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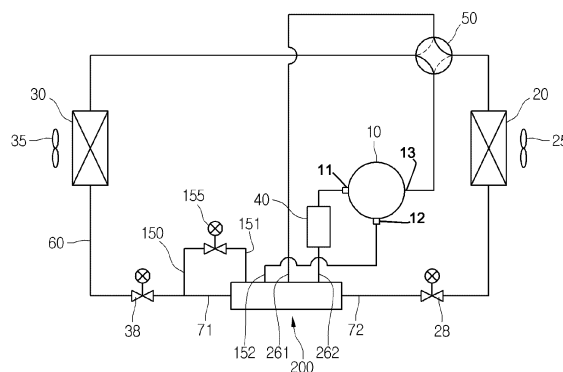
(54) **Air conditioner**

(57) Provided is an air conditioner. The air conditioner includes a compressor (10), a condenser (20,30), a super cooling device (100), and an evaporator (30,20). The super cooling device includes: a first flow passage disposed in the super cooling device to guide the refrigerant coming from the condenser toward the evaporator; and a second flow passage located in the super cooling device for exchanging heat with the first flow passage

and guiding the refrigerant toward the compressor. One of the first and second flow passage includes: a distribution part configured to divide a flow of the refrigerant; and an inner tube connected to the distribution part. A stream of the refrigerant flowing in the first flow passage exchanges heat with a stream of the refrigerant flowing in the second flow passage while using an outer surface area of the inner tube as a heat exchange area.

Fig. 6

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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 5 June 2014	Examiner Szilagyi, Barnabas
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503.03.82 (P04G01)



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-9

Air conditioner wherein the inner tubes are spaced apart from each other and from the main body so that a whole outer surface of each inner tube corresponds to a heat exchange area of said inner tube.

2. claims: 1, 2, 10-15

Air conditioner wherein the additional heat exchanger, such as the super cooling device, further comprises a third flow passage located in the additional heat exchanger, such as the super cooling device, for exchanging heat with the first flow passage and guiding the refrigerant passing through the evaporator toward the compressor.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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05-06-2014

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