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**Datasheet for the decision  
of 16 January 2017**

**Case Number:** T 1501/12 - 3.2.03

**Application Number:** 04106375.1

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**IPC:** F25D11/02, F25B5/04, F25D25/02

**Language of the proceedings:** EN

**Title of invention:**  
Refrigerating apparatus

**Patent Proprietor:**  
Whirlpool EMEA S.p.A

**Opponent:**  
BSH Bosch und Siemens Hausgeräte GmbH

**Headword:**

**Relevant legal provisions:**  
EPC Art. 56, 123(2)  
RPBA Art. 12(5)

**Keyword:**  
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**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

European Patent Office  
D-80298 MUNICH  
GERMANY  
Tel. +49 (0) 89 2399-0  
Fax +49 (0) 89 2399-4465

Case Number: T 1501/12 - 3.2.03

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.03**  
**of 16 January 2017**

**Appellant:** Whirlpool EMEA S.p.A.  
(Patent Proprietor) Viale Aristide Merloni, 47  
60044 Fabriano (AN) (IT)

**Representative:** Dini, Roberto  
Metroconsult S.r.l.  
Via Sestriere 100  
10060 None (TO) (IT)

**Respondent:** BSH Bosch und Siemens Hausgeräte GmbH  
(Opponent) Carl-Wery-Str. 34  
81739 München (DE)

**Representative:** Patentship  
Patentanwaltsgesellschaft mbH  
Elsenheimerstraße 65  
80687 München (DE)

**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on 28 June 2012  
revoking European patent No. 1541944 pursuant to  
Article 101(3) (b) EPC.**

**Composition of the Board:**

**Chairman** G. Ashley  
**Members:** C. Donnelly  
M.-B. Tardo-Dino

## **Summary of Facts and Submissions**

- I. The appeal lies from the decision of the opposition division revoking European patent no. EP 1 541 944 B.

In its decision the opposition division held that starting out from US 4 294 081 (K6) or FR 2 831 948 (K8) as the nearest prior art in combination with DE 1 015 826 (K1), the subject-matter of claim 1 as granted did not involve an inventive step.

It also decided that the first and second auxiliary requests filed during the oral proceedings lacked an inventive step in the light of the same documents.

- II. The patent proprietor (hereinafter: the "appellant") filed an appeal against this decision in due time and form.

It requested that the opposition be rejected and that the patent be maintained as granted, or alternatively, be maintained in amended form on the basis of the first or second auxiliary requests filed with the statement of the grounds of appeal. It also made an auxiliary request for oral proceedings to be held should its requests not be allowed.

- III. The opponent (hereinafter: the "respondent") requested that the appeal be dismissed. It relied on the following state of the art to support its case.

K1: DE 1 015 826;

K6: US 4 294 081;

K8: FR 2 831 948.

IV. The board informed the parties of its provisional opinion in a communication pursuant to Article 15(1) RPBA annexed to the summons to oral proceedings. In particular, it indicated that in view of the teachings of K8 and K1 the subject-matter of claim 1 according to the appellant's main and second auxiliary requests appeared to lack an inventive step and that of the first auxiliary request would require discussion in relation to both Articles 123(2) and 56 EPC.

By letter of 2 September 2016 the appellant simply informed the board that it would not be attending the oral proceedings appointed for 12 October 2016 without responding to the points raised in the communication.

In a further communication, dated 27 September 2016, the board informed the parties that the oral proceedings were cancelled and that it intended to take a decision on the basis of the written submissions in accordance with the provisional opinion.

V. Claim 1 as granted (appellant's main request) reads:

"Two-door type refrigerating appliance (1), comprising:

- a cooling system,
  - a cell for fresh food (2), and
  - a cell for frozen food (3),
- said cooling system comprising at least two evaporators (5,14,31,32), one of said at least two evaporators cooling said cell for frozen food (3) enveloping said cell for frozen food, characterised in that at least one section (5) of the evaporator (14,31) cooling said cell for frozen food (3) runs within said

cell for frozen food (3) and a dividing shelf (4) for supporting the food to be placed is inserted in said cell for frozen food (3), said dividing shelf (4) comprising a food bearing surface on the underside of which said section (5) of the evaporator (31) running within said cell for frozen food (3) is arranged."

Claim 1 according to the first auxiliary request (AR1) is identical to claim 1 as granted with the additional feature:

"wherein said at least one section (5) of the evaporator (14,31) cooling said cell for frozen food (3) comes out from a rear wall (8) delimiting said cell for frozen food (3), runs within said cell for frozen food (3), and then enters again said rear wall(8)."

Claim 1 according to the second auxiliary request is as claim 1 as granted with the additional feature of:

"wherein said cooling system comprises means for cooling said cell for frozen food (3) independently from said cell for fresh food (2), said means comprising a solenoid valve (34) and two capillaries (35,36) associated with said two cells (2,3) of said refrigerating appliance (1), said solenoid valve (34) being controlled by an electronic thermostat (40) and performing a hydraulic switching between said two capillaries."

VI. The arguments of the parties can be summarised as follows.

**(a) Appellant,**

**Main request**

The freezer compartment of K6 already comprises an additional second cooler with a defrosting capability arranged behind the blind board 40. The second cooler operates at a lower temperature than the first cooler placed in the walls of the freezer cell such that frost formed on the internal walls of the freezer cell sublimates and moves to the second cooler and defrosting can be carried out by the heating wire fitted to the second cooler.

Therefore, the skilled person would not think of fitting the chilled food shelves with an additional evaporator known from K1 in the freezer cell of K6 since it would not be possible to defrost them.

K8 merely discloses a two-door type refrigerator. The feature of an evaporator that envelops the freezing cell as specified in claim 1 is not disclosed. Thus, even if the skilled person were to combine K8 and K1, the subject-matter of claim 1 would not be obtained.

**First Auxiliary request (AR1)**

It is acknowledged that paragraph [0048] of the patent states that "For the purposes of the present invention, it is however unimportant whether the "inner evaporator" (5) exits from the rear wall (8) or from any other wall (9,10,11)." However, this only applies

for the purposes of what the patentee considered to be the invention at the time of the filing of the application and at the time of the grant of the patent. During the opposition procedure the patentee was faced with new prior art, of which it had previously been unaware, necessitating a reconsideration of the importance of features initially deemed optional or minor.

By arranging the additional evaporator to exit and enter from the same wall i.e. the rear wall, it is only necessary to provide one aperture.

**Second Auxiliary request (AR2)**

K8 does not show or suggest an evaporator that envelopes the freezing cell and merely discloses a two-door type refrigerating appliance. For this reason it would not be considered as a promising starting out point in order to arrive at the subject-matter of claim according to AR2.

**(b) Respondent,**

**Main request**

The opposition division was correct in deciding that the subject matter of the appellant's main request (claim 1 as granted) does not involve an inventive step starting out from (i) K6 in combination with K1 or (ii) K8 in combination with K1

**Auxiliary request 1 (AR1)**

The requirements of Article 123(2) and (3) EPC are not met since the expression:



"to run within the other walls of said cell for frozen food and return to a compressor"

which is comprised in the passage of the description upon which the additional feature is based reading:

"After running within the cell for frozen food (3), the evaporator enters again said rear wall (8) to run within the other walls of said cell for frozen food and return, as described, to the compressor."

is missing in the claim.

The subject-matter of claim 1 according to AR1 lacks an inventive step in any case in view of a combination of K6 and K1 since, as indicated in the application as published (see column 7, lines 37 to 39), it is unimportant whether the evaporator exits from the rear wall or from any other wall.

**Auxiliary request 2 (AR2)**

The subject-matter of claim 1 according to AR2 lacks an inventive step in view of K8 in combination with K1.

K8 discloses at page 5, lines 7 to 10 an evaporator that envelopes the freezing cell.

In the fridge appliance of K1 the evaporator is situated in the top and bottom of the freezer compartment as well as under each shelf section (see column 1, lines 27 to 32).

## Reasons for the Decision

1. By letter of 27 September 2016, the board informed the parties that the oral proceedings scheduled for 12 October 2016 were cancelled, since firstly the appellant had indicated that it would not be attending, and secondly the board intended to take a decision in favour of the respondent as laid out in its provisional opinion attached to the summons. No further comments have been made by the parties and under Article 12(5) of the RPBA the board is in a position to take its decision on the basis of the written submissions.

2. *Appellant's main request*

2.1 The only issue to be addressed is that of inventive step. The opposition division decided that the subject-matter of claim 1 as granted lacked an inventive step starting out from K6 or K8 in combination with K1. The board's analysis of these documents is given below.

2.2 K6 describes a:

two-door type refrigerating appliance (2), comprising:

- a cooling system,
- a cell for fresh food (6), and
- a cell for frozen food (4),

said cooling system comprising at least two evaporators (22,26,32), one (26) of said at least two evaporators cooling said cell for frozen food (4) enveloping said cell for frozen food,  
whereby

at least one section of the evaporator (26) cooling said cell for frozen food (4) runs within said cell for frozen food

The subject-matter of claim 1 differs therefrom in that:

- a dividing shelf for supporting the food to be placed is inserted in said cell for frozen food,
- said dividing shelf comprising a food bearing surface on the underside of which said section of the evaporator running within said cell for frozen food is arranged.

2.3 K8 describes a:

two-door type refrigerating appliance (1), comprising:

- a cooling system,
  - a cell for fresh food (Vf), and
  - a cell for frozen food (Vz),
- said cooling system comprising at least two evaporators (Ef, Ez), one (Ez) of said at least two evaporators cooling said cell for frozen food (Vz) enveloping said cell for frozen food,

wherein

at least one section of the evaporator Ez cooling said cell for frozen food runs within said cell for frozen food (see page 5, lines 7 to 10 - "le serpentín de l'évaporateur de dispositif de congélation Ez court sur la totalité de l'extérieur du compartiment de dispositif de congélation Vz").

As is the case for K6, the subject-matter of claim 1 differs therefrom in that:

- a dividing shelf for supporting the food to be placed is inserted in said cell for frozen food,
- said dividing shelf comprising a food bearing surface, on the underside of which said section of the evaporator running within said cell for frozen food is arranged.

2.4 In the fridge appliance of K1 evaporator coils are situated in the top and bottom of the freezer compartment as well as under each shelf section (see column 1, lines 27 to 32). Thus K1, see in particular figures 2,6 and 7, describes a:

two-door type refrigerating appliance (1), comprising:

- a cooling system,
  - a cell for fresh food (24), and
  - a cell for frozen food (1),
- said cooling system comprising at least two evaporators ("Kühlschlange" 7, 7',7";42, 42'),
- whereby
- at least one section (7,7',7") of the evaporator cooling said cell for frozen food (1) runs within said cell for frozen food (1) and a dividing shelf (4) for supporting the food to be placed is inserted in said cell for frozen food (3), said dividing shelf (4) comprising a food bearing surface on the underside of which said section (7) of the evaporator (7,7',7") running within said cell for frozen food (1) is arranged."

The subject-matter of claim 1 differs therefrom by:

the evaporator cooling said cell for frozen food enveloping said cell for frozen food.

- 2.5 The objective technical problem starting out from all of these documents can be seen to be one of improving the cooling efficiency and cooling capacity of the appliance.
- 2.6 The board agrees with the appellant that the skilled person would not obviously place a dividing shelf fitted with an evaporator cooler in the freezer compartment of K6, since the freezer compartment already comprises an additional second cooler 32 with a defrosting capability arranged behind the blind board 40 which might not necessarily function with a further evaporator placed in a dividing shelf.
- 2.7 However, these arguments do not apply to the appliance disclosed in K8 which, contrary to the appellant's opinion, the board does consider to disclose the feature of an evaporator that envelops the freezing cell (see page 5, lines 5 to 7). K8 is also concerned with improving the energy efficiency of the appliance (see page 3, lines 14 to 21). Thus, it would be obvious that the skilled person faced with this task would consult K1 which teaches the use of dividing shelves fitted with evaporator sections for the freezer compartment in order to improve efficiency (see column 1, lines 27 to 32) and apply this feature to the apparatus known in K8 without the need to exercise any inventive activity.
- 2.8 The board would add that similarly, as set out in the communication accompanying the summons to oral proceedings, taking K1 as the most promising starting point, the skilled person is already taught by K1 that increasing the cooling area improves the energy efficiency. It would therefore seem an obvious step for the skilled person to improve the device of K1 by

incorporating evaporator sections in the side walls of the freezer compartment so as to envelope it as suggested by K8.

2.9 The subject-matter of claim 1 as granted therefore lacks an inventive step starting out from K8 in combination with K1 or starting out from K1 in combination with K8.

3. *Auxiliary requests (AR1)*

3.1 Article 123(2) EPC

3.1.1 Claim 1 according to AR1 is composed of claim 1 as granted and the following additional feature:

3.1.2 "wherein said at least one section (5) of the evaporator (14,31) cooling said cell for frozen food (3) comes out from a rear wall (8) delimiting said cell for frozen food (3), runs within said cell for frozen food (3), and then enters again said rear wall(8)."

3.1.3 This amendment is based on the description of the published application at column 7, lines 30 to 36. However, the amended claim does not comprise the last part of this passage reading:

"to run within the other walls of said cell for frozen food and return to the compressor"

3.1.4 Since the term "to run within the other walls" is a more precise definition of where the evaporator runs than the generic term "runs within said cell for frozen food" which covers various other possibilities, the requirements of Article 123(2) EPC are not met.

3.2 Inventive step, Article 56 EPC

3.2.1 The subject-matter of claim 1 does not in any case involve an inventive step. In the device disclosed in K8, the evaporator cooling said cell for frozen food envelopes the cell for frozen food. Although the board agrees with the respondent that, as indicated in the patent itself (see column 7, lines 47 to 49), it is unimportant whether the evaporator exits from the rear wall or from any other wall, it is commonplace for components such as the compressor and condenser to be placed at the rear of the device out of sight of the user. Thus, a configuration wherein at least one section of the evaporator cooling said cell for frozen food comes out from a rear wall delimiting said cell for frozen food, runs within said cell for frozen food and then enters again said rear wall is an obvious arrangement resulting from routine design procedure taking into account the position of the other components making up the vapour-compression circuit.

In conclusion, the subject-matter of claim 1 according to the first auxiliary request does not involve an inventive step in the light of K8 in combination with K1 and the skilled person's general knowledge.

3.3 *Second auxiliary request (AR2).*

3.3.1 Figure 1 and the corresponding description of K8 at page 5, lines 14 to 27 show all the additional features included in claim 1 of AR2, since its cooling system comprises means (Ez) for cooling said cell for frozen food (Vz) independently from said cell for fresh food (Vf), said means comprising a solenoid valve (EV) and two capillaries (Lz, Lf) associated with said two cells (Vz, Vf) of said refrigerating appliance, said

solenoid valve (EV) being controlled by an electronic thermostat (TE) and performing a hydraulic switching between said two capillaries.

- 3.3.2 The subject-matter of claim 1 according to AR2 therefore also lacks an inventive step with respect to a combination of K8 and K1.
4. The Board underlines the fact that the reasons for the present decision are based on those set out in its provisional opinion annexed to the summons to oral proceedings according to Article 15(1) RPBA to which the appellant did not reply. In the absence of any allowable request the appeal is dismissed.

## Order

### **For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



C. Spira

G. Ashley

Decision electronically authenticated