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- **Seo, Kook Jeong**
Gyeonggi-do (KR)
- **Yoon, Ho**
Gyeonggi-do (KR)
- **Kim, Jung Hyeon**
Gyeonggi-do (KR)
- **Choi, Hyen Young**
Gyeonggi-do (KR)
- **Ryu, O Do**
Gyeonggi-do (KR)

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(71) Applicant: **SAMSUNG ELECTRONICS CO., LTD.**
Suwon-si,
Gyeonggi-do (KR)

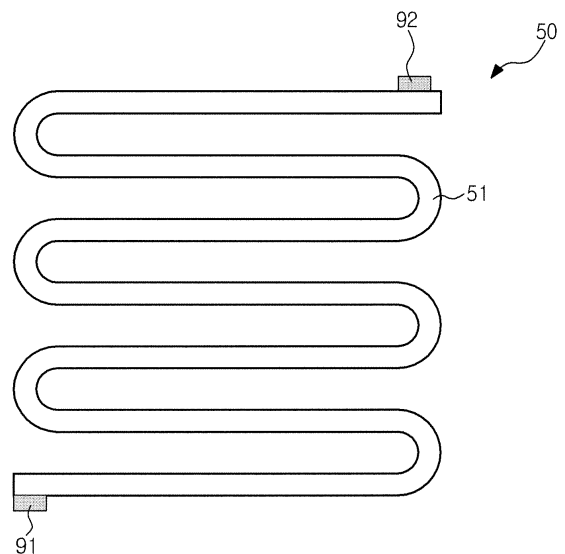
(74) Representative: **Grünecker, Kinkeldey,**
Stockmair & Schwanhäusser
Anwaltssozietät
Leopoldstrasse 4
80802 München (DE)

(72) Inventors:
• **Han, Jeong Su**
Gyeonggi-do (KR)
• **Lee, Sang Jun**
Gyeonggi-do (KR)

(54) **Cooling system with a unit for determining the amount of frost and method of controlling such a system**

(57) An oscillatory wave generating unit and an oscillatory wave sensing unit are installed at both ends of a refrigerant pipe of an evaporator of the cooling system, an amount of frost formed on the refrigerant pipe is determined by comparing a wave form of an oscillatory wave generated from one end of the refrigerant through the oscillatory wave generating unit and a wave form of the oscillatory wave sensed by the other one end of the refrigerant through the oscillatory wave sensing unit, and whether or not a defrosting operation is performed is determined by a result of the determination. The cooling system increases the accuracy in sensing the amount of the frost formed on the evaporator of a refrigerator, a Kimchi refrigerator, or an air conditioner, and respectively starts and ends the defrosting operation at proper points of time, thus enhancing a heat-exchanging performance and increasing energy efficiency.

FIG. 2



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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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X	FR 2 555 715 A1 (APPLIC THERMIQUE CIE INDLE [FR]) 31 May 1985 (1985-05-31) * abstract; figure 1 * * page 1, lines 20-25 * * page 2, line 35 - page 3, line 3 * -----	1-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			F25D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 15 March 2011	Examiner Salaün, Eric
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	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82