to a left end of the bottom surface portion 6A, and a side surface portion 6D connected to a right end of the bottom surface portion 6A. Further, the storage case 6 includes a back surface portion 6F connected to a back end of the bottom surface portion 6A, and a front surface portion 6G connected to a front end of the bottom surface portion 6A (see Fig. 3).

[0023]

The bottom surface portion 6A is a plate-like member extending in parallel to a

CLAIMS

[Claim 1]

A refrigerator, comprising:

a heat insulating box body;

a storage compartment formed in the heat insulating box body;

a storage case placed in the storage compartment and arranged so as to be movable in a depth direction of the storage compartment;

an elastic member fixed on a side of the storage case in the storage compartment, and configured to press the storage case from a first inner side surface side of the storage compartment to a second inner side surface side of the storage compartment opposed to the first inner side surface side; and

a support structure arranged below the storage case in the storage compartment, and configured to guide the storage case to travel in the depth direction and to restrain the storage case from moving in a direction of pressing the storage case by the elastic member.

[Claim 2]

The refrigerator of claim 1, wherein

the elastic member includes

a fixing portion fixed in the storage compartment, and

a pressing portion positioned on the storage case side with respect to the fixing portion, and configured to press the storage case from the first inner side surface side to the second inner side surface side, and

the storage case includes

a concave portion into which the pressing portion enters, the concave portion being formed in a side surface portion of the storage case on a side on which the elastic member is arranged, and

a contact portion formed on the side surface portion at a position back from the concave portion, and configured to come into contact with the pressing portion to be pressed onto the pressing portion when the storage case is moved.

[Claim 3]

The refrigerator of claim 2, wherein,

in a horizontal sectional view, the pressing portion has an arc shape protruding to the side

surface portion side of the storage case, and

the concave portion is formed into a concave shape conforming to a shape of the pressing portion.

[Claim 4]

The refrigerator of claim 2 or 3, wherein the contact portion comprises a convex portion that is formed on a portion connected to the concave portion and protrudes to the elastic member side.

[Claim 5]

The refrigerator of any one of claims 2 to 4, wherein the refrigerator has a gap defined between the concave portion and the pressing portion to prevent contact between the concave portion and the pressing portion under a state in which the storage case is fully closed and the pressing portion enters into the concave portion.

[Claim 6]

The refrigerator of any one of claims 1 to 5, wherein

the support structure includes a rail portion that is formed on a placement surface for the storage case in the storage compartment to extend in parallel to the depth direction and protrude from the placement surface side to the storage case side, and

the storage case includes a first rib that is formed on a bottom surface of the storage case to extend to the depth direction and protrude to the rail portion side along a side surface of the rail portion on the side on which the elastic member is arranged.

[Claim 7]

The refrigerator of claim 6, wherein the storage case comprises a second rib that is formed on the bottom surface of the storage case to extend to the depth direction and protrude to the rail portion side along a side surface of the rail portion opposite to a side on which the first rib is arranged.

[Claim 8]

The refrigerator of any one of claims 1 to 7, comprising:

a reservoir case arranged beside the storage case and on a placement surface for the storage case; and

a partition member arranged between the reservoir case and the storage case, and partitioning a space in the storage compartment into a side on which the reservoir case is

arranged and a side on which the storage case is arranged,

wherein the elastic member is fixed to the partition member.

[Claim 9]

The refrigerator of claim 8, wherein the partition member comprises a recessed portion that is formed at a position in front, in the depth direction, of a position of fixing the elastic member, and form a clearance configured to receive the elastic member when the elastic member comes into contact with the storage case and bends.

[Claim 10]

The refrigerator of claim 8 or 9, wherein

the partition member is a vertical partition arranged between the first inner side surface and the second inner side surface.

[Claim 11]

The refrigerator of any one of claims 1 to 7, wherein

the elastic member is fixed to the first inner side surface.

[Claim 12]

The refrigerator of any one of claims 1 to 11, wherein

the storage compartment comprises a refrigerating compartment, and

the storage case is arranged on a bottom of the refrigerating compartment.