{Claims}

{Claim 1}

A cold and hot storage comprising:

a main body portion including a door on a front surface;

an inner tank arranged in the main body portion;

a temperature control heat sink including a base plate and a plurality of fins formed on one surface of the base plate having the other surface arranged along a rear surface in the inner tank;

a heater that heats the temperature control heat sink;

a temperature control fan arranged on the one surface of the temperature control heat sink and blows air in the inner tank to the fins of the temperature control heat sink;

a shielding plate that includes a plurality of through holes and a temperature control fan facing portion facing the temperature control fan and shields an area where the temperature control heat sink is arranged in a state that air blowing outlets are formed on upper and lower portions of the inner tank;

a heat dissipation heat sink arranged outside the rear surface of the inner tank;

a heat dissipation fan that blows air outside the inner tank to the heat dissipation heat sink;

a Peltier module having a heat absorbing surface to be connected to the temperature control heat sink and a heat

dissipating surface to be connected to the heat dissipation heat sink; and

a power control unit that supplies power to the heater and the temperature control fan in a case of heating an inside of the inner tank and to the temperature control fan, the heat dissipation fan, and the Peltier module in a case of cooling the inside of the inner tank.

{Claim 2}

The cold and hot storage according to claim 1, wherein spaces communicating with the air blowing outlets are formed on both side portions of the temperature control heat sink.

{Claim 3}

The cold and hot storage according to claim 1 or 2 further comprising:

a partition plate that partitions vertically an area where the temperature control heat sink is arranged on both sides of the temperature control fan facing portion of a surface of a side of the temperature control heat sink of the shielding plate.

{Claim 4}

The cold and hot storage according to any one of claims 1 to 3 further comprising:

an outer panel and a rear panel configuring the main

body portion;

a partition formed between the rear panel of inner side of the outer panel and the inner tank; and

an air guide that guides air between the rear panel and the partition to at least one opening of the rear panel,

wherein the rear panel includes an air intake port at a position facing the heat dissipation fan and at least one opening at an area extending in a width direction of the rear panel above the air intake port.

{Claim 5}

The cold and hot storage according to claim 4, wherein the air guide comprises:

a first air guide extending from a vicinity of a lower portion of one side portion of the heat dissipation heat sink toward one side of upper inner wall of the rear panel; and

a second air guide extending from a vicinity of a lower portion of the other side portion of the heat dissipation heat sink toward the other side of upper inner wall of the rear panel.

{Claim 6}

A cold and hot storage comprising:

a main body portion including a door on a front surface;

an inner tank arranged in the main body portion;

a temperature control heat sink including a base plate and a plurality of fins formed on one surface of the base plate having the other surface arranged along a rear surface in the inner tank;

a heater that heats the temperature control heat sink;

a temperature control fan arranged on the one surface of the temperature control heat sink and blows air in the inner tank to the fins of the temperature control heat sink;

a plate portion that is positioned on both sides of the temperature control fan and covers the upper portion of the plurality of fins;

a heat dissipation heat sink arranged outside the rear surface of the inner tank;

a heat dissipation fan that blows air outside the inner tank to the heat dissipation heat sink;

a Peltier module having a heat absorbing surface to be connected to the temperature control heat sink and a heat dissipating surface to be connected to the heat dissipation heat sink; and

a power control unit that supplies power to the heater and the temperature control fan in a case of heating an inside of the inner tank and to the temperature control fan, the heat dissipation fan, and the Peltier module in a case of cooling the inside of the inner tank.

{Claim 7}

The cold and hot storage according to any one of claims 1 to 6, wherein the temperature control fan is arranged at the center of the one surface of the temperature control heat sink.

{Claim 8}

The cold and hot storage according to any one of claims 1 to 7, wherein the heater is a plate-shaped sheet heater arranged in close contact with the other surface of the base plate.

{Claim 9}

The cold and hot storage according to any one of claims 1 to 7, wherein the heater includes a heater wire and the heater wire is arranged in close contact with a base end portion of the fins between the fins.

{Claim 10}

The cold and hot storage according to any one of claims 1 to 9, wherein the fin is a plate-shaped fin extending toward an inner wall on both sides of the inner tank.

{Claim 11}

The cold and hot storage according to any one of claims 1 to 9, wherein the fin is a plate-shaped fin having a

predetermined length and a plurality of the fin is arranged at predetermined intervals in a vertical direction and a lateral direction.

{Claim 12}

The cold and hot storage according to any one of claims 1 to 9, wherein the fin is a plate-shaped fin extending radially from the center portion of the temperature control heat sink.

{Claim 13}

The cold and hot storage according to any one of claims 1 to 12, wherein the temperature control fan blows air in the inner tank to the plurality of fins of the temperature control heat sink and circulates the air in the inner tank through a groove formed between the plurality of fins.

{Claim 14}

A cold and hot storage comprising:

a main body portion including a door on a front surface;

an inner tank arranged in the main body portion;

a temperature control heat sink arranged near a rear surface in the inner tank;

a heater that heats the temperature control heat sink;

a temperature control fan arranged on a front surface

of the temperature control heat sink and blows air in the inner tank to the front surface of the temperature control heat sink;

a heat dissipation heat sink arranged outside the rear surface of the inner tank;

a heat dissipation fan that blows air outside the inner tank to the heat dissipation heat sink;

a Peltier module having a heat absorbing surface to be connected to the temperature control heat sink and a heat dissipating surface to be connected to the heat dissipation heat sink; and

a power control unit that supplies power to the heater and the temperature control fan in a case of heating an inside of the inner tank and to the temperature control fan, the heat dissipation fan, and the Peltier module in a case of cooling the inside of the inner tank.

{Claim 15}

The cold and hot storage according to claim 14, further comprising:

an outer panel and a rear panel configuring the main body portion;

a partition formed between the rear panel of inner side of the outer panel and the inner tank; and

an air guide that guides air between the rear panel and the partition to at least one opening of the rear panel,

wherein the rear panel includes an air intake port at a position facing the heat dissipation fan and at least one opening at an area extending in a width direction of the rear panel above the air intake port.

{Claim 16}

The cold and hot storage according to claim 15, wherein the air guide comprises:

a first air guide extending from a vicinity of a lower portion of one side portion of the heat dissipation heat sink toward one side of upper inner wall of the rear panel; and

a second air guide extending from a vicinity of a lower portion of the other side portion of the heat dissipation heat sink toward the other side of upper inner wall of the rear panel.

{Claim 17}

The cold and hot storage according to any one of claims 1 to 16, wherein the inner tank houses a wet towel and heats or cools the wet towel.