[0005] Embodiments of the present invention seek to provide a refrigerator capable of suppressing an increase in volume of a first header and a second header.

SOLUTION TO PROBLEM

[0006] A refrigerator according to an aspect of the present invention comprises a housing and a refrigerant circuit. The refrigerant circuit is accommodated in the housing. The refrigerant circuit comprises a compressor, a condenser, a decompression device, and an evaporator. The refrigerant circuit is configured to pass refrigerant through the compressor, the condenser, the decompression device, and the evaporator in this order. The condenser comprises a first header, a second header, and a plurality of flat tubes. The second header is spaced from the first header in a first direction. The plurality of flat tubes each extend in the first direction to be connected to each of the first and second headers, and also extend in a second direction crossing the first direction. The first and second headers each have an inner circumference formed in an elliptical shape having a minor axis and a major axis. The inner circumference has the minor axis along the first direction and the major axis along the second direction. The minor axis has a dimension allowing the first and second headers to pass the refrigerant at a flow velocity equal to or larger than a zero penetration flow velocity.

ADVANTAGEOUS EFFECTS OF INVENTION

[0007] The present refrigerator has first and second headers each having an inner circumference formed in an elliptical shape having a minor axis and a major axis with the minor axis along the first direction and the major axis along the second direction. By reducing a dimension of the first and second headers in the first direction, an increase in volume of the first and second headers can be suppressed.

BRIEF DESCRIPTION OF DRAWINGS

[0008] Fig. 1 is a perspective view schematically showing a configuration of a refrigerator according to an embodiment on a front side.

Fig. 2 is a perspective view schematically showing the configuration of the refrigerator according to the embodiment on a rear side.

Fig. 3 is a circuit diagram schematically showing a refrigerant circuit of the refrigerator according to the embodiment.

Fig. 4 is a front view schematically showing a configuration of a machinery

CLAIMS

1. A refrigerator comprising:

a housing; and

a refrigerant circuit accommodated in the housing,

the refrigerant circuit comprising a compressor, a condenser, a decompression device, and an evaporator,

the refrigerant circuit being configured to pass refrigerant through the compressor, the condenser, the decompression device, and the evaporator in this order,

the condenser comprising:

a first header;

a second header spaced from the first header in a first direction; and

a plurality of flat tubes each extending in the first direction to be connected to each of the first and second headers, and also extending in a second direction crossing the first direction,

the first and second headers each having an inner circumference formed in an elliptical shape having a minor axis and a major axis,

the inner circumference having the minor axis along the first direction and the major axis along the second direction,

the minor axis having a dimension allowing the first and second headers to pass the refrigerant at a flow velocity equal to or larger than a zero penetration flow velocity.

2. The refrigerator according to claim 1, wherein

the plurality of flat tubes each have a plurality of through holes aligned in the second direction, and

the plurality of through holes each pass through each of the plurality of flat tubes in the first direction.