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(54) **Air conditioning device utilizing temperature differentiation of exhausted air to even temperature of external heat exchanger**

(57) This invention relates to a cooling/heating air conditioning device for regulating temperature, which pumps an airflow exhausted from a space in an air conditioning object such as inside of a room or vehicle to the external through the external heat exchanger disposed

at the external of the air conditioning object such as outside of the room or vehicle so as to equalize the temperature of the fluid flowing through the internal of the external heat exchanger by means of the temperature difference between the internal and external of the air conditioning object for achieving an energy saving effect.

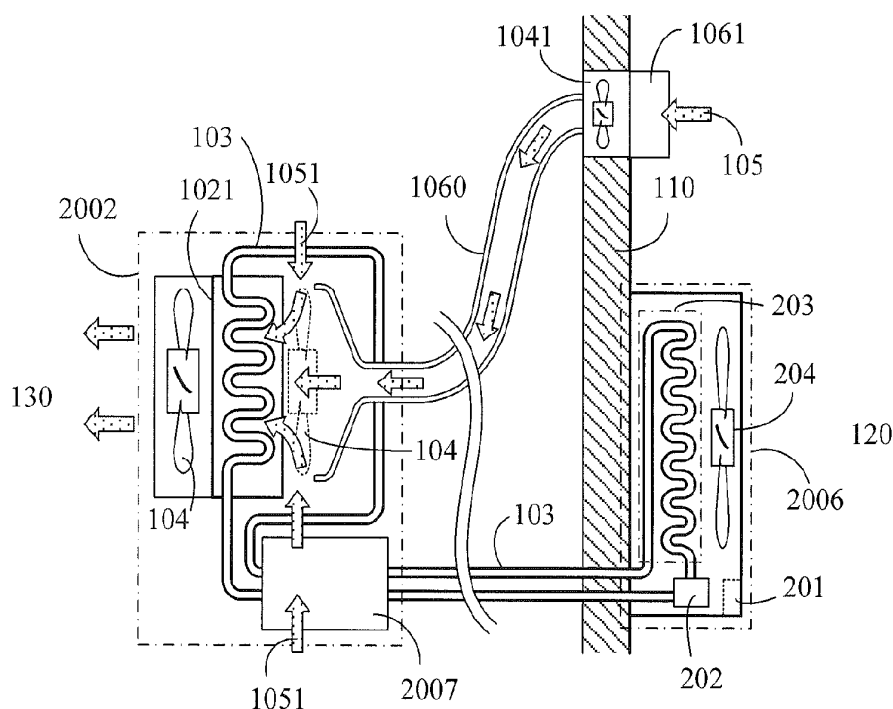


FIG. 19

## Description

### BACKGROUND OF THE INVENTION

#### (a) Field of the Invention

[0001] This invention relates to a cooling/heating air conditioning device for regulating temperature, which pumps an airflow exhausted from a space in an air conditioning object such as inside of a room or vehicle to the external through the external heat exchanger disposed at the external of the air conditioning object such as outside of the room or vehicle so as to equalize the temperature of the fluid flowing through the internal of the external heat exchanger by means of the temperature difference between the internal and external of the air conditioning object for achieving an energy saving effect.

#### (b) Description of the Prior Art

[0002] Conventionally, during the use of a cooling/heating air conditioning device, due to the need for external ventilation, vent holes are typically disposed in a window type air conditioning device to perform the external ventilation, alternatively, a window type main unit is cooperated with a ventilating device such as a ventilator or total heat exchanging ventilating device to perform the external ventilation. However, the pity is that, heretofore, when the aforementioned window type air conditioning device or split type air conditioning device is operated as a cooler, the airflow of a relatively lower temperature exhausted from the space of an air conditioning object such as inside of a room has not been used to facilitate the decreasing of the temperature of an external heat exchanger which is disposed outdoors as a condenser, and when the air conditioning device is operated as a heater, the exhausted airflow of a relatively higher temperature has not been used to facilitate the increasing of the temperature of the external heat exchanger which is disposed outdoors as an evaporator.

### SUMMARY OF THE INVENTION

[0003] This invention relates to a cooling/heating air conditioning device for regulating temperature, which pumps an airflow exhausted from a space in an air conditioning object such as inside of a room or vehicle to the external through the external heat exchanger disposed at the external of the air conditioning object such as outside of the room or vehicle so as to equalize the temperature of the fluid flowing through the internal of the external heat exchanger device by means of the temperature differentiation between the two fluids. When the air conditioning device is operated as a cooler, the airflow of a relatively lower temperature exhausted from the space of the air conditioning object such as the inside of the room can be used to facilitate the decreasing of the temperature of the external heat exchanger which is dis-

posed outdoors as a condenser, and when the air conditioning device is operated as a heater, the exhausted airflow of a relatively higher temperature can be used to facilitate the increasing of the temperature of the external heat exchanger which is disposed outdoors as an evaporator; the characteristic of energy saving of the present invention is applicable in the internal or external space of a gas-state cooling/warming air conditioning device or liquid-state temperature regulating device installed in a fixed member such as the internal of an architecture, factory, public building or camp; or applicable in the internal or external space of a gas-state cooling/warming air conditioning device or liquid-state temperature regulating device installed in a moveable member such as a road vehicle, rail vehicle or aircraft; or applicable in the internal or external space of a gas-state cooling/warming air conditioning device or liquid-state temperature regulating device installed in an equipment device.

[0004] According to another aspect of the invention, an air conditioning device has been invented which pumps an airflow exhausted from an air conditioned space through an external heat exchanger disposed externally of the air conditioned space so as to raise the temperature of the fluid flowing through the inside of the external heat exchanger, the device comprising:

an air conditioning device main unit (101), having an internal heat exchanger (203);  
the external heat exchanger (1021), having a coolant fluid pipeline (103) for allowing coolant passed from the main unit (101) to heat exchange with the airflow exhausted from the air conditioned space (105);  
a fan unit (104, 1041) arranged to pump air from the air conditioned space to create the airflow exhausted from the air conditioned space (105) through the external heat exchanger (1021) to an external temperature differentiation space (130). In this way, relatively warmer air from the air conditioned space is used to warm the coolant passing through the heat exchanger.

[0005] Preferably, the device is arranged to permit an external airflow (1051) from the external temperature differentiation space (130) through the external heat exchanger (1021). This might be appropriate, for example, if it is undesirable to extract air from the air conditioned space, or if the temperature of the air in the external temperature differentiation space is higher than the air in the air conditioned space.

### BRIEF DESCRIPTION OF THE DRAWINGS

#### [0006]

Fig. 1 is a diagram of the operating principles of this invention illustrated by the integral air conditioning device.

Fig. 2 is a structural schematic view of an embodi-

ment of present invention having an integral air conditioning device with an external heat exchanger airflow exhausting fan unit (104) and a fluid exhausting path (106) so as to pump an air conditioning object space exhausted fluid (105) and an external airflow (1051) to flow together through an external heat exchanger (1021).

Fig. 3 is a structural schematic view of an embodiment of present invention having an integral air conditioning device without a heat exchanger airflow exhausting fan unit (104) and a ventilating device (1041) commonly constructed with a fluid exhausting path (106) so as to pump an air conditioning object space exhausted fluid (105) to flow through an external heat exchanger (1021).

Fig. 4 is a structural schematic view of an embodiment of present invention having a fluid exhausting path (1060) and an external heat exchanger airflow exhausting fan unit (104) so as to pump an air conditioning object space exhausted fluid (105) and an external airflow (1051) to flow together through an external heat exchanger (1021) in the air conditioning device assembly (1000).

Fig. 5 is a structural schematic view of an embodiment of present invention having a separately mounted blowing pump (1041) and an exhaust amount regulating device (1061) and having an air conditioning device assembly (1000) without the external heat exchanger airflow exhausting fan unit (104).

Fig. 6 is a structural schematic view of an embodiment of present invention having an integral air conditioning device assembly (1000) mounted with an external heat exchanger airflow exhausting fan unit (104) and the fluid exhausting path (1060) and the blowing pump (1041).

Fig. 7 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) with an external heat exchanger airflow exhausting fan unit (104) and a split type air conditioning device main unit (2001) mounted with the fluid exhausting path (1060).

Fig. 8 is a structural schematic view of an embodiment of present invention having the split type air conditioning device main unit (2001) commonly constructed with the blowing pump (1041) and having a split type air conditioning device outdoor unit (2002) without the external heat exchanger airflow exhausting fan unit (104).

Fig. 9 is a structural schematic view of an embodiment of present invention having the separately mounted fluid exhausting path (1060), the split type air conditioning device main unit (2001) and the split type air conditioning device outdoor unit (2002) with the external heat exchanger airflow exhausting fan unit (104).

Fig. 10 is a structural schematic view of an embodiment of present invention having the separately

mounted blowing pump (1041), the split type air conditioning device main unit (2001) and the split type air conditioning device outdoor unit (2002) without the external heat exchanger airflow exhausting fan unit (104).

Fig. 11 is a structural schematic view of an embodiment of present invention having the split type air conditioning device main unit (2001), the split type air conditioning device outdoor unit (2002) with the external heat exchanger airflow exhausting fan unit (104) and the separately mounted blowing pump (1041).

Fig. 12 is a structural schematic view of an embodiment of present invention having a water-cooled air conditioning device main unit (2005), a powered fan provided cooling tower (2003) and the separately mounted blowing pump (1041).

Fig. 13 is a structural schematic view of an embodiment of present invention having a water-cooled air conditioning device main unit (2005) and a powered fan provided cooling tower (2003).

Fig. 14 is a structural schematic view of an embodiment of present invention having a water-cooled air conditioning device main unit (2005), a natural draft cooling tower (2003) and the separately mounted blowing pump (1041).

Fig. 15 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104) and a split type air conditioning device outdoor main station (2007), having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204) and an exhaust amount regulating device (1061), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021).

Fig. 16 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and a split type air conditioning device outdoor main station (2007), having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204), a blowing pump (1041) and an exhaust amount regulating device (1061), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and installing a fluid exhausting path (1060) in the air

conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021).

Fig. 17 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104) and a split type air conditioning device outdoor main station (2007), having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and separately mounting a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021).

Fig. 18 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and a split type air conditioning device outdoor main station (2007), having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and separately mounting a blowing pump (1041) and a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021).

Fig. 19 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104) and a split type air conditioning device outdoor main station (2007), having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and separately mounting a blowing pump (1041) and a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air condition-

ing object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021).

Fig. 20 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104), having a split type air conditioning device outdoor main station (2007) which is individually installed, having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204) and an exhaust amount regulating device (1061), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021).

Fig. 21 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021), having a split type air conditioning device outdoor main station (2007) which is individually installed, having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204), a blowing pump (1041) and an exhaust amount regulating device (1061), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and installing a fluid exhausting path (1060) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021).

Fig. 22 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104), having a split type air conditioning device outdoor main station (2007) which is individually installed, having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and separately mounting a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the ex-

haust amount regulating device (1061) and the external heat exchanger (1021).

Fig. 23 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021), having a split type air conditioning device outdoor main station (2007) which is individually installed, having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and separately mounting a blowing pump (1041) and a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021).

Fig. 24 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104), having a split type air conditioning device outdoor main station (2007) which is individually installed, having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and separately mounting a blowing pump (1041) and a exhaust amount regulating device (1061) in the thermal insulation device (110) and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021).

#### DESCRIPTION OF MAIN COMPONENT SYMBOLS

##### [0007]

- 101 : air conditioning device main unit
- 103 : coolant fluid pipeline
- 104 : external heat exchanger airflow exhausting fan unit
- 105 : air conditioning object space exhausted fluid
- 106 : fluid exhausting path

- 107 : water pipe
- 108 : cooling tower fan unit
- 109 : water in and out pipe
- 110 : thermal insulation device
- 111 : water pump
- 120 : air conditioning object space
- 130 : external temperature differentiation space
- 201 : control device
- 202 : airflow regulating device
- 203 : internal heat exchanger
- 204 : conditioned airflow blowing fan
- 1000 : air conditioning device assembly
- 1021 : external heat exchanger
- 1041 : blowing pump
- 1051 : external airflow
- 1060 : fluid exhausting path
- 1061 : exhaust amount regulating device
- 1070 : external airflow intake pipe
- 2001 : split type air conditioning device main unit
- 2002 : split type air conditioning device outdoor unit
- 2003 : powered fan provided cooling tower
- 2004 : natural draft cooling tower
- 2005 : water-cooled air conditioning device main unit
- 2006 : split type air conditioning device indoor unit
- 2007 : split type air conditioning device outdoor main station

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0008] Conventionally, during the use of a cooling/heating air conditioning device, due to the need for external ventilation, vent holes are typically disposed in a window type air conditioning device to perform the exter-

nal ventilation, alternatively, a window type main unit is cooperated with a ventilating device such as a ventilator or total heat exchanging ventilating device to perform the external ventilation. However, the pity is that, heretofore, when the aforementioned window type air conditioning device or split type air conditioning device is operated as a cooler, the airflow of a relatively lower temperature exhausted from the space of an air conditioning object such as inside of a room has not been used to facilitate the decreasing of the temperature of an external heat exchanger which is disposed outdoors as a condenser, and when the air conditioning device is operated as a heater, the exhausted airflow of a relatively higher temperature has not been used to facilitate the increasing of the temperature of the external heat exchanger which is disposed outdoors as an evaporator.

**[0009]** This invention relates to a cooling/heating air conditioning device for regulating temperature, which pumps the air conditioning object space exhausted fluid (105) in an air conditioning object such as the indoor or the internal of a vehicle, and/or pumps the external airflow (1051) through the external heat exchanger (1021) disposed at the external of the air conditioning object such as the outdoor or the outside of a vehicle, so as to perform heat exchange with the coolant fluid pipeline (103) passing through the internal of the external heat exchanger device by means of the temperature differentiation between the two fluids. When the air conditioning device is operated as a cooler, the airflow of a relatively lower temperature exhausted from the space of the air conditioning object such as the inside of the room can be used to facilitate the decreasing of the temperature of the external heat exchanger which is disposed outdoors as a condenser, and when the air conditioning device is operated as a heat pump to supply hot air, the exhausted airflow of a relatively higher temperature can be used to facilitate the increasing of the temperature of the external heat exchanger which is disposed outdoors as an evaporator; the characteristic of energy saving of the present invention is applicable in the internal or external space of a gas-state cooling/warming air conditioning device or liquid-state temperature regulating device installed in a fixed member such as the internal of an architecture, factory, public building or camp; or applicable in the internal or external space of a gas-state cooling/warming air conditioning device or liquid-state temperature regulating device installed in a moveable member such as a road vehicle, rail vehicle or aircraft; or applicable in the internal or external space of a gas-state cooling/warming air conditioning device or liquid-state temperature regulating device installed in an equipment device.

**[0010]** Fig. 1 is a diagram of the operating principles of this invention illustrated by the integral air conditioning device.

**[0011]** As illustrated in Fig. 1, the main configurations are as follows:

an air conditioning device main unit (101), essentially

consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having exhaust amount regulating device (1061) and a fluid exhausting path (1060) for the air conditioning object space exhausted fluid (105) to flow through, and further to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the external heat exchanger (1021), provided with the coolant fluid pipeline (103) for allowing the coolant passed from the main unit to heat exchange with the external airflow (1051) of the external temperature differentiation space (130) of the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);

a blowing pump (1041) or an external heat exchanger airflow exhausting fan unit (104) is installed at one or more than one of the three locations including the fluid exhausting path (1060) or the inlet side or the outlet side of the external heat exchanger (1021), so as to pump the air conditioning object space exhausted fluid (105) to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

said external heat exchanger airflow exhausting fan unit (104) and said blowing pump (1041), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), or for simultaneously pumping the air conditioning object space exhausted fluid (105) and the external airflow (1051), so as to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021), enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated; the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105); the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105);

**[0012]** This operating principles thereof are as follows:

--When operated as the function to supply cold air to the air conditioning object space (120), if the temperature of an external temperature differentiation space (130) where the external heat exchanger (1021) is located is higher, and the external airflow (1051) is pumped only by the external heat exchanger airflow exhausting fan unit (104), it is difficult to release heat from the coolant in the coolant fluid pipe (103) disposed in the external heat exchanger (1021), thereby by utilizing both or one of the external heat exchanger airflow exhausting fan unit (104) and/or the exhaust amount regulating device (1061) to pump the air conditioning object space exhausted fluid (105) at a relatively lower temperature in an indoor air conditioning object space (120), or simultaneously pump the air conditioning object space exhausted fluid (105) and the external airflow (1051) flowing through the external heat exchanger (1021), the effect of lowering the temperature of the external heat exchanger (1021) is enhanced, and thereby facilitating the enhancing of the cooling air conditioning efficiency;

--on the contrary, when operated as an heat pump function to supply hot air to the air conditioning object space (120), by pumping the air conditioning object space exhausted fluid (105) having relatively higher temperature to the external heat exchanger (1021) through the external heat exchanger (1021), the effect of raising the temperature of the external heat exchanger (1021) is enhanced, and thereby facilitating to enhance the heating air conditioning efficiency; The air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger of the present invention includes to pump the airflow passing through the external of the external heat exchanger (1021) by means of the external heat exchanger airflow exhausting fan unit (104), and /or the blowing pump (1041);

According to the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, with a thermal insulation device (110) constructed in the object location, the air conditioning object space (120) and the external temperature differentiation space (130) can be insulated, the thermal insulation structure (110) includes the wall of a building, the housing of a carrier or the enclosure of a mechanism made of a heat insulation material or a material having even better heat insulation properties;

According to the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, the mentioned air conditioning object space (120) is often defined as the internal of a building or the internal of a vehicle or the internal of a boat or the internal of an aircraft or the internal of an equipment device, which allows the air conditioning device to perform

temperature-raising regulation or temperature-lowering regulation; the mentioned air conditioning object space exhausted fluid (105) is defined as the airflow exhausted from the internal of the air conditioning object space (120) and flowing through the external heat exchanger (1021);

According to the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, the mentioned external temperature differentiation space (130) is defined as the external space insulated from the air conditioning object space (120) through the thermal insulation device (110);

According to the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, the mentioned external airflow (1051) is defined as the airflow surrounding the external temperature differentiation space (130);

In the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, the temperature of the air conditioning object space exhausted fluid (105) includes higher than that of an heat exchanger to the external disposed externally of a temperature regulator;

In the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, the temperature of the air conditioning object space exhausted fluid (105) includes lower than that of an heat exchanger to the external disposed externally of a temperature regulator;

In the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, the exhausted air conditioning object space exhausted fluid (105) includes to heat exchange with the coolant fluid pipeline (103) disposed in the external heat exchanger (1021) in the external space or a surface of the external heat exchanger (1021);

The air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger of the present invention is formed by applying the aforementioned operating principles to various types of air conditioning devices including integral air conditioning devices, or split type air conditioning devices, or using the cooling tower to replace the cooling tower type air conditioning device of the external heat exchanger (1021).

**[0013]** Several embodiments of the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchangers of the present invention are described as follows:

Fig. 2 is a structural schematic view of an embodiment of present invention having an integral air con-

ditioning device with an external heat exchanger airflow exhausting fan unit (104) and a fluid exhausting path (106) so as to pump an air conditioning object space exhausted fluid (105) and an external airflow (1051) to flow together through an external heat exchanger (1021).

**[0014]** As illustrated in Fig. 2, the main configurations are as follows:

an air conditioning device main unit (101), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having an exhaust amount regulating device (1061), and a fluid exhausting path (106) formed by a housing for allowing air conditioning object space exhausted fluid (105) to flow to the external heat exchanger (1021);  
the external heat exchanger (1021), provided with the coolant fluid pipeline (103) for allowing the coolant passed from the main unit to heat exchange with the external airflow (1051) of the external temperature differentiation space (130) of the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);  
the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;  
an external heat exchanger airflow exhausting fan unit (104), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation which is pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);  
the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105);  
the fluid exhausting path (106), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105);  
whereby an integral air conditioning device assembly (1000) is formed by the abovementioned structures.

**[0015]** Fig. 3 is a structural schematic view of an embodiment of present invention having an integral air conditioning device without a heat exchanger airflow exhausting fan unit (104) and a ventilating device (1041) commonly constructed with a fluid exhausting path (106) so as to pump an air conditioning object space exhausted fluid (105) to flow through an external heat exchanger (1021).

**[0016]** As illustrated in Fig. 3, the main configurations are as follows:

an air conditioning device main unit (101), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (106) formed by a housing, and having an exhaust amount regulating device (1061) and the blowing pump (1041);  
the external heat exchanger (1021), provided with the coolant fluid pipeline (103) for allowing the coolant passed from the main unit to heat exchange with the air conditioning object space exhausted fluid (105) through the external heat exchanger (1021);  
the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;  
a blowing pump (1041), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), so as to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);  
the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105);  
the fluid exhausting path (106), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105);  
whereby an integral air conditioning device assembly (1000) is formed by the abovementioned structures.

**[0017]** Fig. 4 is a structural schematic view of an embodiment of present invention having a fluid exhausting path (1060) and an external heat exchanger airflow exhausting fan unit (104) so as to pump an air conditioning object space exhausted fluid (105) and an external air-



flow (1051) to flow together through an external heat exchanger (1021) in the air conditioning device assembly (1000).

**[0018]** As illustrated in Fig. 4, the main configurations are as follows:

an air conditioning device main unit (101), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060) and an exhaust amount regulating device (1061);

the external heat exchanger (1021), provided with the coolant fluid pipeline (103) for allowing the coolant passed from the main unit to heat exchange with the external airflow (1051) of the external temperature differentiation space (130) of the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated; an external heat exchanger airflow exhausting fan unit (104), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation which is pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

whereby an air conditioning device assembly (1000) is formed by the abovementioned structures; the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105); the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

**[0019]** Fig. 5 is a structural schematic view of an embodiment of present invention having a separately mounted blowing pump (1041) and an exhaust amount regulating device (1061) and having an air conditioning device assembly (1000) without the external heat exchanger airflow exhausting fan unit (104).

**[0020]** As illustrated in Fig. 5, the main configurations

are as follows:

an air conditioning device main unit (101), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060), an exhaust amount regulating device (1061), a blowing pump (1041);

the external heat exchanger (1021), provided with the coolant fluid pipeline (103) for allowing the coolant passed from the main unit to heat exchange with the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated; whereby an air conditioning device assembly (1000) is formed by the abovementioned structures;

a blowing pump (1041), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), so as to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105); the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

**[0021]** Fig. 6 is a structural schematic view of an embodiment of present invention having an air conditioning device assembly (1000) mounted with an external heat exchanger airflow exhausting fan unit (104) and the fluid exhausting path (1060) and the blowing pump (1041).

**[0022]** As illustrated in Fig. 6, the main configurations are as follows:

an air conditioning device main unit (101), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid

pipeline (103); and having a fluid exhausting path (1060) and a blowing pump (1041);  
 the external heat exchanger (1021), provided with the coolant fluid pipeline (103) for allowing the coolant passed from the main unit to heat exchange with the external airflow (1051) of the external temperature differentiation space (130) of the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);  
 the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;  
 an external heat exchanger airflow exhausting fan unit (104), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation which is pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060) by the blowing pump (1041), enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);  
 whereby an air conditioning device assembly (1000) is formed by the abovementioned structures;  
 a blowing pump (1041), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), so as to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021), enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);  
 the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105);  
 the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

**[0023]** Fig. 7 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) with an external heat exchanger airflow exhausting fan unit (104) and a split type air conditioning device main unit (2001) mounted with the fluid exhausting path (1060).

**[0024]** As illustrated in Fig. 7, the main configurations are as follows:

a split type air conditioning device main unit (2001), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in a split type air conditioning device outdoor unit (2002) in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060) and an exhaust amount regulating device (1061);

the split type air conditioning device outdoor unit (2002), having a housing and the external heat exchanger (1021), wherein the external heat exchanger (1021) being provided with the coolant fluid pipeline (103) for allowing the coolant passed from the split type air conditioning device main unit (2001) to heat exchange with the external airflow (1051) of the external temperature differentiation space (130) of the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105), and having an external heat exchanger airflow exhausting fan unit (104), wherein the external heat exchanger airflow exhausting fan unit (104) comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), and enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);  
 the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;  
 the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105);  
 the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

**[0025]** Fig. 8 is a structural schematic view of an embodiment of present invention having the split type air conditioning device main unit (2001) commonly constructed with the blowing pump (1041) and having a split type air conditioning device outdoor unit (2002) without the external heat exchanger airflow exhausting fan unit (104).

**[0026]** As illustrated in Fig. 8, the main configurations are as follows:

a split type air conditioning device main unit (2001), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning air-flow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in a split type air conditioning device outdoor unit (2002) in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060), an exhaust amount regulating device (1061) and a blowing pump (1041);

the split type air conditioning device outdoor unit (2002), having a housing and the external heat exchanger (1021), wherein the external heat exchanger (1021) being provided with the coolant fluid pipeline (103) for allowing the coolant passed from the split type air conditioning device main unit (2001) to heat exchange with the air conditioning object space exhausted fluid (105) by means of the external heat exchanger (1021);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated; a blowing pump (1041), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation which is pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), so as to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105); the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

**[0027]** Fig. 9 is a structural schematic view of an embodiment of present invention having the separately mounted fluid exhausting path (1060), the split type air conditioning device main unit (2001) and the split type air conditioning device outdoor unit (2002) with the external heat exchanger airflow exhausting fan unit (104).

**[0028]** As illustrated in Fig. 9, the main configurations are as follows:

a split type air conditioning device main unit (2001), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning air-flow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in a

split type air conditioning device outdoor unit (2002) in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060) and an exhaust amount regulating device (1061);

the split type air conditioning device outdoor unit (2002), having a housing and the external heat exchanger (1021), wherein the external heat exchanger (1021) being provided with the coolant fluid pipeline (103) for allowing the coolant passed from the split type air conditioning device main unit (2001) to heat exchange with the external airflow (1051) of the external temperature differentiation space (130) of the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105), and having an external heat exchanger airflow exhausting fan unit (104), wherein the external heat exchanger airflow exhausting fan unit (104) comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the split type air conditioning device main unit (2001) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;

the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105); the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

**[0029]** Fig. 10 is a structural schematic view of an embodiment of present invention having the separately mounted blowing pump (1041), the split type air conditioning device main unit (2001) and the split type air conditioning device outdoor unit (2002) without the external heat exchanger airflow exhausting fan unit (104).

**[0030]** As illustrated in Fig. 10, the main configurations are as follows:

a split type air conditioning device main unit (2001), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning air-flow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in

an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060), an exhaust amount regulating device (1061) and a blowing pump (1041);

the split type air conditioning device outdoor unit (2002), having a housing and the external heat exchanger (1021), wherein the external heat exchanger (1021) being provided with the coolant fluid pipeline (103) for allowing the coolant passed from the split type air conditioning device main unit (2001) to heat exchange with the air conditioning object space exhausted fluid (105) by means of the external heat exchanger (1021);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling split type air conditioning device main unit (2001) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;

a blowing pump (1041), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation which is pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), so as to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105); the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105);

**[0031]** Fig. 11 is a structural schematic view of an embodiment of present invention having the split type air conditioning device main unit (2001), the split type air conditioning device outdoor unit (2002) with the external heat exchanger airflow exhausting fan unit (104) and the separately mounted blowing pump (1041).

**[0032]** As illustrated in Fig. 11, the main configurations are as follows:

a split type air conditioning device main unit (2001), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060), the exhaust amount regulating device (1061) and the blowing pump (1041);

the split type air conditioning device outdoor unit

(2002), having a housing and the external heat exchanger (1021), wherein the external heat exchanger (1021) being provided with the coolant fluid pipeline (103) for allowing the coolant passed from the split type air conditioning device main unit (2001) to heat exchange with the external airflow (1051) of the external temperature differentiation space (130) of the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105), and having an external heat exchanger airflow exhausting fan unit (104), wherein the external heat exchanger airflow exhausting fan unit (104) comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the split type air conditioning device main unit (2001) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;

the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105); the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

**[0033]** Fig. 12 is a structural schematic view of an embodiment of present invention having a water-cooled air conditioning device main unit (2005), a powered fan provided cooling tower (2003) and the separately mounted blowing pump (1041).

**[0034]** As illustrated in Fig. 12, the main configurations are as follows:

a water-cooled air conditioning device main unit (2005), which is an air conditioning device main unit essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower water-cooled cooling device and a housing, and a water pipe (107) of the water-cooled condensing device disposed in the water-cooled air conditioning device main unit (2005) being coupled to a water in and out pipe (109) of a water inlet and water exhaust pipeline of the powered fan provided cooling tower (2003) disposed in the external temperature differentiation space (130) so as to form a path of water circulation; and having the fluid exhausting

path (1060), the exhaust amount regulating device (1061) and the blowing pump (1041), and by means of the blowing pump (1041) to pump the air conditioning object space exhausted fluid (105) through the fluid exhausting path (1060) and the exhaust amount regulating device (1061) to an air inlet of the powered fan provided cooling tower (2003); the powered fan provided cooling tower (2003), comprising a cooling tower equipped with the cooling tower fan unit (108), for example, a counterflow mechanical draft cooling tower, an induced counterflow mechanical draft cooling tower, a counterflow cooling tower, a crossflow mechanical draft cooling tower, or an evaporative cooling tower, and the powered fan provided cooling tower (2003) having an air inlet, so that the air conditioning object space exhausted fluid (105) pumped from the air conditioning object space (120) through the blowing pump (1041) is directed through the fluid exhausting path (1060) into the air inlet of the powered fan provided cooling tower (2003), and passing through the powered fan provided cooling tower (2003) so as to cool the waterflow and then is exhausted to the surrounding through the cooling tower fan unit (108), and having a water in and out pipe (109) for connecting the water pipe (107) so as to allow the cooling water to circulate between the powered fan provided cooling tower (2003) and the water-cooled air conditioning device main unit (2005); the water pipe (107), disposed between a water-cooled condensing device of the water-cooled air conditioning device main unit (2005) and the water in and out pipe (109) of the powered fan provided cooling tower (2003); the cooling tower fan unit (108), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, and having one or more following operation functions, including: 1) pumping the external airflow (1051) of the external temperature differentiation space (130) to the external temperature differentiation space (130) through the inside of the powered fan provided cooling tower (2003); 2) pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061), the blowing pump (1041) and the fluid exhausting path (1060) to the external temperature differentiation space (130) through the powered fan provided cooling tower (2003); 3) enabling the external airflow (1051) and the air conditioning object space exhausted fluid (105) to exhaust commonly to the external temperature differentiation space (130) through the powered fan provided cooling tower (2003); a water pump (111), for pumping a cooling water between the water-cooled air conditioning device main unit (2005) and the powered fan provided cooling tower (2003) through the water pipe (107) and

the water in and out pipe (109) for cooling circulation; the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105); the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

**[0035]** Fig. 13 is a structural schematic view of an embodiment of present invention having a water-cooled air conditioning device main unit (2005) and a powered fan provided cooling tower (2003).

**[0036]** As illustrated in Fig. 13, the main configurations are as follows:

a water-cooled air conditioning device main unit (2005), which is an air conditioning device main unit essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower water-cooled cooling device and a housing, and a water pipe (107) of the water-cooled condensing device disposed in the water-cooled air conditioning device main unit (2005) being coupled to a water in and out pipe (109) of a water inlet and water exhaust pipeline of the powered fan provided cooling tower (2003) disposed in the external temperature differentiation space (130) so as to form a path of water circulation; and having a fluid exhausting path (1060) and an exhaust amount regulating device (1061) for delivering the air conditioning object space exhausted fluid (105) to an air inlet of the powered fan provided cooling tower (2003); the powered fan provided cooling tower (2003), comprising a cooling tower equipped with the cooling tower fan unit (108), for example, a counterflow mechanical draft cooling tower, an induced counterflow mechanical draft cooling tower, a counterflow cooling tower, a crossflow mechanical draft cooling tower, or an evaporative cooling tower, and the powered fan provided cooling tower (2003) having an air inlet, so that the air conditioning object space exhausted fluid (105) pumped from the air conditioning object space (120) is directed through the fluid exhausting path (1060) into the air inlet of the powered fan provided cooling tower (2003), and is passing through the powered fan provided cooling tower (2003) so as to cool the waterflow, and then is exhausted to the surrounding through the cooling tower fan unit (108), and having a water in and out pipe (109) for connecting the water pipe (107) so as to allow the cooling water to circulate between the powered fan provided cooling tower (2003) and the water-cooled air conditioning device main unit (2005); the water pipe (107), disposed between a water-cooled condensing device of the water-cooled air conditioning device main unit (2005) and the water

in and out pipe (109) of the powered fan provided cooling tower (2003);

the cooling tower fan unit (108), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, and having one or more follow-  
 ing operation functions, including: 1) pumping the  
 external airflow (1051) of the external temperature  
 differentiation space (130) to the external tempera-  
 ture differentiation space (130) through the inside of  
 the powered fan provided cooling tower (2003); 2)  
 pumping the air conditioning object space exhausted  
 fluid (105) with a temperature differentiation from the  
 air conditioning object space (120) through the ex-  
 haust amount regulating device (1061) and the fluid  
 exhausting path (1060) to the external temperature  
 differentiation space (130) through the powered fan  
 provided cooling tower (2003); 3) enabling the ex-  
 ternal airflow (1051) and the air conditioning object  
 space exhausted fluid (105) to exhaust commonly  
 to the external temperature differentiation space  
 (130) through the powered fan provided cooling tow-  
 er (2003);

a water pump (111), for pumping a cooling water  
 between the water-cooled air conditioning device  
 main unit (2005) and the powered fan provided cool-  
 ing tower (2003) through the water pipe (107) and  
 the water in and out pipe (109) for cooling circulation;  
 the exhaust amount regulating device (1061),  
 formed by a fluid gate, a shutoff gate or valve for  
 operating and adjusting the exhaust amount of the  
 air conditioning object space exhausted fluid (105);  
 the fluid exhausting path (1060), which is a fluid pas-  
 sage structure for permitting the exhaust of the air  
 conditioning object space exhausted fluid (105).

**[0037]** Fig. 14 is a structural schematic view of an em-  
 bodiment of present invention having a water-cooled air  
 conditioning device main unit (2005), a natural draft cool-  
 ing tower (2003) and the separately mounted blowing  
 pump (1041).

**[0038]** As illustrated in Fig. 14, the main configurations  
 are as follows:

a water-cooled air conditioning device main unit  
 (2005), which is an air conditioning device main unit  
 essentially consisted of a throttle device, an internal  
 heat exchanger (203), a compression device, pipe-  
 lines, a control device (201), an air conditioning air-  
 flow blower water-cooled cooling device and a hous-  
 ing, and a water pipe (107) of the water-cooled con-  
 densing device disposed in the water-cooled air con-  
 ditioning device main unit (2005) being coupled to a  
 water in and out pipe (109) of a water inlet and water  
 exhaust pipeline of a natural draft cooling tower  
 (2004) disposed in the external temperature differ-  
 entiation space (130) so as to form a path of water  
 circulation; and having the fluid exhausting path  
 (1060), the exhaust amount regulating device (1061)

and the blowing pump (1041), and by means of the  
 blowing pump (1041) to pump the air conditioning  
 object space exhausted fluid (105) to an air inlet of  
 the natural draft cooling tower (2004) through the  
 fluid exhausting path (1060) and the exhaust amount  
 regulating device (1061);

a natural draft cooling tower (2004), comprising a  
 natural draft cooling tower, for example, a crossflow  
 natural draft cooling tower, and the natural draft cool-  
 ing tower (2004) having an air inlet, and having one  
 or more following operating functions, including: 1)  
 directing the external airflow (1051) from the external  
 temperature differentiation space (130) into the air  
 inlet of the natural draft cooling tower (2004), and  
 passing through the natural draft cooling tower  
 (2004) so as to cool the waterflow, and then exhaust-  
 ing the same to the surrounding through the cooling  
 tower; 2) directing the air conditioning object space  
 exhausted fluid (105) pumped from the air condition-  
 ing object space (120) by means of the blowing pump  
 (1041) through the fluid exhausting path (1060) into  
 the air inlet of the natural draft cooling tower (2004),  
 and passing through the natural draft cooling tower  
 (2004) so as to cool the waterflow, and then exhaust-  
 ing the same to the surrounding through the cooling  
 tower; 3) directing the air conditioning object space  
 exhausted fluid (105) and the external airflow (1051)  
 into the air inlet of the natural draft cooling tower  
 (2004), and passing through the natural draft cooling  
 tower (2004) so as to cool the waterflow, and then  
 exhausting the same to the surrounding through the  
 cooling tower; and having a water in and out pipe  
 (109) for coupling the water pipe (107) so as to allow  
 the cooling water to circulate between the natural  
 draft cooling tower (2004) and the water-cooled air  
 conditioning device main unit (2005);

the water pipe (107), disposed between a water-  
 cooled condensing device of the water-cooled air  
 conditioning device main unit (2005) and the water  
 in and out pipe (109) of the natural draft cooling tower  
 (2004);

a water pump (111), for pumping a cooling water  
 between the water-cooled air conditioning device  
 main unit (2005) and the powered fan provided cool-  
 ing tower (2003) through the water pipe (107) and  
 the water in and out pipe (109) for cooling circulation;  
 the exhaust amount regulating device (1061),  
 formed by a fluid gate, a shutoff gate or valve for  
 operating and adjusting the exhaust amount of the  
 air conditioning object space exhausted fluid (105);  
 the fluid exhausting path (1060), which is a fluid pas-  
 sage structure for permitting the exhaust of the air  
 conditioning object space exhausted fluid (105).

**[0039]** The air conditioning device utilizing tempera-  
 ture differentiation of exhausted gas to even temperature  
 of external heat exchanger is further applied to a split  
 type air conditioning device, which mainly includes a split

type air conditioning device outdoor unit (2002) therein having a split type air conditioning device outdoor main station (2007) and an external heat exchanger (1021) and an airflow exhausting fan unit (104), and a split type air conditioning device indoor unit (2006) therein having an internal heat exchanger (203), a flow regulating device (202), a conditioned airflow blowing fan (204) and a control device (201), and a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) being installed therebetween, and a fluid exhausting path (1060) being installed from the air conditioning object space (120) to the external heat exchanger (1021) for facilitating the applications in various separated space, illustrated as followings:

Fig. 15 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104) and a split type air conditioning device outdoor main station (2007), having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204) and an exhaust amount regulating device (1061), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021);

**[0040]** As shown FIG. 15, the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104) and a split type air conditioning device outdoor main station (2007), and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204) and an exhaust amount regulating device (1061), and forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021); and wherein

split type air conditioning device outdoor unit (2002), installed with the split type air conditioning device outdoor main station (2007), the external heat exchanger (1021), the coolant fluid pipeline (103) and the airflow exhausting fan unit (104), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating

loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);

the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device; the split type air conditioning device indoor unit (2006) is further installed with the exhaust amount regulating device (1061) and the fluid exhausting path (1060);

the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the external airflow (1051) of the external temperature differentiation space (130) in the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105); the external heat exchanger airflow exhausting fan unit (104) installed on the split type air conditioning device outdoor unit (2002) is constituted by an airflow blowing or airflow exhausting fan unit or an air pump driven by an electric motor, wherein an airflow introducing interval is defined between the fluid exhausting path (1060) and the external heat exchanger (1021) for pumping in the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation and pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), thereby enabling two airflows to exchange heat then being exhausted to the external temperature differentiation space (130) through the external heat exchanger (1021); coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;

exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);

fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);

the coolant fluid pipeline (103) and fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

**[0041]** Fig. 16 is a structural schematic view of an em-

bodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and a split type air conditioning device outdoor main station (2007), having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204), a blowing pump (1041) and an exhaust amount regulating device (1061), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and installing a fluid exhausting path (1060) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021).

**[0042]** As shown FIG. 16, the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and a split type air conditioning device outdoor main station (2007), and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204), a blowing pump (1041) and an exhaust amount regulating device (1061), and forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and installing a fluid exhausting path (1060) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021); and wherein

split type air conditioning device outdoor unit (2002), installed with the split type air conditioning device outdoor main station (2007), the external heat exchanger (1021) and the coolant fluid pipeline (103), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);

the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device; the split type air conditioning device indoor unit (2006) is further installed with the exhaust amount regulating device (1061), the blowing pump (1041) and the fluid exhausting path (1060);

the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the air conditioning object space exhausted fluid (105);

coolant fluid pipeline (103), constituted by a pipeline de-

vice for connecting the split type air conditioning device outdoor main station (2007) and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;

exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);

fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);

the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

**[0043]** Fig. 17 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104) and a split type air conditioning device outdoor main station (2007), having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and separately mounting a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021).

**[0044]** As shown in FIG. 17, the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104) and a split type air conditioning device outdoor main station (2007), installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and separately mounting a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021); wherein

split type air conditioning device outdoor unit (2002), installed with the split type air conditioning device outdoor main station (2007), the external heat exchanger (1021), the coolant fluid pipeline (103) and the airflow exhausting



fan unit (104), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);

the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device;

the thermal insulation device (110) is separately mounted with the exhaust amount regulating device (1061) and the fluid exhausting path (1060);

the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the external airflow (1051) of the external temperature differentiation space (130) in the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105); the external heat exchanger airflow exhausting fan unit (104) installed on the split type air conditioning device outdoor unit (2002) is constituted by an airflow blowing or airflow exhausting fan unit or an air pump driven by an electric motor, wherein an airflow introducing interval is defined between the fluid exhausting path (1060) and the external heat exchanger (1021) for pumping in the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation and pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), thereby enabling two airflows to exchange heat then being exhausted to the external temperature differentiation space (130) through the external heat exchanger (1021); coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;

exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);

fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);

the coolant fluid pipeline (103) and the fluid exhausting

path (1060) can be individually installed or jointly constituted as a pipeline structure.

**[0045]** Fig. 18 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and a split type air conditioning device outdoor main station (2007), having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and separately mounting a blowing pump (1041) and a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021).

**[0046]** As shown in FIG. 18, the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and a split type air conditioning device outdoor main station (2007), and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204), and forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and separately mounting a blowing pump (1041) and a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021); wherein

split type air conditioning device outdoor unit (2002), installed with the split type air conditioning device outdoor main station (2007), the external heat exchanger (1021) and the coolant fluid pipeline (103), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);

the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device;

The thermal insulation device (110) is separately mounted with the exhaust amount regulating device (1061), the blowing pump (1041) and the fluid exhausting path (1060);

the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the air conditioning object space exhausted fluid (105);  
 coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;  
 blowing pump (1041), constituted by an air blowing or air exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a relative temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060) and exchanging heat while flowing through the external heat exchanger (1021) then being exhausted to the external temperature differentiation space (130);  
 exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);  
 fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);  
 the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

**[0047]** Fig. 19 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104) and a split type air conditioning device outdoor main station (2007), having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and separately mounting a blowing pump (1041) and a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021).

**[0048]** As shown in FIG. 19, the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104) and a split type air conditioning device outdoor main station (2007), in-

stalling a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and separately mounting a blowing pump (1041) and a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021); wherein

split type air conditioning device outdoor unit (2002), installed with the split type air conditioning device outdoor main station (2007), the external heat exchanger (1021), the coolant fluid pipeline (103) and the airflow exhausting fan unit (104), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);

the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device;

the thermal insulation device (110) is separately mounted with the exhaust amount regulating device (1061), the blowing pump (1041) and the fluid exhausting path (1060);

the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the external airflow (1051) of the external temperature differentiation space (130) in the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);

the external heat exchanger airflow exhausting fan unit (104) installed on the split type air conditioning device outdoor unit (2002) is constituted by an airflow blowing or airflow exhausting fan unit or an air pump driven by an electric motor, wherein an airflow introducing interval is defined between the fluid exhausting path (1060) and the external heat exchanger (1021) for pumping in the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation and pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), thereby enabling two airflows to exchange heat then being

exhausted to the external temperature differentiation space (130) through the external heat exchanger (1021); coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through; exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105); fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120); the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

**[0049]** Fig. 20 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104), having a split type air conditioning device outdoor main station (2007) which is individually installed, having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204) and an exhaust amount regulating device (1061), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021).

**[0050]** As shown in FIG. 20, the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104), installing a split type air conditioning device outdoor main station (2007) which is individually installed, and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204) and an exhaust amount regulating device (1061), and forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021); wherein

split type air conditioning device outdoor unit (2002), installed with the external heat exchanger (1021), the coolant fluid pipeline (103), the airflow exhausting fan unit

(104) and the individually installed split type air conditioning device outdoor main station (2007), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);

the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device; the split type air conditioning device indoor unit (2006) is further installed with the exhaust amount regulating device (1061) and the fluid exhausting path (1060);

the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the external airflow (1051) of the external temperature differentiation space (130) in the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);

the external heat exchanger airflow exhausting fan unit (104) installed on the split type air conditioning device outdoor unit (2002) is constituted by an airflow blowing or airflow exhausting fan unit or an air pump driven by an electric motor, wherein an airflow introducing interval is defined between the fluid exhausting path (1060) and the external heat exchanger (1021) for pumping in the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation and pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), thereby enabling two airflows to exchange heat then being exhausted to the external temperature differentiation space (130) through the external heat exchanger (1021);

coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) which is individually installed and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;

exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);

fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from

the air conditioning object space (120); the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

**[0051]** Fig. 21 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021), having a split type air conditioning device outdoor main station (2007) which is individually installed, having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204), a blowing pump (1041) and an exhaust amount regulating device (1061), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and installing a fluid exhausting path (1060) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021).

**[0052]** As shown in FIG. 21, the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021), installing a split type air conditioning device outdoor main station (2007) which is individually installed, and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204), a blowing pump (1041) and an exhaust amount regulating device (1061), and forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and installing a fluid exhausting path (1060) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021); wherein

split type air conditioning device outdoor unit (2002), installed with the external heat exchanger (1021), the coolant fluid pipeline (103) and the individually installed split type air conditioning device outdoor main station (2007), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120); the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device; the split type air conditioning device indoor unit (2006) is further installed with the exhaust amount regulating device (1061), the blowing

pump (1041) and the fluid exhausting path (1060); the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the air conditioning object space exhausted fluid (105);

coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) which is individually installed and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;

blowing pump (1041), constituted by an air blowing or air exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a relative temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060) and flowing through the external heat exchanger (1021) then being exhausted to the external temperature differentiation space (130);

exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);

fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);

the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

**[0053]** Fig. 22 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104), having a split type air conditioning device outdoor main station (2007) which is individually installed, having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and separately mounting a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021).

**[0054]** As shown in FIG. 22, the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104) installing a split

type air conditioning device outdoor main station (2007) which is individually installed, and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), and forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and separately mounting an exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021); wherein split type air conditioning device outdoor unit (2002), installed with the external heat exchanger (1021), the coolant fluid pipeline (103), the airflow exhausting fan unit (104) and the individually installed split type air conditioning device outdoor main station (2007), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);

the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device;

the thermal insulation device (110) is separately mounted with the exhaust amount regulating device (1061) and the fluid exhausting path (1060);

the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the external airflow (1051) of the external temperature differentiation space (130) in the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105); the external heat exchanger airflow exhausting fan unit (104) installed on the split type air conditioning device outdoor unit (2002) is constituted by an airflow blowing or airflow exhausting fan unit or an air pump driven by an electric motor, wherein an airflow introducing interval is defined between the fluid exhausting path (1060) and the external heat exchanger (1021) for pumping in the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation and pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), thereby enabling two airflows to exchange heat then being exhausted to the external temperature differentiation

space (130) through the external heat exchanger (1021); coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) which is individually installed and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;

exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);

fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);

the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

**[0055]** Fig. 23 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021), having a split type air conditioning device outdoor main station (2007) which is individually installed, having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and separately mounting a blowing pump (1041) and an exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021).

**[0056]** As shown in FIG. 23, the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021), installing a split type air conditioning device outdoor main station (2007) which is individually installed, and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), and forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and separately mounting a blowing pump (1041) and an exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the a blowing pump (1041) and the external heat exchanger (1021); wherein

split type air conditioning device outdoor unit (2002), installed with the external heat exchanger (1021), the coolant fluid pipeline (103) and the individually installed split type air conditioning device outdoor main station (2007), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120); the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device;

the thermal insulation device (110) is separately mounted with the exhaust amount regulating device (1061), the blowing pump (1041) and the fluid exhausting path (1060);

the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the air conditioning object space exhausted fluid (105);

coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;

blowing pump (1041), constituted by an air blowing or air exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a relative temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060) and flowing through the external heat exchanger (1021) then being exhausted to the external temperature differentiation space (130);

exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);

fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);

the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

**[0057]** Fig. 24 is a structural schematic view of an embodiment of present invention having a split type air conditioning device outdoor unit (2002) composed of an ex-

ternal heat exchanger (1021) and an airflow exhausting fan unit (104), having a split type air conditioning device outdoor main station (2007) which is individually installed, having a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), having a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and separately mounting a blowing pump (1041) and a exhaust amount regulating device (1061) in the thermal insulation device (110) and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021).

**[0058]** As shown in FIG. 24, the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104), installing a split type air conditioning device outdoor main station (2007) which is individually installed, and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), and forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and separately mounting a blowing pump (1041) and a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021); wherein

split type air conditioning device outdoor unit (2002), installed with the external heat exchanger (1021), the coolant fluid pipeline (103), the airflow exhausting fan unit (104) and the individually installed split type air conditioning device outdoor main station (2007), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);

the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device;

the thermal insulation device (110) is separately mounted with the exhaust amount regulating device (1061), the blowing pump (1041) and the fluid exhausting path (1060);

the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the external airflow (1051) of the external temperature differentiation space (130) in the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105); the external heat exchanger airflow exhausting fan unit (104) installed on the split type air conditioning device outdoor unit (2002) is constituted by an airflow blowing or airflow exhausting fan unit or an air pump driven by an electric motor, wherein an airflow introducing interval is defined between the fluid exhausting path (1060) and the external heat exchanger (1021) for pumping in the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation and pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), thereby enabling two airflows to exchange heat then being exhausted to the external temperature differentiation space (130) through the external heat exchanger (1021); coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) which is individually installed and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through; exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105); fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120); the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

**[0059]** In summary, the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger relates to a cooling/heating air conditioning device for regulating temperature, which pumps an airflow exhausted from a space in an air conditioning object such as inside of a room or vehicle to the external through the external heat exchanger disposed at the external of the air conditioning object such as outside of the room or vehicle so as to equalize the temperature of the fluid flowing through the internal of the external heat exchanger by means of the temperature difference between the internal and external of the air conditioning object for achieving an energy saving effect.

## Claims

1. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, which relates to a cooling/heating air conditioning device for regulating temperature, which pumps the air conditioning object space exhausted fluid (105) in an air conditioning object such as the indoor or the internal of a vehicle, and/or pumps the external airflow (1051) through the external heat exchanger (1021) disposed at the external of the air conditioning object such as the outdoor or the outside of a vehicle, so as to perform heat exchange with the coolant fluid pipeline (103) passing through the internal of the external heat exchanger device by means of the temperature differentiation between the two fluids; when the air conditioning device is operated as a cooler, the airflow of a relatively lower temperature exhausted from the space of the air conditioning object such as the inside of the room can be used to facilitate the decreasing of the temperature of the external heat exchanger which is disposed outdoors as a condenser, and when the air conditioning device is operated as a heat pump to supply hot air, the exhausted airflow of a relatively higher temperature can be used to facilitate the increasing of the temperature of the external heat exchanger which is disposed outdoors as an evaporator, and the main configurations are as follows:

an air conditioning device main unit (101), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having exhaust amount regulating device (1061) and a fluid exhausting path (1060) for the air conditioning object space exhausted fluid (105) to flow through, and further to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021); the external heat exchanger (1021), provided with the coolant fluid pipeline (103) for allowing the coolant passed from the main unit to heat exchange with the external airflow (1051) of the external temperature differentiation space (130) of the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105); a blowing pump (1041) or an external heat exchanger airflow exhausting fan unit (104) is installed at one or more than one of the three lo-

cations including the fluid exhausting path (1060) or the inlet side or the outlet side of the external heat exchanger (1021), so as to pump the air conditioning object space exhausted fluid (105) to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

said external heat exchanger airflow exhausting fan unit (104) and said blowing pump (1041), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), or for simultaneously pumping the air conditioning object space exhausted fluid (105) and the external airflow (1051), so as to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021), enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;

the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105);

the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105);

the operating principles thereof are as follows:

--When operated as the function to supply cold air to the air conditioning object space (120), by utilizing both or one of the external heat exchanger airflow exhausting fan unit (104) and/or the exhaust amount regulating device (1061) to pump the air conditioning object space exhausted fluid (105) at a relatively lower temperature in an indoor air conditioning object space (120), or simultaneously pump the air conditioning object space exhausted fluid (105) and the external airflow (1051) flowing through the external heat exchanger (1021), the effect of lowering the temperature of the external heat exchanger (1021) is enhanced, and thereby facilitating the enhancing of the cooling air conditioning efficiency;

--when operated as an heat pump function

to supply hot air to the air conditioning object space (120), by pumping the air conditioning object space exhausted fluid (105) having relatively higher temperature to the external heat exchanger (1021) through the external heat exchanger (1021), the effect of raising the temperature of the external heat exchanger (1021) is enhanced, and thereby facilitating to enhance the heating air conditioning efficiency;

the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger of the present invention includes to pump the airflow passing through the external of the external heat exchanger (1021) by means of the external heat exchanger airflow exhausting fan unit (104), and/or the blowing pump (1041);

according to the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, with a thermal insulation device (110) constructed in the object location, the air conditioning object space (120) and the external temperature differentiation space (130) can be insulated, the thermal insulation structure (110) includes the wall of a building, the housing of a carrier or the enclosure of a mechanism made of a heat insulation material or a material having even better heat insulation properties;

according to the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, the mentioned air conditioning object space (120) is often defined as the internal of a building or the internal of a vehicle or the internal of a boat or the internal of an aircraft or the internal of an equipment device, which allows the air conditioning device to perform temperature-raising regulation or temperature-lowering regulation; the mentioned air conditioning object space exhausted fluid (105) is defined as the airflow exhausted from the internal of the air conditioning object space (120) and flowing through the external heat exchanger (1021);

according to the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, the mentioned external temperature differentiation space (130) is defined as the external space insulated from the air conditioning object space (120) through the thermal insulation device (110);

according to the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, the mentioned external airflow (1051) is defined



as the airflow surrounding the external temperature differentiation space (130);

in the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, the temperature of the air conditioning object space exhausted fluid (105) includes higher than that of an heat exchanger to the external disposed externally of an temperature regulator;

in the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, the temperature of the air conditioning object space exhausted fluid (105) includes lower than that of an heat exchanger to the external disposed externally of an temperature regulator;

in the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger, the exhausted air conditioning object space exhausted fluid (105) includes to heat exchange with the coolant fluid pipeline (103) disposed in the external heat exchanger (1021) in the external space or a surface of the external heat exchanger (1021);

the air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger of the present invention is formed by applying the aforementioned operating principles to various types of air conditioning devices including integral air conditioning devices, or split type air conditioning devices, or using the cooling tower to replace the cooling tower type air conditioning device of the external heat exchanger (1021).

2. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 1, wherein it includes to be applied to an integral air conditioning device with an external heat exchanger airflow exhausting fan unit (104) and a fluid exhausting path (106) so as to pump an air conditioning object space exhausted fluid (105) and an external airflow (1051) to flow together through an external heat exchanger (1021), and the main configurations are as follows:

an air conditioning device main unit (101), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having an exhaust amount regulating de-

vice (1061), and a fluid exhausting path (106) formed by a housing for allowing air conditioning object space exhausted fluid (105) to flow to the external heat exchanger (1021);

the external heat exchanger (1021), provided with the coolant fluid pipeline (103) for allowing the coolant passed from the main unit to heat exchange with the external airflow (1051) of the external temperature differentiation space (130) of the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;

an external heat exchanger airflow exhausting fan unit (104), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation which is pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105);

the fluid exhausting path (106), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105);

whereby an integral air conditioning device assembly (1000) is formed by the abovementioned structures.

3. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 1, wherein it includes to be applied to an integral air conditioning device without a heat exchanger airflow exhausting fan unit (104) and a ventilating device (1041) commonly constructed with a fluid exhausting path (106) so as to pump an air conditioning object space exhausted fluid (105) to flow through an external heat exchanger (1021), and the main configurations are as follows:

an air conditioning device main unit (101), essentially consisted of a throttle device, an inter-

nal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (106) formed by a housing, and having an exhaust amount regulating device (1061) and the blowing pump (1041);

the external heat exchanger (1021), provided with the coolant fluid pipeline (103) for allowing the coolant passed from the main unit to heat exchange with the air conditioning object space exhausted fluid (105) through the external heat exchanger (1021);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;

a blowing pump (1041), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), so as to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105);

the fluid exhausting path (106), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105);

whereby an integral air conditioning device assembly (1000) is formed by the abovementioned structures.

4. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 1, wherein it includes to be applied to a fluid exhausting path (1060) and an external heat exchanger airflow exhausting fan unit (104) so as to pump an air conditioning object space exhausted fluid (105) and an external airflow (1051) to flow together through an external heat exchanger (1021) in the air conditioning device assembly (1000), and the main configurations are as follows:

an air conditioning device main unit (101), es-

entially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060) and an exhaust amount regulating device (1061); the external heat exchanger (1021), provided with the coolant fluid pipeline (103) for allowing the coolant passed from the main unit to heat exchange with the external airflow (1051) of the external temperature differentiation space (130) of the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;

an external heat exchanger airflow exhausting fan unit (104), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation which is pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

whereby an air conditioning device assembly (1000) is formed by the abovementioned structures;

the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105);

the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

5. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 1, wherein it includes to be applied to a separately mounted blowing pump (1041) and an exhaust amount regulating device (1061) and having an air conditioning device assembly (1000) without the external heat exchanger airflow exhausting fan unit

(104), and the main configurations are as follows:

an air conditioning device main unit (101), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060), an exhaust amount regulating device (1061), a blowing pump (1041);

the external heat exchanger (1021), provided with the coolant fluid pipeline (103) for allowing the coolant passed from the main unit to heat exchange with the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;

whereby an air conditioning device assembly (1000) is formed by the abovementioned structures;

a blowing pump (1041), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), so as to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021); the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105);

the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

6. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 1, wherein it includes to be applied to an air conditioning device assembly (1000) mounted with an external heat exchanger airflow exhausting fan unit (104) and the fluid exhausting path (1060) and the blowing pump (1041), and the main configurations are as follows:

an air conditioning device main unit (101), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060) and a blowing pump (1041);

the external heat exchanger (1021), provided with the coolant fluid pipeline (103) for allowing the coolant passed from the main unit to heat exchange with the external airflow (1051) of the external temperature differentiation space (130) of the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;

an external heat exchanger airflow exhausting fan unit (104), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation which is pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060) by the blowing pump (1041), enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

whereby an air conditioning device assembly (1000) is formed by the abovementioned structures;

a blowing pump (1041), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), so as to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021), enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount

of the air conditioning object space exhausted fluid (105);  
the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

7. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 1, wherein it includes to be applied to a split type air conditioning device outdoor unit (2002) with an external heat exchanger airflow exhausting fan unit (104) and a split type air conditioning device main unit (2001) mounted with the fluid exhausting path (1060), and the main configurations are as follows:

a split type air conditioning device main unit (2001), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in a split type air conditioning device outdoor unit (2002) in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060) and an exhaust amount regulating device (1061);  
the split type air conditioning device outdoor unit (2002), having a housing and the external heat exchanger (1021), wherein the external heat exchanger (1021) being provided with the coolant fluid pipeline (103) for allowing the coolant passed from the split type air conditioning device main unit (2001) to heat exchange with the external airflow (1051) of the external temperature differentiation space (130) of the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105), and having an external heat exchanger airflow exhausting fan unit (104), wherein the external heat exchanger airflow exhausting fan unit (104) comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), and enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);  
the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air condi-

tioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;  
the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105);  
the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

8. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 1, wherein it includes to be applied to the split type air conditioning device main unit (2001) commonly constructed with the blowing pump (1041) and having a split type air conditioning device outdoor unit (2002) without the external heat exchanger airflow exhausting fan unit (104), and the main configurations are as follows:

a split type air conditioning device main unit (2001), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in a split type air conditioning device outdoor unit (2002) in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060), an exhaust amount regulating device (1061) and a blowing pump (1041);  
the split type air conditioning device outdoor unit (2002), having a housing and the external heat exchanger (1021), wherein the external heat exchanger (1021) being provided with the coolant fluid pipeline (103) for allowing the coolant passed from the split type air conditioning device main unit (2001) to heat exchange with the air conditioning object space exhausted fluid (105) by means of the external heat exchanger (1021);  
the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the air conditioning device main unit (101) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;  
a blowing pump (1041), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation which is pumped from the air conditioning object space (120) through the exhaust amount regulating device

(1061) and the fluid exhausting path (1060), so as to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the exhaust amount regulating device (1061),  
formed by a fluid gate, a shutoff gate or valve  
for operating and adjusting the exhaust amount  
of the air conditioning object space exhausted  
fluid (105);  
the fluid exhausting path (1060), which is a fluid  
passage structure for permitting the exhaust of  
the air conditioning object space exhausted fluid  
(105).

9. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 1, wherein it includes to be applied to the separately mounted fluid exhausting path (1060), the split type air conditioning device main unit (2001) and the split type air conditioning device outdoor unit (2002) with the external heat exchanger airflow exhausting fan unit (104), and the main configurations are as follows:

a split type air conditioning device main unit (2001), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in a split type air conditioning device outdoor unit (2002) in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060) and an exhaust amount regulating device (1061);  
the split type air conditioning device outdoor unit (2002), having a housing and the external heat exchanger (1021), wherein the external heat exchanger (1021) being provided with the coolant fluid pipeline (103) for allowing the coolant passed from the split type air conditioning device main unit (2001) to heat exchange with the external airflow (1051) of the external temperature differentiation space (130) of the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105), and having an external heat exchanger airflow exhausting fan unit (104), wherein the external heat exchanger airflow exhausting fan unit (104) comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the

air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the split type air conditioning device main unit (2001) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;

the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105);

the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

10. an air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 1, wherein it includes to be applied to the separately mounted blowing pump (1041), the split type air conditioning device main unit (2001) and the split type air conditioning device outdoor unit (2002) without the external heat exchanger airflow exhausting fan unit (104), and the main configurations are as follows:

a split type air conditioning device main unit (2001), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060), an exhaust amount regulating device (1061) and a blowing pump (1041);

the split type air conditioning device outdoor unit (2002), having a housing and the external heat exchanger (1021), wherein the external heat exchanger (1021) being provided with the coolant fluid pipeline (103) for allowing the coolant passed from the split type air conditioning device main unit (2001) to heat exchange with the air conditioning object space exhausted fluid (105) by means of the external heat exchanger (1021); the coolant fluid pipeline (103), which is a circulation pipeline device for coupling split type air conditioning device main unit (2001) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;

a blowing pump (1041), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation which is pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), so as to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105);

the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

11. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 1, wherein it includes to be applied to the split type air conditioning device main unit (2001), the split type air conditioning device outdoor unit (2002) with the external heat exchanger airflow exhausting fan unit (104) and the separately mounted blowing pump (1041), and the main configurations are as follows:

a split type air conditioning device main unit (2001), essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower and a housing, and coupled to a pipeline of the external heat exchanger (1021) mounted in an external temperature differentiation space (130) to form a circulating path by means of a coolant fluid pipeline (103); and having a fluid exhausting path (1060), the exhaust amount regulating device (1061) and the blowing pump (1041);

the split type air conditioning device outdoor unit (2002), having a housing and the external heat exchanger (1021), wherein the external heat exchanger (1021) being provided with the coolant fluid pipeline (103) for allowing the coolant passed from the split type air conditioning device main unit (2001) to heat exchange with the external airflow (1051) of the external temperature differentiation space (130) of the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105), and having an external heat exchanger airflow exhausting fan unit (104), wherein the external heat exchanger airflow exhausting fan unit (104) comprising an air blowing or exhausting fan unit or an air pump

driven by an electric motor, for pumping the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060), enabling two airflows to exhaust to the external temperature differentiation space (130) through the external heat exchanger (1021);

the coolant fluid pipeline (103), which is a circulation pipeline device for coupling the split type air conditioning device main unit (2001) and the external heat exchanger (1021), in which a gas or liquid coolant is circulated;

the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105);

the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

12. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 1, wherein it includes to be applied to a water-cooled air conditioning device main unit (2005), a powered fan provided cooling tower (2003) and the separately mounted blowing pump (1041), and the main configurations are as follows:

a water-cooled air conditioning device main unit (2005), which is an air conditioning device main unit essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower water-cooled cooling device and a housing, and a water pipe (107) of the water-cooled condensing device disposed in the water-cooled air conditioning device main unit (2005) being coupled to a water in and out pipe (109) of a water inlet and water exhaust pipeline of the powered fan provided cooling tower (2003) disposed in the external temperature differentiation space (130) so as to form a path of water circulation; and having the fluid exhausting path (1060), the exhaust amount regulating device (1061) and the blowing pump (1041), and by means of the blowing pump (1041) to pump the air conditioning object space exhausted fluid (105) through the fluid exhausting path (1060) and the exhaust amount regulating device (1061) to an air inlet of the powered fan provided cooling tower (2003);

the powered fan provided cooling tower (2003), comprising a cooling tower equipped with the cooling tower fan unit (108), for example, a counterflow mechanical draft cooling tower, an induced counterflow mechanical draft cooling tower, a counterflow cooling tower, a crossflow mechanical draft cooling tower, or an evaporative cooling tower, and the powered fan provided cooling tower (2003) having an air inlet, so that the air conditioning object space exhausted fluid (105) pumped from the air conditioning object space (120) through the blowing pump (1041) is directed through the fluid exhausting path (1060) into the air inlet of the powered fan provided cooling tower (2003), and passing through the powered fan provided cooling tower (2003) so as to cool the waterflow and then is exhausted to the surrounding through the cooling tower fan unit (108), and having a water in and out pipe (109) for connecting the water pipe (107) so as to allow the cooling water to circulate between the powered fan provided cooling tower (2003) and the water-cooled air conditioning device main unit (2005);

the water pipe (107), disposed between a water-cooled condensing device of the water-cooled air conditioning device main unit (2005) and the water in and out pipe (109) of the powered fan provided cooling tower (2003);

the cooling tower fan unit (108), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, and having one or more following operation functions, including: 1) pumping the external airflow (1051) of the external temperature differentiation space (130) to the external temperature differentiation space (130) through the inside of the powered fan provided cooling tower (2003); 2) pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061), the blowing pump (1041) and the fluid exhausting path (1060) to the external temperature differentiation space (130) through the powered fan provided cooling tower (2003); 3) enabling the external airflow (1051) and the air conditioning object space exhausted fluid (105) to exhaust commonly to the external temperature differentiation space (130) through the powered fan provided cooling tower (2003);

a water pump (111), for pumping a cooling water between the water-cooled air conditioning device main unit (2005) and the powered fan provided cooling tower (2003) through the water pipe (107) and the water in and out pipe (109) for cooling circulation;

the exhaust amount regulating device (1061),

formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105);

the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

- 13.** An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 1, wherein it includes to be applied to a water-cooled air conditioning device main unit (2005) and a powered fan provided cooling tower (2003), and the main configurations are as follows:

a water-cooled air conditioning device main unit (2005), which is an air conditioning device main unit essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air conditioning airflow blower water-cooled cooling device and a housing, and a water pipe (107) of the water-cooled condensing device disposed in the water-cooled air conditioning device main unit (2005) being coupled to a water in and out pipe (109) of a water inlet and water exhaust pipeline of the powered fan provided cooling tower (2003) disposed in the external temperature differentiation space (130) so as to form a path of water circulation; and having a fluid exhausting path (1060) and an exhaust amount regulating device (1061) for delivering the air conditioning object space exhausted fluid (105) to an air inlet of the powered fan provided cooling tower (2003);

the powered fan provided cooling tower (2003), comprising a cooling tower equipped with the cooling tower fan unit (108), for example, a counterflow mechanical draft cooling tower, an induced counterflow mechanical draft cooling tower, a counterflow cooling tower, a crossflow mechanical draft cooling tower, or an evaporative cooling tower, and the powered fan provided cooling tower (2003) having an air inlet, so that the air conditioning object space exhausted fluid (105) pumped from the air conditioning object space (120) is directed through the fluid exhausting path (1060) into the air inlet of the powered fan provided cooling tower (2003), and is passing through the powered fan provided cooling tower (2003) so as to cool the waterflow, and then is exhausted to the surrounding through the cooling tower fan unit (108), and having a water in and out pipe (109) for connecting the water pipe (107) so as to allow the cooling water to circulate between the powered fan provided

cooling tower (2003) and the water-cooled air conditioning device main unit (2005); the water pipe (107), disposed between a water-cooled condensing device of the water-cooled air conditioning device main unit (2005) and the water in and out pipe (109) of the powered fan provided cooling tower (2003); the cooling tower fan unit (108), comprising an air blowing or exhausting fan unit or an air pump driven by an electric motor, and having one or more following operation functions, including: 1) pumping the external airflow (1051) of the external temperature differentiation space (130) to the external temperature differentiation space (130) through the inside of the powered fan provided cooling tower (2003); 2) pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060) to the external temperature differentiation space (130) through the powered fan provided cooling tower (2003); 3) enabling the external airflow (1051) and the air conditioning object space exhausted fluid (105) to exhaust commonly to the external temperature differentiation space (130) through the powered fan provided cooling tower (2003); a water pump (111), for pumping a cooling water between the water-cooled air conditioning device main unit (2005) and the powered fan provided cooling tower (2003) through the water pipe (107) and the water in and out pipe (109) for cooling circulation; the exhaust amount regulating device (1061), formed by a fluid gate, a shutoff gate or valve for operating and adjusting the exhaust amount of the air conditioning object space exhausted fluid (105); the fluid exhausting path (1060), which is a fluid passage structure for permitting the exhaust of the air conditioning object space exhausted fluid (105).

14. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 1, wherein it includes to be applied to a water-cooled air conditioning device main unit (2005), a natural draft cooling tower (2003) and the separately mounted blowing pump (1041), and the main configurations are as follows:

a water-cooled air conditioning device main unit (2005), which is an air conditioning device main unit essentially consisted of a throttle device, an internal heat exchanger (203), a compression device, pipelines, a control device (201), an air

conditioning airflow blower water-cooled cooling device and a housing, and a water pipe (107) of the water-cooled condensing device disposed in the water-cooled air conditioning device main unit (2005) being coupled to a water in and out pipe (109) of a water inlet and water exhaust pipeline of a natural draft cooling tower (2004) disposed in the external temperature differentiation space (130) so as to form a path of water circulation; and having the fluid exhausting path (1060), the exhaust amount regulating device (1061) and the blowing pump (1041), and by means of the blowing pump (1041) to pump the air conditioning object space exhausted fluid (105) to an air inlet of the natural draft cooling tower (2004) through the fluid exhausting path (1060) and the exhaust amount regulating device (1061);

a natural draft cooling tower (2004), comprising a natural draft cooling tower, for example, a crossflow natural draft cooling tower, and the natural draft cooling tower (2004) having an air inlet, and having one or more following operating functions, including: 1) directing the external airflow (1051) from the external temperature differentiation space (130) into the air inlet of the natural draft cooling tower (2004), and passing through the natural draft cooling tower (2004) so as to cool the waterflow, and then exhausting the same to the surrounding through the cooling tower; 2) directing the air conditioning object space exhausted fluid (105) pumped from the air conditioning object space (120) by means of the blowing pump (1041) through the fluid exhausting path (1060) into the air inlet of the natural draft cooling tower (2004), and passing through the natural draft cooling tower (2004) so as to cool the waterflow, and then exhausting the same to the surrounding through the cooling tower; 3) directing the air conditioning object space exhausted fluid (105) and the external airflow (1051) into the air inlet of the natural draft cooling tower (2004), and passing through the natural draft cooling tower (2004) so as to cool the waterflow, and then exhausting the same to the surrounding through the cooling tower; and having a water in and out pipe (109) for coupling the water pipe (107) so as to allow the cooling water to circulate between the natural draft cooling tower (2004) and the water-cooled air conditioning device main unit (2005); the water pipe (107), disposed between a water-cooled condensing device of the water-cooled air conditioning device main unit (2005) and the water in and out pipe (109) of the natural draft cooling tower (2004); a water pump (111), for pumping a cooling water between the water-cooled air conditioning de-



vice main unit (2005) and the powered fan provided cooling tower (2003) through the water pipe (107) and the water in and out pipe (109) for cooling circulation;

the exhaust amount regulating device (1061),  
formed by a fluid gate, a shutoff gate or valve  
for operating and adjusting the exhaust amount  
of the air conditioning object space exhausted  
fluid (105);

the fluid exhausting path (1060), which is a fluid  
passage structure for permitting the exhaust of  
the air conditioning object space exhausted fluid  
(105).

15. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 1, wherein it further applied to a split type air conditioning device, which mainly includes a split type air conditioning device outdoor unit (2002) therein having a split type air conditioning device outdoor main station (2007) and an external heat exchanger (1021) and an airflow exhausting fan unit (104), and a split type air conditioning device indoor unit (2006) therein having an internal heat exchanger (203), a flow regulating device (202), a conditioned airflow blowing fan (204) and a control device (201), and a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) being installed therebetween, and a fluid exhausting path (1060) being installed from the air conditioning object space (120) to the external heat exchanger (1021) for facilitating the applications in various separated space.

16. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 15, wherein the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104) and a split type air conditioning device outdoor main station (2007), and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204) and an exhaust amount regulating device (1061), and forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021); and wherein split type air conditioning device outdoor unit (2002), installed with the split type air conditioning device outdoor main station (2007), the external heat exchanger (1021), the coolant fluid pipeline (103) and

the airflow exhausting fan unit (104), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);

the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device; the split type air conditioning device indoor unit (2006) is further installed with the exhaust amount regulating device (1061) and the fluid exhausting path (1060);

the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the external airflow (1051) of the external temperature differentiation space (130) in the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);

the external heat exchanger airflow exhausting fan unit (104) installed on the split type air conditioning device outdoor unit (2002) is constituted by an airflow blowing or airflow exhausting fan unit or an air pump driven by an electric motor, wherein an airflow introducing interval is defined between the fluid exhausting path (1060) and the external heat exchanger (1021) for pumping in the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation and pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), thereby enabling two airflows to exchange heat then being exhausted to the external temperature differentiation space (130) through the external heat exchanger (1021);

coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;

exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air condi-

tioning object space exhausted fluid (105);  
 fluid exhausting path (1060), constituted by a fluid  
 passage structure for exhausting the exhaust  
 amount of the air conditioning object space exhaust-  
 ed fluid (105) from the air conditioning object space  
 (120);  
 the coolant fluid pipeline (103) and fluid exhausting  
 path (1060) can be individually  
 installed or jointly constituted as a pipeline structure.

17. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 15, wherein the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and a split type air conditioning device outdoor main station (2007), and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204), a blowing pump (1041) and an exhaust amount regulating device (1061), and forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and installing a fluid exhausting path (1060) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021); and wherein  
 split type air conditioning device outdoor unit (2002), installed with the split type air conditioning device outdoor main station (2007), the external heat exchanger (1021) and the coolant fluid pipeline (103), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);  
 the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device; the split type air conditioning device indoor unit (2006) is further installed with the exhaust amount regulating device (1061), the blowing pump (1041) and the fluid exhausting path (1060);  
 the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the air conditioning object space exhausted fluid

(105);  
 coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;  
 exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);  
 fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);  
 the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

18. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 15, wherein the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104) and a split type air conditioning device outdoor main station (2007), installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and separately mounting an exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021); wherein  
 split type air conditioning device outdoor unit (2002), installed with the split type air conditioning device outdoor main station (2007), the external heat exchanger (1021), the coolant fluid pipeline (103) and the airflow exhausting fan unit (104), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space

(120);

the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device;

the thermal insulation device (110) is separately mounted with the exhaust amount regulating device (1061) and the fluid exhausting path (1060);

the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the external airflow (1051) of the external temperature differentiation space (130) in the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);

the external heat exchanger airflow exhausting fan unit (104) installed on the split type air conditioning device outdoor unit (2002) is constituted by an airflow blowing or airflow exhausting fan unit or an air pump driven by an electric motor, wherein an airflow introducing interval is defined between the fluid exhausting path (1060) and the external heat exchanger (1021) for pumping in the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation and pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), thereby enabling two airflows to exchange heat then being exhausted to the external temperature differentiation space (130) through the external heat exchanger (1021);

coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;

exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);

fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);

the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

19. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 15, wherein the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and a split type air conditioning device outdoor main station (2007), and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204), and forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and separately mounting a blowing pump (1041) and a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021); wherein

split type air conditioning device outdoor unit (2002), installed with the split type air conditioning device outdoor main station (2007), the external heat exchanger (1021) and the coolant fluid pipeline (103), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);

the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device;

the thermal insulation device (110) is separately mounted with the exhaust amount regulating device (1061), the blowing pump (1041) and the fluid exhausting path (1060);

the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the air conditioning object space exhausted fluid (105);

coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the in-

ternal of pipeline allows the gas-state or liquid-state coolant to flow through;

blowing pump (1041), constituted by an air blowing or air exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a relative temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060) and exchanging heat while flowing through the external heat exchanger (1021) then being exhausted to the external temperature differentiation space (130);

exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);

fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);

the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be

individually installed or jointly constituted as a pipeline structure.

20. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 15, wherein the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104) and a split type air conditioning device outdoor main station (2007), installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), an flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above two, and separately mounting a blowing pump (1041) and a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021); wherein
- split type air conditioning device outdoor unit (2002), installed with the split type air conditioning device outdoor main station (2007), the external heat exchanger (1021), the coolant fluid pipeline (103) and the airflow exhausting fan unit (104), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through

the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);

the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device;

the thermal insulation device (110) is separately mounted with the exhaust amount regulating device (1061), the blowing pump (1041) and the fluid exhausting path (1060);

the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the external airflow (1051) of the external temperature differentiation space (130) in the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);

the external heat exchanger airflow exhausting fan unit (104) installed on the split type air conditioning device outdoor unit (2002) is constituted by an airflow blowing or airflow exhausting fan unit or an air pump driven by an electric motor, wherein an airflow introducing interval is defined between the fluid exhausting path (1060) and the external heat exchanger (1021) for pumping in the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation and pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), thereby enabling two airflows to exchange heat then being exhausted to the external temperature differentiation space (130) through the external heat exchanger (1021);

coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;

exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);

fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust

amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);

the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

21. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 15, wherein the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104), installing a split type air conditioning device outdoor main station (2007) which is individually installed, and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204) and an exhaust amount regulating device (1061), and forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021); wherein split type air conditioning device outdoor unit (2002), installed with the external heat exchanger (1021), the coolant fluid pipeline (103), the airflow exhausting fan unit (104) and the individually installed split type air conditioning device outdoor main station (2007), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120); the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device; the split type air conditioning device indoor unit (2006) is further installed with the exhaust amount regulating device (1061) and the fluid exhausting path (1060); the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the external airflow (1051) of the external temperature differentiation space (130) in the external

heat exchanger (1021) and the air conditioning object space exhausted fluid (105);

the external heat exchanger airflow exhausting fan unit (104) installed on the split type air conditioning device outdoor unit (2002) is constituted by an airflow blowing or airflow exhausting fan unit or an air pump driven by an electric motor, wherein an airflow introducing interval is defined between the fluid exhausting path (1060) and the external heat exchanger (1021) for pumping in the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation and pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), thereby enabling two airflows to exchange heat then being exhausted to the external temperature differentiation space (130) through the external heat exchanger (1021);

coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) which is individually installed and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;

exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);

fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);

the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

22. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 15, wherein the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021), installing a split type air conditioning device outdoor main station (2007) which is individually installed, and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201), a conditioned airflow blowing fan (204), a blowing pump (1041) and an exhaust amount regulating device (1061), and forming a coolant com-

pressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and installing a fluid exhausting path (1060) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021); wherein

split type air conditioning device outdoor unit (2002), installed with the external heat exchanger (1021), the coolant fluid pipeline (103) and the individually installed split type air conditioning device outdoor main station (2007), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);

the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device; the split type air conditioning device indoor unit (2006) is further installed with the exhaust amount regulating device (1061), the blowing pump (1041) and the fluid exhausting path (1060); the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the air conditioning object space exhausted fluid (105);

coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) which is individually installed and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;

blowing pump (1041), constituted by an air blowing or air exhausting fan unit or an air pump driven by an electric motor, for pumping the air conditioning object space exhausted fluid (105) with a relative temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060) and flowing through the external heat exchanger (1021) then being exhausted to the external temperature differentiation space (130);

exhaust amount regulating device (1061), constitut-

ed by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);

fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);

the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

**23.** An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 15, wherein the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104) installing a split type air conditioning device outdoor main station (2007) which is individually installed, and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), and forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and separately mounting a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061) and the external heat exchanger (1021); wherein

split type air conditioning device outdoor unit (2002), installed with the external heat exchanger (1021), the coolant fluid pipeline (103), the airflow exhausting fan unit (104) and the individually installed split type air conditioning device outdoor main station (2007), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);

the split type air conditioning device indoor unit (2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device;

the thermal insulation device (110) is separately mounted with the exhaust amount regulating device

(1061) and the fluid exhausting path (1060);  
the external heat exchanger (1021) of the split type  
air conditioning device outdoor unit (2002) is in-  
stalled with the coolant fluid pipeline (103) allowing  
the coolant to flow through so as to exchange heat  
with the external airflow (1051) of the external tem-  
perature differentiation space (130) in the external  
heat exchanger (1021) and the air conditioning ob-  
ject space exhausted fluid (105);

the external heat exchanger airflow exhausting fan  
unit (104) installed on the split type air conditioning  
device outdoor unit (2002) is constituted by an airflow  
blowing or airflow exhausting fan unit or an air pump  
driven by an electric motor, wherein an airflow intro-  
ducing interval is defined between the fluid exhaust-  
ing path (1060) and the external heat exchanger  
(1021) for pumping in the external airflow (1051) of  
the external temperature differentiation space (130)  
and for pumping the air conditioning object space  
exhausted fluid (105) with a temperature differenti-  
ation and pumped from the air conditioning object  
space (120) through the exhaust amount regulating  
device (1061) and the fluid exhausting path (106),  
thereby enabling two airflows to exchange heat then  
being exhausted to the external temperature differ-  
entiation space (130) through the external heat ex-  
changer (1021);

coolant fluid pipeline (103), constituted by a pipeline  
device for connecting the split type air conditioning  
device outdoor main station (2007) which is individ-  
ually installed and the external heat exchanger  
(1021) and the flow regulating device (202) and the  
internal heat exchanger (203) of the split type air  
conditioning device indoor unit (2006) for the pur-  
pose of circulation, wherein the internal of pipeline  
allows the gas-state or liquid-state coolant to flow  
through;

exhaust amount regulating device (1061), constitut-  
ed by a fluid gate, a shutoff gate or valve for operating  
and regulating the exhaust amount of the air condi-  
tioning object space exhausted fluid (105);

fluid exhausting path (1060), constituted by a fluid  
passage structure for exhausting the exhaust  
amount of the air conditioning object space exhaust-  
ed fluid (105) from the air conditioning object space  
(120);

the coolant fluid pipeline (103) and the fluid exhaust-  
ing path (1060) can be individually installed or jointly  
constituted as a pipeline structure.

- 24.** An air conditioning device utilizing temperature dif-  
ferentiation of exhausted gas to even temperature  
of external heat exchanger as claimed in claim 15,  
wherein the main configuration is installing a split  
type air conditioning device outdoor unit (2002) com-  
posed of an external heat exchanger (1021), install-  
ing a split type air conditioning device outdoor main  
station (2007) which is individually installed, and in-

stalling a split type air conditioning device indoor unit  
(2006) composed of an internal heat exchanger  
(203), a flow regulating device (202), a control device  
(201) and a conditioned airflow blowing fan (204),  
and forming a coolant compressing and circulating  
loop constructed by a coolant fluid pipeline (103) in-  
stalled between the above three, and separately  
mounting a blowing pump (1041) and a exhaust  
amount regulating device (1061) in the thermal in-  
sulation device (110), and installing a fluid exhaust-  
ing path (1060) in the air conditioning object space  
(120) between the exhaust amount regulating device  
(1061), the a blowing pump (1041) and the external  
heat exchanger (1021); wherein

split type air conditioning device outdoor unit (2002),  
installed with the external heat exchanger (1021),  
the coolant fluid pipeline (103) and the individually  
installed split type air conditioning device outdoor  
main station (2007), wherein the split type air condi-  
tioning device outdoor main station (2007) mainly  
includes a compress device and forms a compress-  
ing and circulating loop leaded through the coolant  
fluid pipeline (103) towards the external heat ex-  
changer (1021) and towards the internal heat ex-  
changer (203) and the flow regulating device (202)  
in the split type air conditioning device indoor unit  
(2006) installed in the air conditioning object space  
(120);

the split type air conditioning device indoor unit  
(2006) is installed with the internal heat exchanger  
(203), the flow regulating device (202), the condi-  
tioned airflow blowing fan (204) and provided with a  
control device (201) for controlling operations of in-  
putting electric energy and driving the air condition-  
ing device;

the thermal insulation device (110) is separately  
mounted with the exhaust amount regulating device  
(1061), the blowing pump (1041) and the fluid ex-  
hausting path (1060);

the external heat exchanger (1021) of the split type  
air conditioning device outdoor unit (2002) is in-  
stalled with the coolant fluid pipeline (103) allowing  
the coolant to flow through so as to exchange heat  
with the air conditioning object space exhausted fluid  
(105);

coolant fluid pipeline (103), constituted by a pipeline  
device for connecting the split type air conditioning  
device outdoor main station (2007) and the external  
heat exchanger (1021) and the flow regulating de-  
vice (202) and the internal heat exchanger (203) of  
the split type air conditioning device indoor unit  
(2006) for the purpose of circulation, wherein the in-  
ternal of pipeline allows the gas-state or liquid-state  
coolant to flow through;

blowing pump (1041), constituted by an air blowing  
or air exhausting fan unit or an air pump driven by  
an electric motor, for pumping the air conditioning  
object space exhausted fluid (105) with a relative

temperature differentiation from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (1060) and flowing through the external heat exchanger (1021) then being exhausted to the external temperature differentiation space (130);  
 exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);  
 fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);  
 the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.

25. An air conditioning device utilizing temperature differentiation of exhausted gas to even temperature of external heat exchanger as claimed in claim 15, wherein the main configuration is installing a split type air conditioning device outdoor unit (2002) composed of an external heat exchanger (1021) and an airflow exhausting fan unit (104), installing a split type air conditioning device outdoor main station (2007) which is individually installed, and installing a split type air conditioning device indoor unit (2006) composed of an internal heat exchanger (203), a flow regulating device (202), a control device (201) and a conditioned airflow blowing fan (204), and forming a coolant compressing and circulating loop constructed by a coolant fluid pipeline (103) installed between the above three, and separately mounting a blowing pump (1041) and a exhaust amount regulating device (1061) in the thermal insulation device (110), and installing a fluid exhausting path (1060) and introducing external airflow (1051) in the air conditioning object space (120) between the exhaust amount regulating device (1061), the blowing pump (1041) and the external heat exchanger (1021); wherein  
 split type air conditioning device outdoor unit (2002), installed with the external heat exchanger (1021), the coolant fluid pipeline (103), the airflow exhausting fan unit (104) and the individually installed split type air conditioning device outdoor main station (2007), wherein the split type air conditioning device outdoor main station (2007) mainly includes a compress device and forms a compressing and circulating loop leaded through the coolant fluid pipeline (103) towards the external heat exchanger (1021) and towards the internal heat exchanger (203) and the flow regulating device (202) in the split type air conditioning device indoor unit (2006) installed in the air conditioning object space (120);  
 the split type air conditioning device indoor unit

(2006) is installed with the internal heat exchanger (203), the flow regulating device (202), the conditioned airflow blowing fan (204) and provided with a control device (201) for controlling operations of inputting electric energy and driving the air conditioning device;  
 the thermal insulation device (110) is separately mounted with the exhaust amount regulating device (1061), the blowing pump (1041) and the fluid exhausting path (1060);  
 the external heat exchanger (1021) of the split type air conditioning device outdoor unit (2002) is installed with the coolant fluid pipeline (103) allowing the coolant to flow through so as to exchange heat with the external airflow (1051) of the external temperature differentiation space (130) in the external heat exchanger (1021) and the air conditioning object space exhausted fluid (105);  
 the external heat exchanger airflow exhausting fan unit (104) installed on the split type air conditioning device outdoor unit (2002) is constituted by an airflow blowing or airflow exhausting fan unit or an air pump driven by an electric motor, wherein an airflow introducing interval is defined between the fluid exhausting path (1060) and the external heat exchanger (1021) for pumping in the external airflow (1051) of the external temperature differentiation space (130) and for pumping the air conditioning object space exhausted fluid (105) with a temperature differentiation and pumped from the air conditioning object space (120) through the exhaust amount regulating device (1061) and the fluid exhausting path (106), thereby enabling two airflows to exchange heat then being exhausted to the external temperature differentiation space (130) through the external heat exchanger (1021);  
 coolant fluid pipeline (103), constituted by a pipeline device for connecting the split type air conditioning device outdoor main station (2007) which is individually installed and the external heat exchanger (1021) and the flow regulating device (202) and the internal heat exchanger (203) of the split type air conditioning device indoor unit (2006) for the purpose of circulation, wherein the internal of pipeline allows the gas-state or liquid-state coolant to flow through;  
 exhaust amount regulating device (1061), constituted by a fluid gate, a shutoff gate or valve for operating and regulating the exhaust amount of the air conditioning object space exhausted fluid (105);  
 fluid exhausting path (1060), constituted by a fluid passage structure for exhausting the exhaust amount of the air conditioning object space exhausted fluid (105) from the air conditioning object space (120);  
 the coolant fluid pipeline (103) and the fluid exhausting path (1060) can be individually installed or jointly constituted as a pipeline structure.



FIG. 1

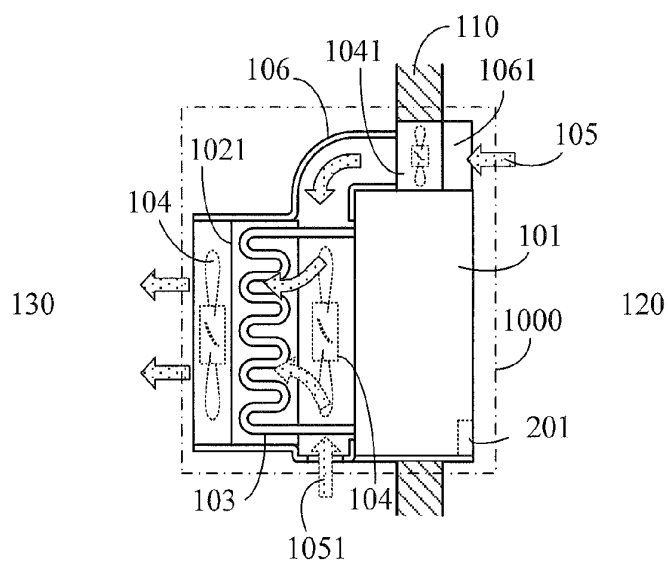


FIG. 2

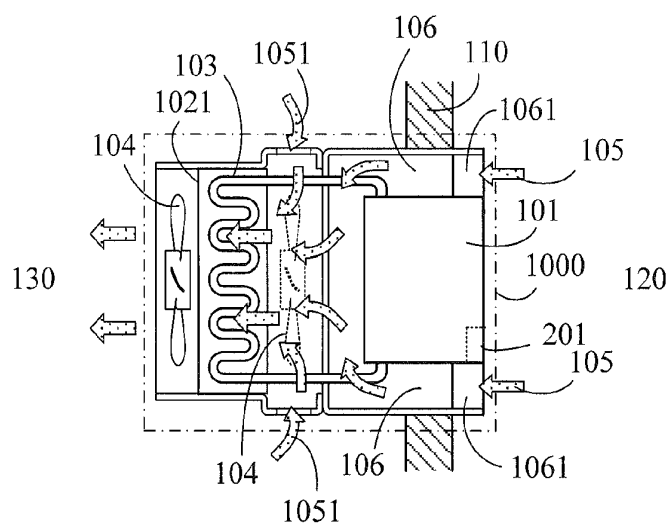
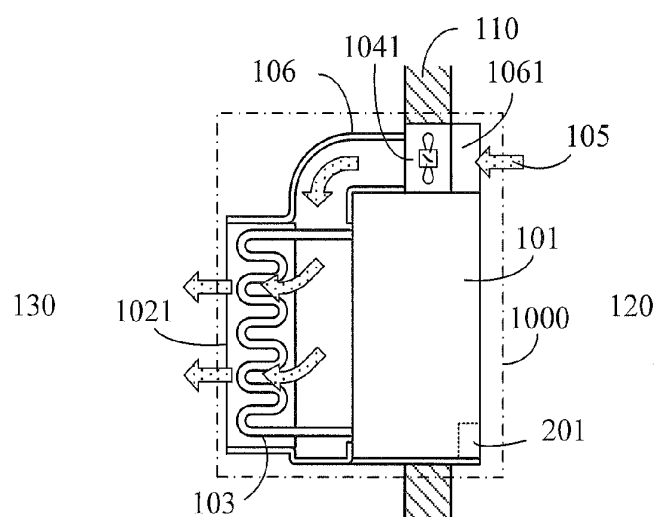
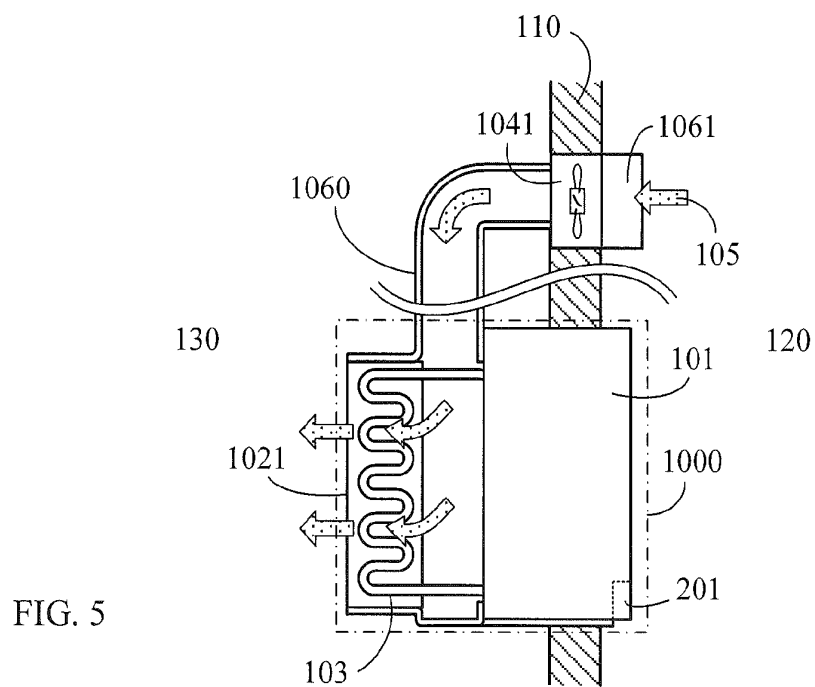
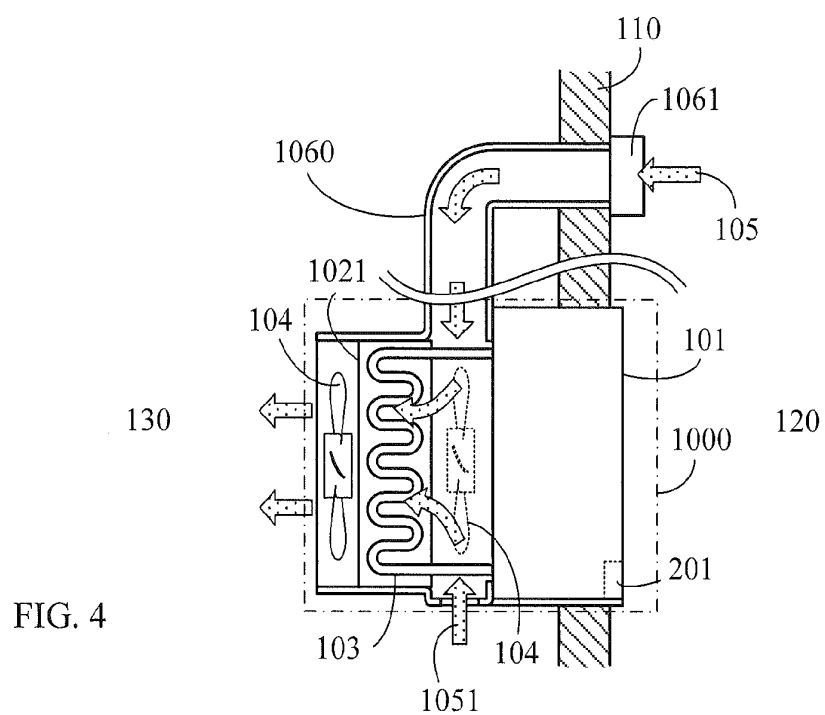
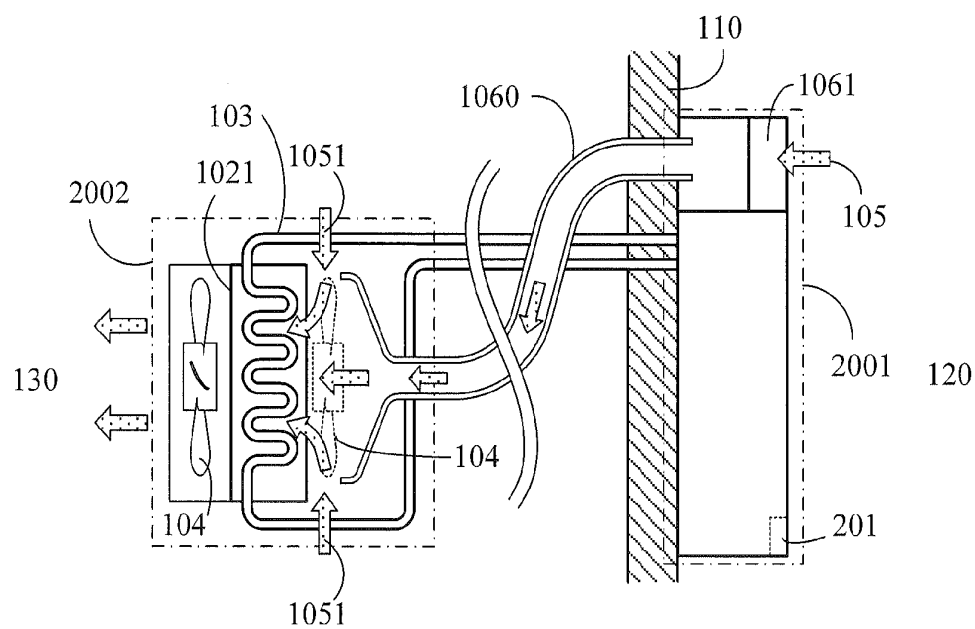
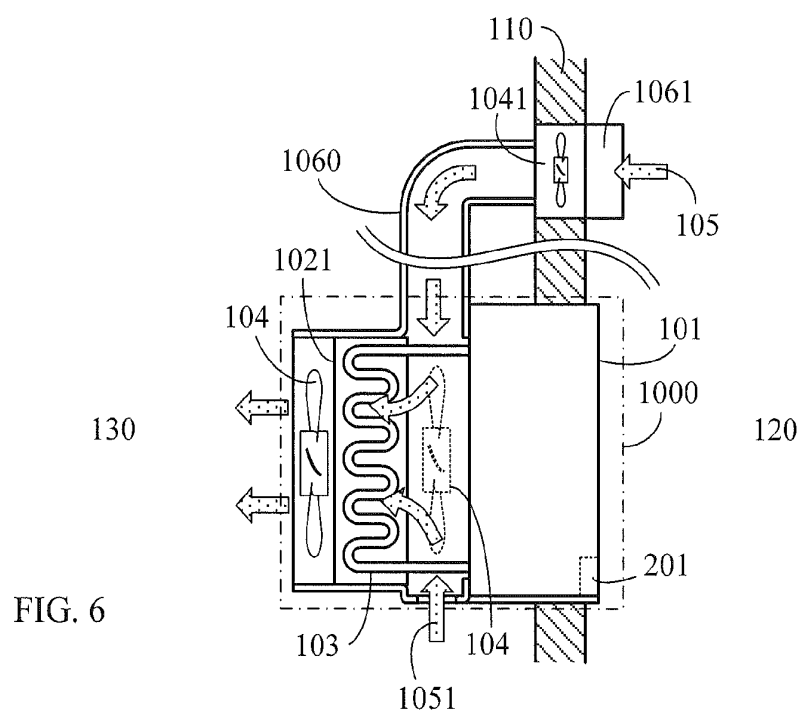


FIG. 3







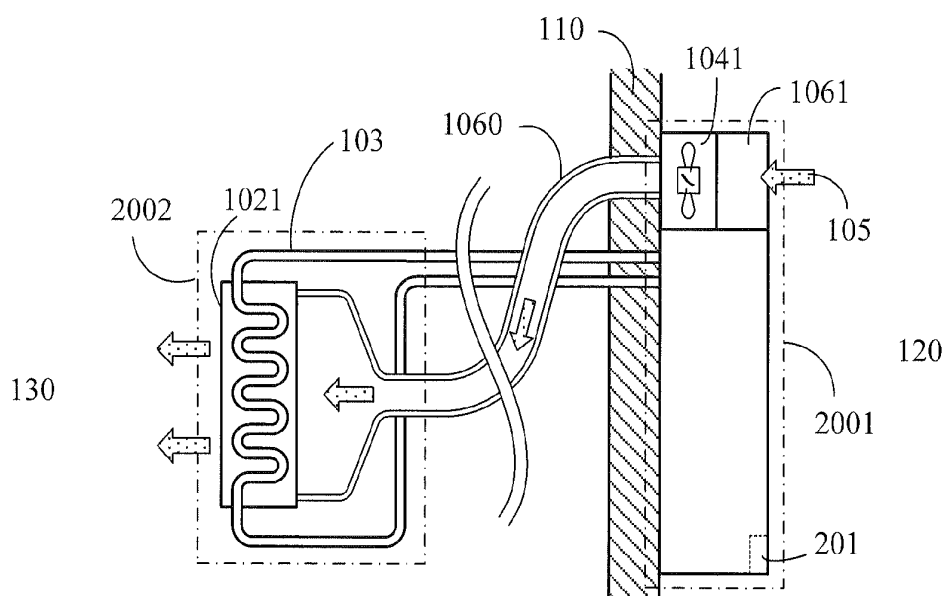


FIG. 8

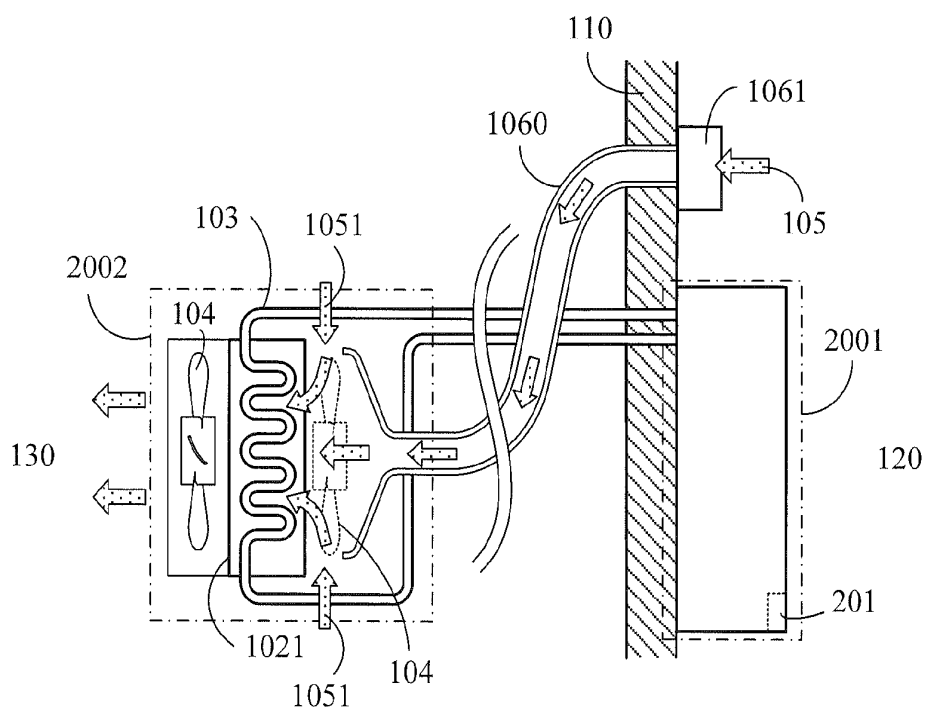


FIG. 9

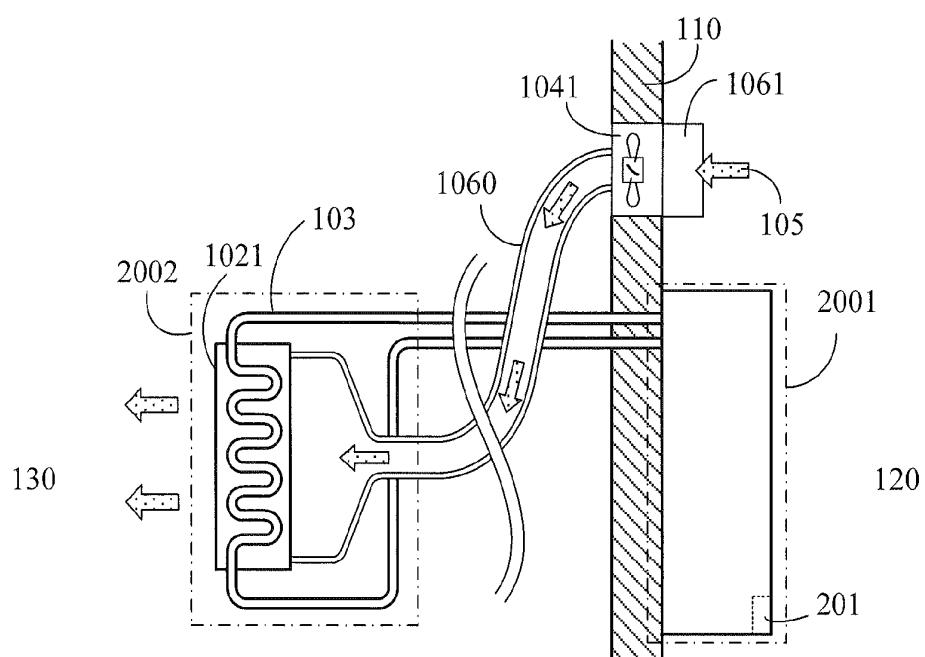


FIG. 10

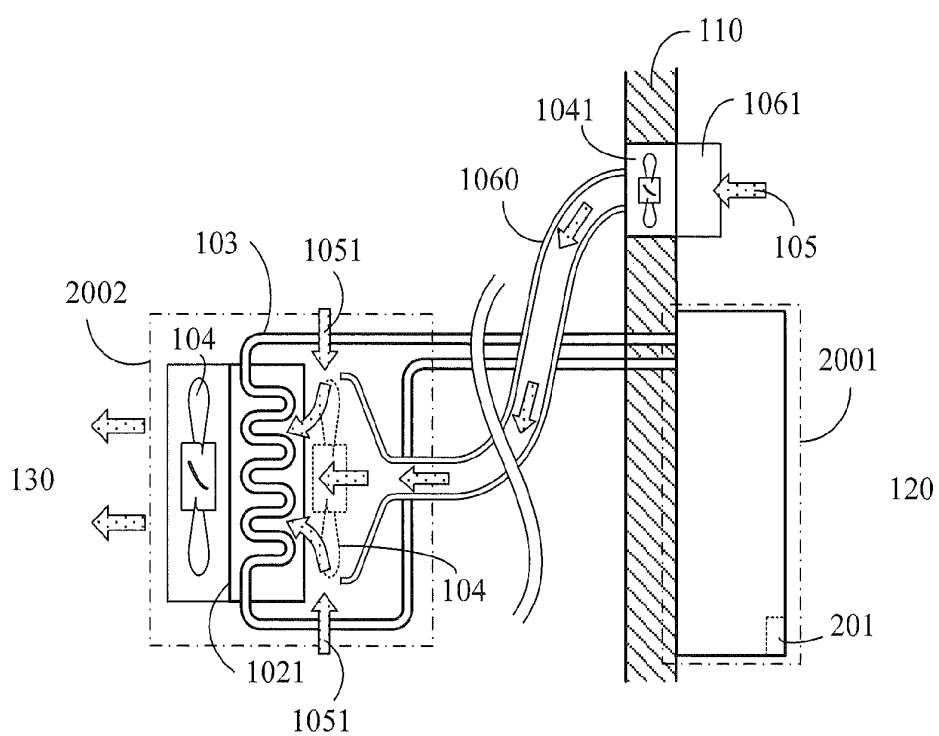


FIG. 11

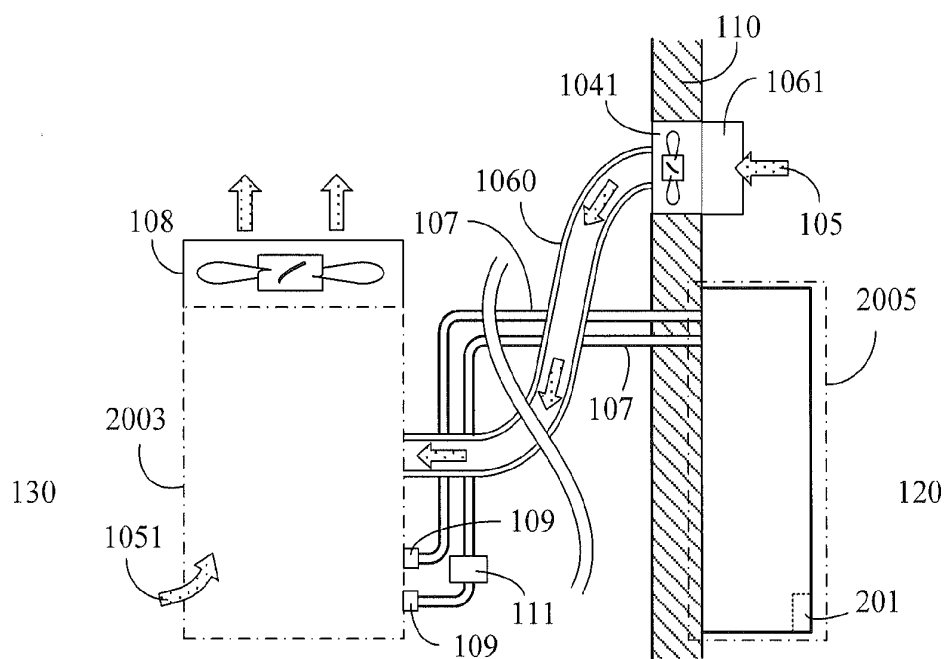


FIG. 12

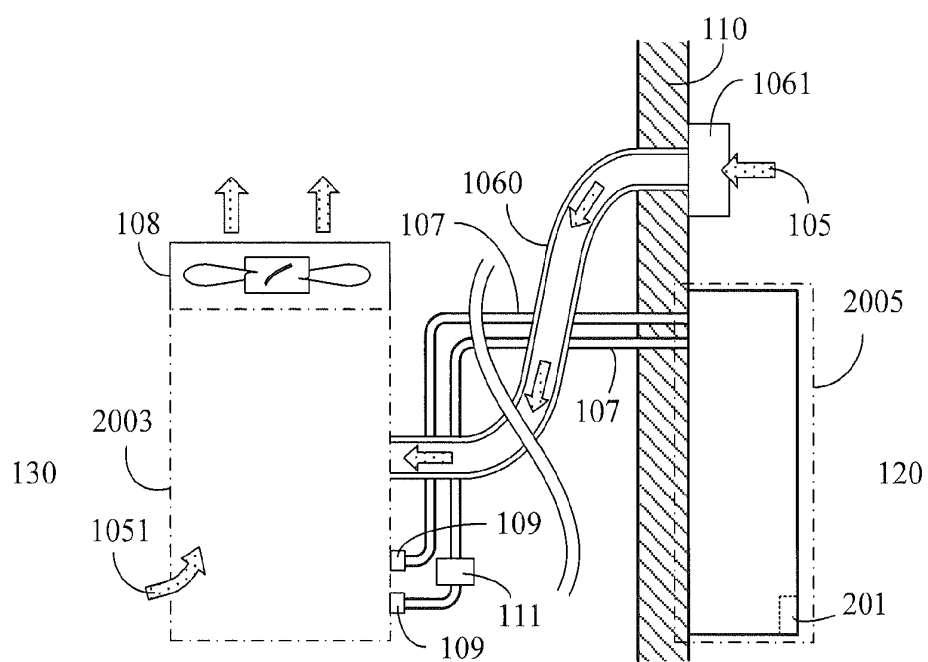


FIG. 13

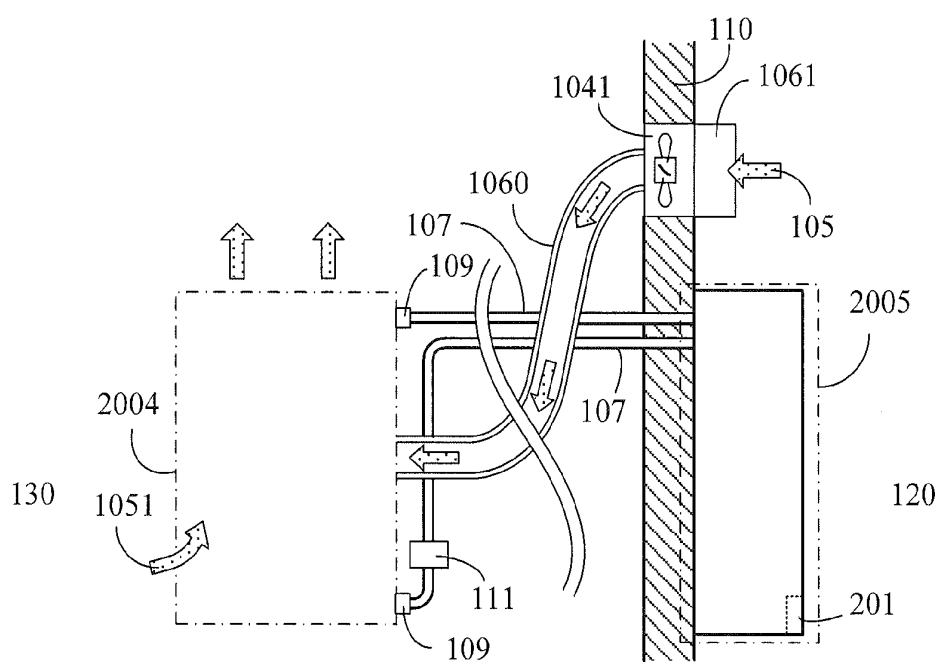


FIG. 14

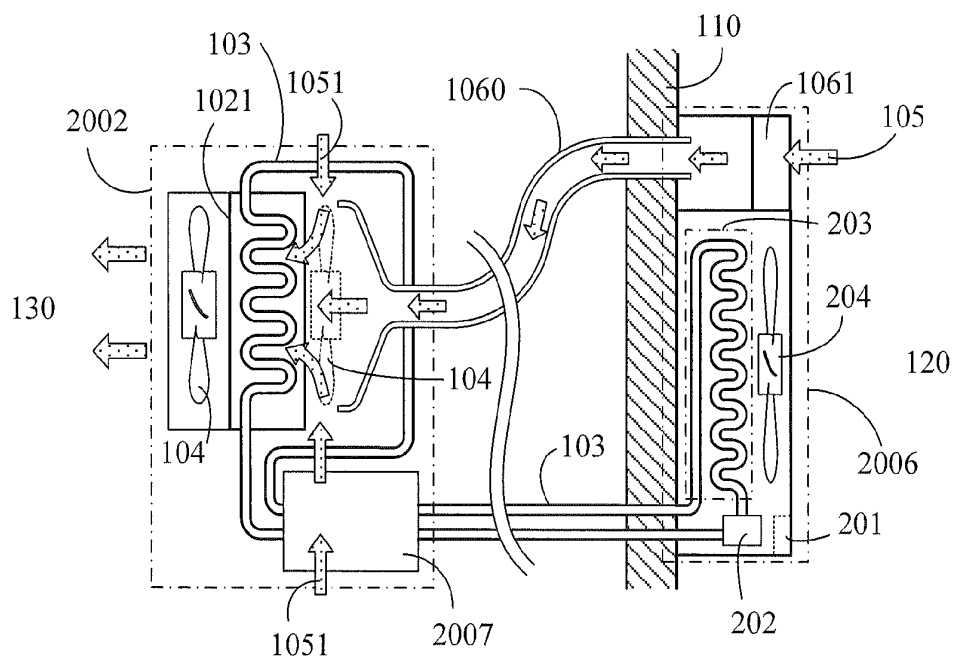


FIG. 15

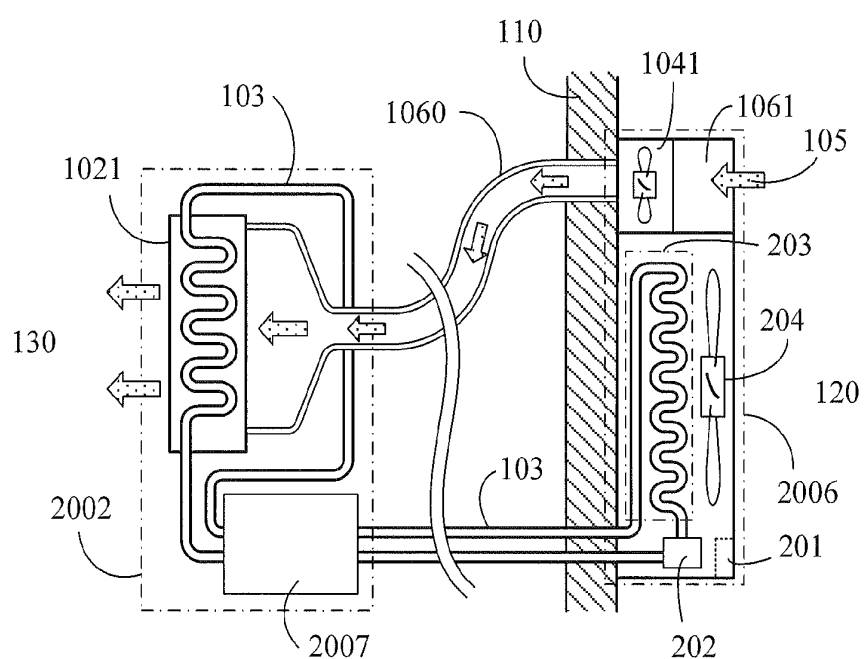


FIG. 16

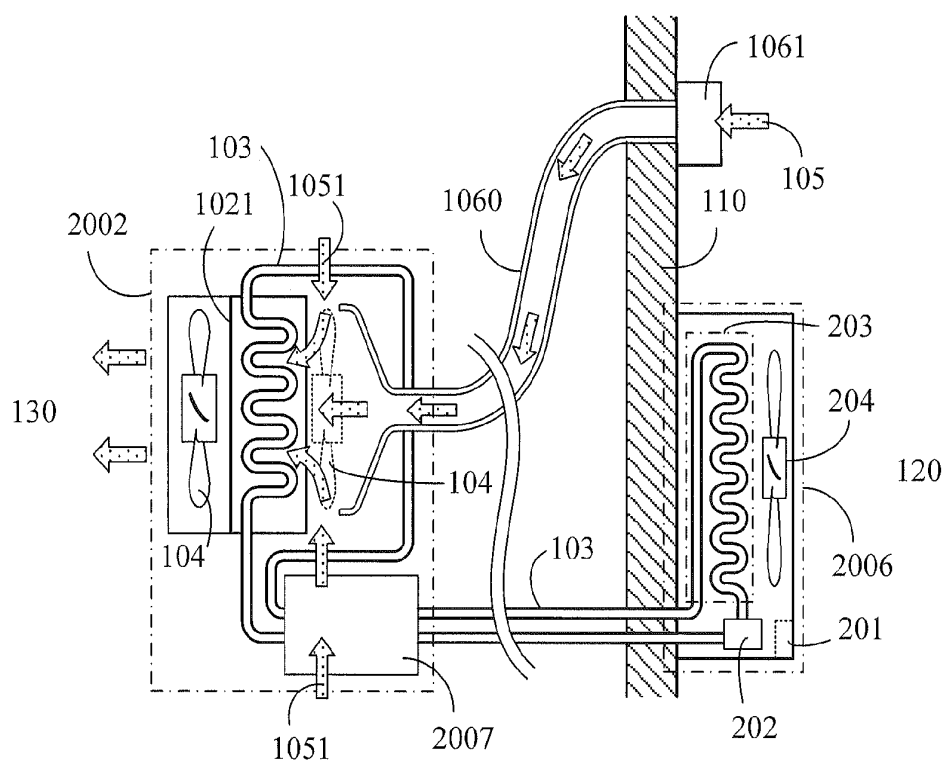


FIG. 17



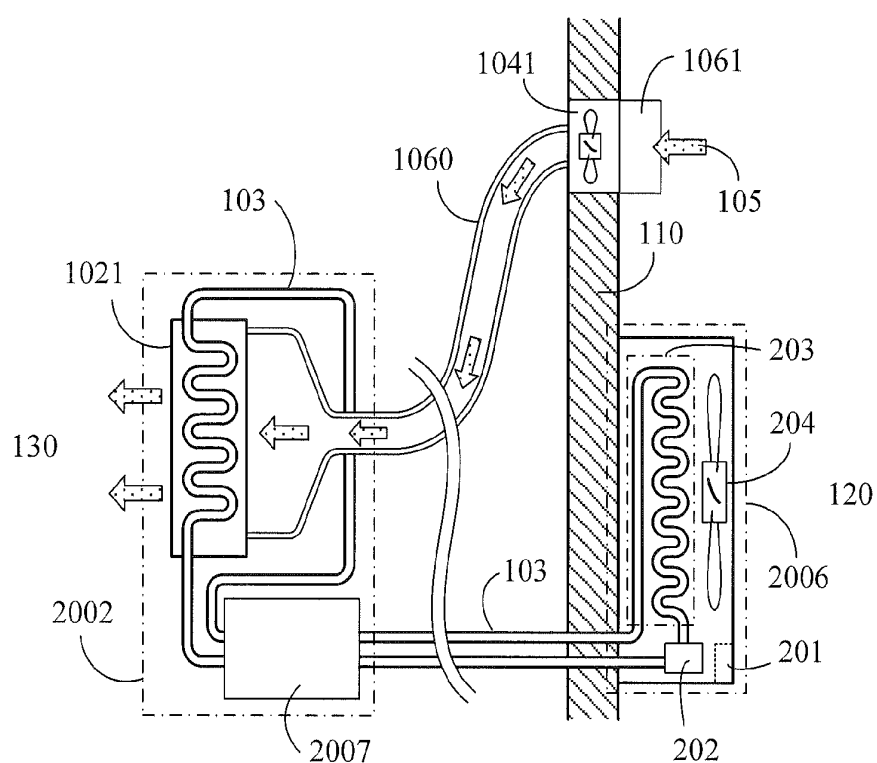


FIG. 18

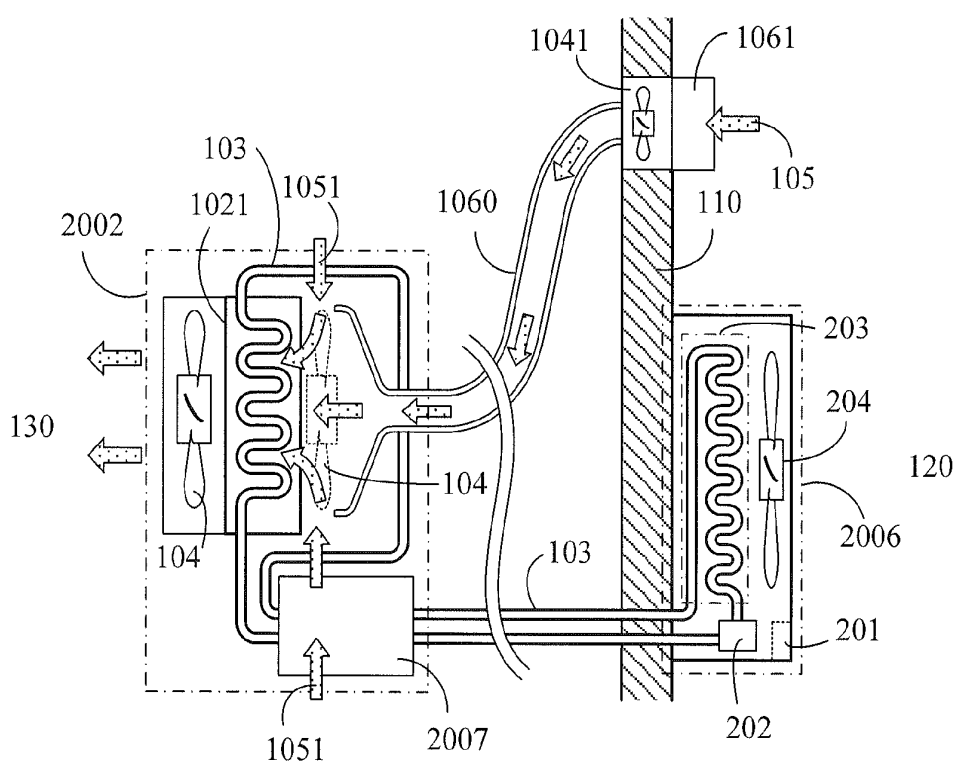


FIG. 19

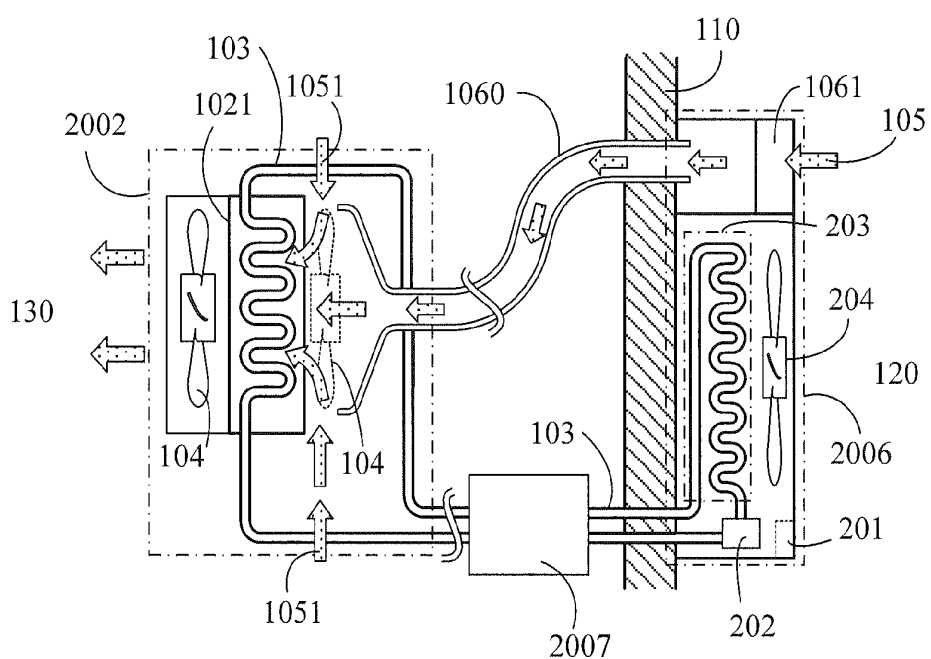


FIG. 20

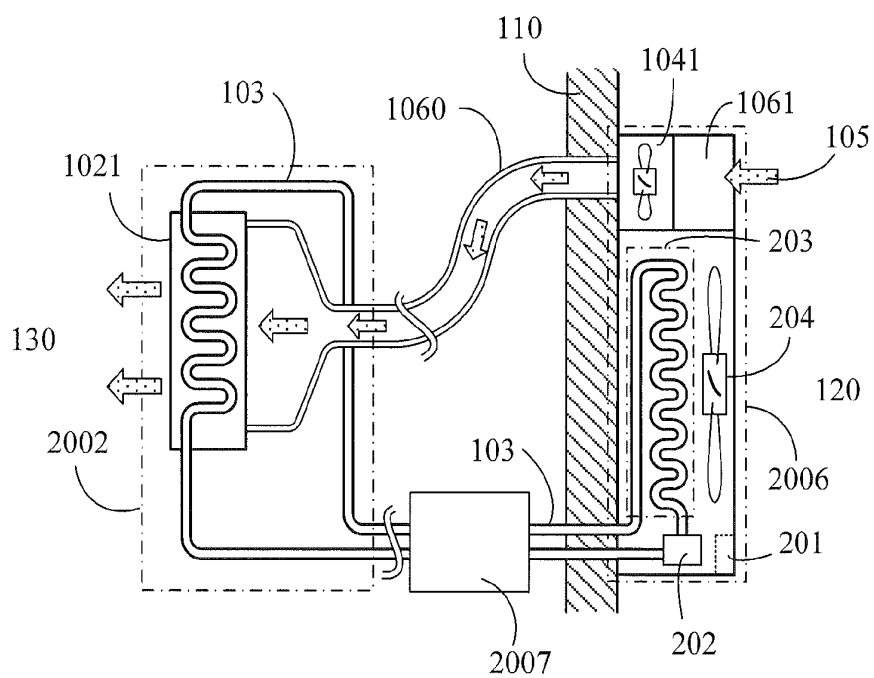


FIG. 21

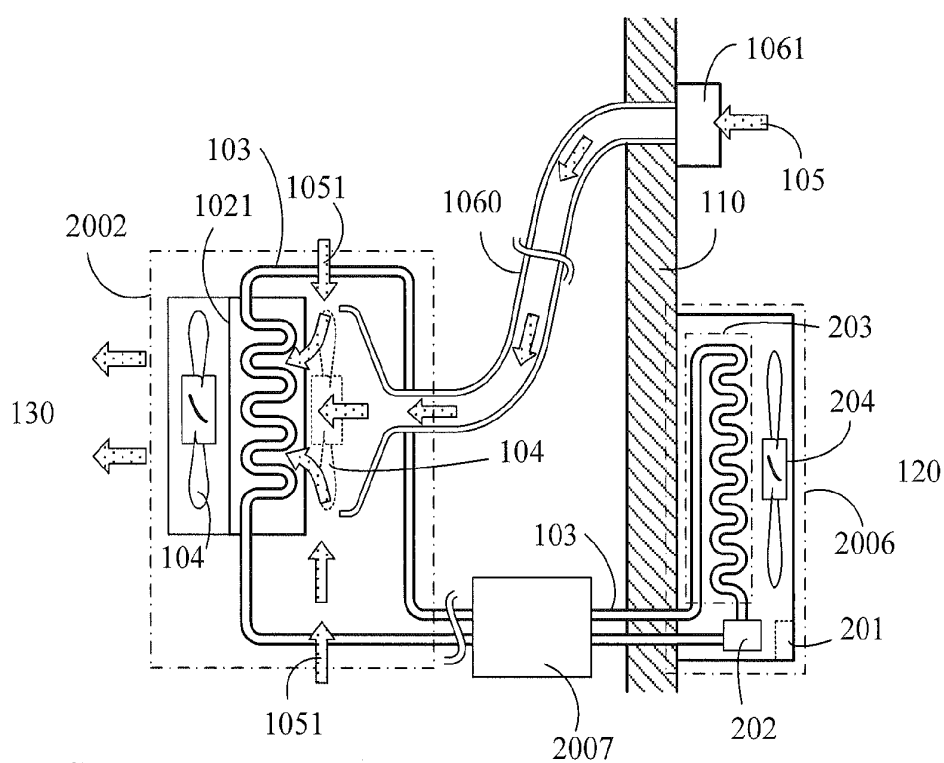


FIG. 22

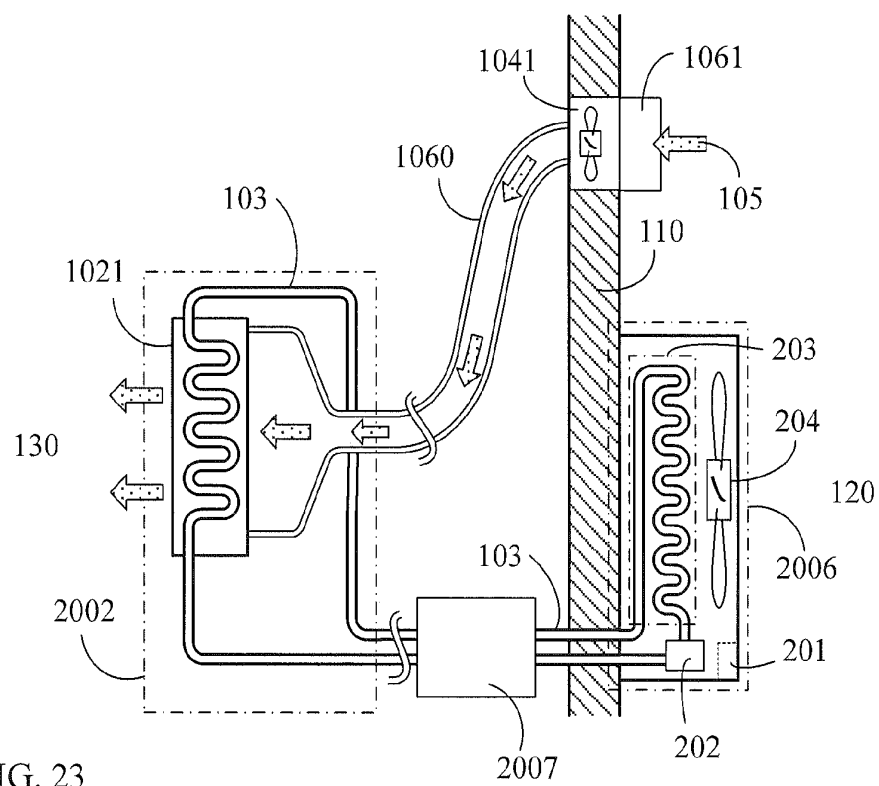


FIG. 23

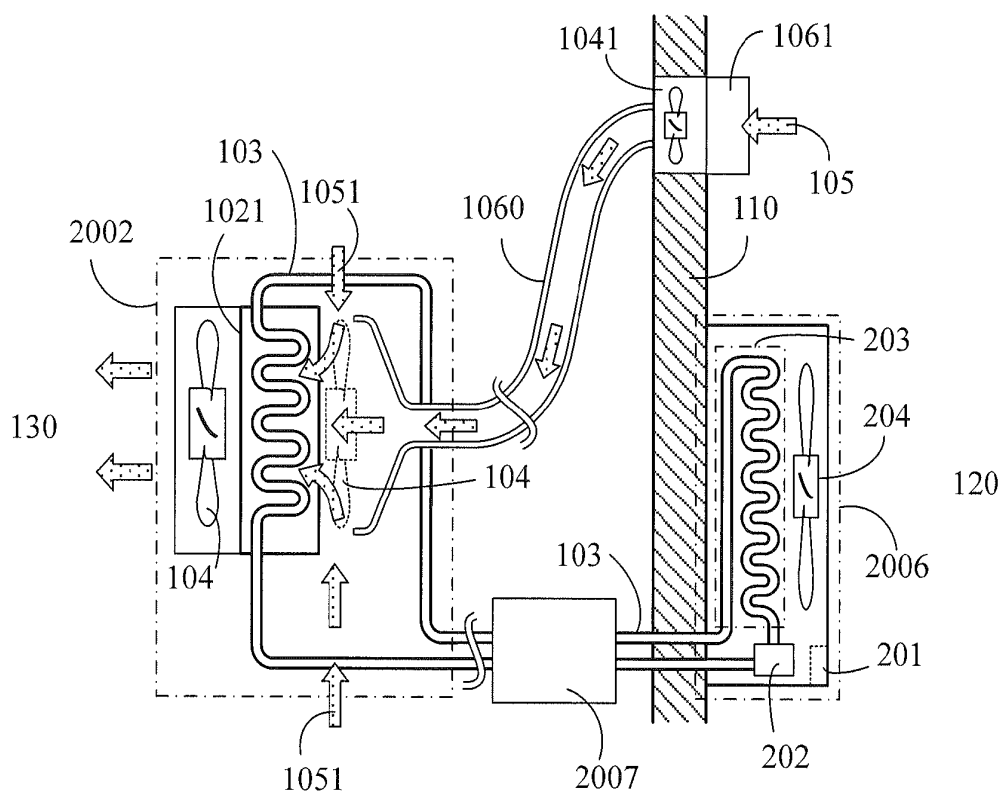


FIG. 24