

Appeal decision

Appeal No. 2019-2231

Appellant Johnson Controls-Hitachi Air Conditioning

Patent Attorney Isono International Patent Office, P. C.

The case of appeal against the examiner's decision of refusal of Japanese Patent Application No. 2018-557939, entitled "AIR CONDITIONER" [] has resulted in the following appeal decision.

Conclusion

The appeal of the case was groundless.

Reason

1 History of the procedures

The present application was filed on January 31, 2018 as an international filing date, a notice of reasons for refusal was issued on November 14, 2018, and a written opinion and a written amendment were submitted on December 19, 2018. An examiner's decision of refusal was issued on January 8, 2019 (dispatch date: January 15, 2019). An appeal against the examiner's decision of refusal was requested on February 19, 2019.

2 The Invention

The inventions according to Claims 1 to 4 of the application are as recited in Claims 1 to 4 of the scope of claims amended by the written amendment dated December 19, 2018. The Invention according to Claim 2 (hereinafter referred to as "the Invention") is as follows.

"[Claim 2]

An air conditioner comprising:
leakage sensing means for sensing refrigerant leakage from an indoor unit;
leakage alert means configured to issue refrigerant leakage alert and having a sound-emitting unit which appeals to the auditory sense of a user;
alert stop means for stopping the alert issued by the sound-emitting unit; and
a start operation unit which starts/stops the air conditioning operation during normal air conditioning operation, wherein
the start operation unit is configured to stop a function of starting/stopping the air conditioning operation when the leakage alert means is in operation, and to function as the alert stop means."

3 Reasons for refusal stated in the examiner's decision

The reasons for refusal stated in the examiner's decision is as follows.

(1) The invention according to Claim 2 of the application could be easily made by a person ordinarily skilled in the art of the invention before the filing of the application based on the invention described in Cited Document 1 which was distributed in Japan or

a foreign country before the filing of the application. Thus, the Appellant should not be granted a patent for the invention under the provisions of article 29(2) of the Patent Act.

(2) The Inventions according to Claim 1 and Claims 3-4 could be easily made by a person ordinarily skilled in the art of the invention before the filing of the application based on the inventions described in the Cited Documents 1 and 2 which were distributed in Japan or a foreign country before the filing of the application. Thus, the Appellant should not be granted a patent for the inventions under the provisions of article 29(2) of the Patent Act.

Cited Document 1: Japanese Unexamined Patent Application Publication No. 2015-94515

Cited Document 2: Japanese Unexamined Patent Application Publication No. 2016-125673

4 Cited documents

(1) Cited Document 1

Japanese Unexamined Patent Application Publication No. 2015-94515 (hereinafter referred to as "Cited Document 1") cited as Cited Document 1 in the reasons for refusal stated in the examiner's decision describes the following matters with drawings.

(1-a) "[Problem to be solved by the invention]
[0004]

Conventionally, once an alert is started, the alert cannot be stopped until a service person arrives and handles it. Especially, when an alert with buzzer-like sound is emitted for a long time at midnight, the noise bothers the neighbors, resulting in increase of complaint of users.

[0005]

The problem to be solved by the invention is to provide an indoor unit which allows a user to arbitrarily stop an alert which is started due to refrigerant leakage."

(1-b) "[0018]

(First embodiment)

FIG. 1 a cross-sectional view of an indoor unit relating to the first embodiment of the Invention, viewed from the front. FIG. 2 is a cross-sectional view of the indoor unit relating to the first embodiment of the Invention, viewed from the right side. As shown in FIG. 1 and FIG. 2, the indoor unit 1 includes a casing 2, a heat exchanger 3, a fan 4, a controller 5, a detection sensor 6, a buzzer 7, an operation lamp 9, and an operation panel 11. The indoor unit 1 is disposed indoors. The indoor unit 1 is connected to an outdoor unit (not shown) to constitute an air conditioner."

(1-c) "[0023]

The detection sensor 6 is fixed in the casing 2. The detection sensor 6 is located in a lower part of the casing 2, and located below the heat exchanger 3. The detection sensor 6 detects concentration of refrigerant in the air and detects leakage of refrigerant from the indoor unit 1. The detection sensor 6 is, for example, a semiconductor CFC sensor. The detection sensor 6 may be other known sensors, such as an infrared absorption sensor."

(1-d) "[0029]

The operation stop button 13, which is a push-button switch, is an input device for inputting a command to stop operation of the indoor unit 1 to the controller 5 on the basis of a manual operation. The operation of the indoor unit 1 means operation of a compressor (not shown), operation of the fan 4, and operation of the operation lamp 9."

(1-e) "[0031]

FIG. 3 is a control block diagram illustrating a control mechanism related to an alert of refrigerant leakage relating to the first embodiment. The controller 5 determines whether refrigerant leakage has occurred from the heat exchanger 3 in the indoor unit 1 and/or a refrigerant pipe, on the basis of an output signal from the detection sensor 6. When the controller 5 determines that refrigerant leakage has occurred, the controller 5 starts the fan 4 to diffuse the refrigerant in the air, and starts the buzzer 7 as an alarm for warning a user about refrigerant leakage, and the operation lamp 9. The buzzer 7 outputs an alert sound, and the operation lamp 9 blinks repeatedly. When the buzzer stop button 12 is pressed while the buzzer 7 is outputting the alert sound, the controller 5 stops operation of the buzzer 7. Meanwhile, even if the operation stop button 13 is pressed while the fan 4 and the operation lamp 9 are in operation, the controller 5 ignores a command to stop the fan 4 and a command to stop the operation lamp 9 made by operating the operation stop button 13, and continues operation of the fan 4 and the operation lamp 9. Specific processing flow is as follows."

(1-f) "[0065]

In the above embodiment, the operation device includes a buzzer stop button for stopping the buzzer, and an operation stop button for stopping the fan and the operation lamp. The operation device may include three dedicated buttons for the buzzer, the fan, and the operation lamp, respectively, or may include one button for all of the buzzer, the fan, and the operation lamp. Association between the operation device and the fan and the alarm is not limited."

The above (1-f) means that the buzzer stop button and the operation stop button may be configured as one button.

Thus, summarizing the matters in (1-a) to (1-f), Cited Document 1 is acknowledged as describing the following invention (hereinafter referred to as "Cited Invention").

"An air conditioner comprising:

- a detection sensor 6 for detecting leakage of refrigerant from an indoor unit 1;
- a buzzer 7 for outputting an alert sound, as an alarm for warning a user about refrigerant leakage, and an operation lamp 9;
- a buzzer stop button for stopping operation of the buzzer 7;
- an operation stop button for inputting a command to stop operation of the indoor unit 1; and
- a controller 5, wherein
the operation of the indoor unit 1 means operation of a compressor, operation of

the fan 4, and operation of the operation lamp 9,

when it is determined that refrigerant leakage has occurred, the controller 5 starts the fan 4 to diffuse the refrigerant in the air, and starts the buzzer 7 as an alarm for warning a user about refrigerant leakage, and the operation lamp 9, when the buzzer stop button is pressed while the buzzer 7 is outputting the alert sound, the controller 5 stops operation of the buzzer 7, even if the operation button is pressed while the fan 4 and the operation lamp 9 are in operation, the controller 5 ignores a command to stop the fan 4 and a command to stop the operation lamp 9 made by operating the operation stop button, and the buzzer stop button and the operation stop button are configured as one button."

5 Comparison

The Invention and the Cited Invention are compared below.

A The description in the Cited Invention, "a detection sensor 6 for detecting leakage of refrigerant from the indoor unit 1" corresponds to the "leakage sensing means for sensing refrigerant leakage from an indoor unit" in the Invention.

B The "buzzer 7" in the Cited Invention corresponds to the "sound-emitting unit which appeals to auditory sense of a user" in the Invention.

Thus, "a buzzer 7 as an alarm for warning a user about refrigerant leakage, and an operation lamp 9" in the Cited Invention correspond to the "leakage alert means configured to issue refrigerant leakage alert and having a sound-emitting unit which appeals to auditory sense of a user" in the Invention.

C The "buzzer stop button for stopping operation of the buzzer 7" in the Cited Invention corresponds to the "alert stop means for stopping the alert issued by the sound-emitting unit" in the Invention.

D The "operation of the indoor unit 1" in the Cited Invention obviously means normal air conditioning operation.

Thus, the "operation stop button for inputting a command to stop operation of the indoor unit 1" in the Cited Invention and the "start operation unit which starts/stops the air conditioning operation during normal air conditioning operation" in the Invention are identical in the point of "an operation unit which stops the air conditioning operation during normal air conditioning operation".

E The description in the Cited Invention, "when it is determined that refrigerant leakage has occurred, the controller 5 starts the fan 4 to diffuse the refrigerant in the air, and starts the buzzer 7 as an alarm for warning a user about refrigerant leakage, and the operation lamp 9, when the buzzer stop button is pressed while the buzzer 7 is outputting the alert sound, the controller 5 stops operation of the buzzer 7, even if the operation button is pressed while the fan 4 and the operation lamp 9 are in operation, the controller 5 ignores a command to stop the fan 4 and a command to stop the operation lamp 9 made by operating the operation stop button", which means that the operation of the fan 4 is not stopped even if the operation stop button is pressed while the alarm is in operation, corresponds to the description in the Invention, "the operation unit is configured to stop a function of stopping the air conditioning operation when the leakage alert means is in

operation". The description in the Cited Invention, "the buzzer stop button and the operation stop button are configured as one button", which can be understood that the operation stop button functions as a buzzer stop button, corresponds to the sections "the operation unit" and "to function as the alert stop means" in the Invention.

Thus, the descriptions in the Cited Invention, "when it is determined that refrigerant leakage has occurred", "ignores a command to stop the fan 4 and a command to stop the operation lamp 9 made by operating the operation stop button", and "the buzzer stop button and the operation stop button are configured as one button", and the description in the Invention, "the start operation unit is configured to stop a function of starting/stopping the air conditioning operation when the leakage alert means is in operation, and to function as the alert stop means", are identical in the following point: "an operation unit is configured to stop a function of stopping air conditioning operation when leakage alert means is in operation, and to function as alert stop means".

Therefore, the Invention and the Cited Invention are identical in the following point:

"An air conditioner comprising:

leakage sensing means for sensing refrigerant leakage from an indoor unit;

leakage alert means configured to issue refrigerant leakage alert and having a sound-emitting unit which appeals to the auditory sense of a user;

alert stop means for stopping the alert issued by the sound-emitting unit; and

an operation unit which stops the air conditioning operation during normal air conditioning operation, wherein

the operation unit is configured to stop a function of stopping the air conditioning operation when the leakage alert means is in operation, and to function as the alert stop means."

The Invention and the Cited Invention are different in the following point.

[Different Feature]

Regarding the operation unit, the Invention includes a start operation unit which starts/stops air conditioning operation and has a function of starting/stopping air conditioning operation, while the Cited Invention includes an operation stop button for inputting a command to stop operation.

6 Judgment

A The above-mentioned Different Feature is examined below.

In the field of air conditioner, the configuration where start and stop operations are conducted by one operation unit is a well-known technique.

According to the well-known technique, it is natural to conduct start operation by using an "operation stop button" in the Cited Invention. When the start operation is conducted by the operation stop button, there is no problem in the function of stopping operation of the buzzer 7.

Thus, a person skilled in the art could easily conceive of using the "operation stop button" in the Cited Invention as a start operation unit for starting/stopping operation.

B Regarding the effect to be produced by the Invention

The effect to be produced by the Invention from the Different Feature, which can be predicted by a person skilled in the art based on the Cited Invention and well-known technique, is not remarkable.

C Appellant's allegation

The Appellant alleges in the written appeal "(3) Comparison between the Invention and the Cited Invention", as follows: "The problem to be solved by Cited Invention 1 is to provide an indoor unit which allows a user to arbitrarily stop an alert which is started due to refrigerant leakage (Paragraph 0005). The problem to be solved by Cited Invention 1 is generated in a 'refrigerant leakage' situation which is not assumed in normal operation. The configuration where 'start and stop operations of an air conditioner are conducted by one operation unit', which is a well-known technique and employed in normal air conditioning operation, is only 'a well-known technique in normal air conditioning operation' even if it is a well-known technique. The configuration where 'start and stop operations of an air conditioner are conducted by one operation unit' is implemented in normal air conditioning operation for 'improving convenience of a user when in normal use', for example, and it is not implemented for 'stopping an alert which is generated at refrigerant leakage' as indicated in Cited Invention 1.

Accordingly, the problem to be solved by Cited Invention 1 is completely different from the object of the well-known technique in the situation to be treated. Specifically, the problem to be solved by Cited Invention 1 is a problem generated at leakage of refrigerant, and the object of the well-known technique is to improve convenience in normal air conditioning operation where no refrigerant leakage occurs. It is generally common for a person skilled in the art to simplify control as much as possible. It is supposed that no one is going to complicate the control by applying a well-known technique to be implemented for other problems or objects to Cited Invention 1."

However, the well-known technique in 6 A is a technique well-known in the field of air conditioners. Motivation to employ the well-known technique is acknowledged in general.

The Cited Invention includes an operation unit for operating an air conditioner. The well-known technique, which relates to a similar operation unit, does not hinder the solution of the problem of the Cited Invention. Thus, a person skilled in the art could easily conceive of the Cited Invention using a configuration based on the well-known technique.

Thus, the Appellant's allegation cannot be accepted.

7 Closing

As described above, the Invention could be easily made by a person skilled in the art based on the Cited Invention and the well-known technique. The Appellant should not be granted a patent for the invention under the provisions of Article 29(2) of the Patent Act.

The present application should be rejected without examining other claims.
Therefore, the appeal decision shall be made as described in the conclusion.

January 6, 2020

Chief administrative judge: KIMOTO, Takashi
Administrative judge: HIRAJI, Toshimasa
Administrative judge: MAKIHARA, Susumu