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**Datasheet for the decision
of 4 June 2020**

Case Number: T 1278/18 - 3.2.03

Application Number: 07108409.9

Publication Number: 1857751

IPC: F25C1/24, F25C1/04

Language of the proceedings: EN

Title of invention:

Water spillage management for in the door ice maker

Applicant:

WHIRLPOOL CORPORATION

Headword:

Relevant legal provisions:

EPC 1973 Art. 54(1), 54(2), 111(1), 114(1)
RPBA 2020 Art. 11, 13

Keyword:

Late-filed request - admitted (yes)
Novelty - main request (no) - auxiliary request (yes)
Remittal to the department of first instance - (yes)

Decisions cited:

Catchword:



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Case Number: T 1278/18 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 4 June 2020

Appellant: WHIRLPOOL CORPORATION
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Michigan 49022 (US)

Representative: Spina, Alessandro
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 27 March 2018
refusing European patent application No.
07108409.9 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Patton
Members: V. Bouyssy
N. Obrovski

Summary of Facts and Submissions

- I. European patent application No. 07108409.9 (in the following: "the application") relates to an automatic ice maker apparatus arranged for use on a refrigerator or freezer door.
- II. The examining division refused the application because the subject-matter of independent claims 1, 10 and 20 as originally filed lacked novelty in the sense of Article 54(1)(2) EPC 1973.
- III. This decision has been appealed by the applicant (in the following "the appellant").
- IV. The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the claims as originally filed, alternatively on the basis of the set of claims filed as the first and second auxiliary requests with the statement of grounds of appeal (letter dated 24 April 2018). The appellant also made a conditional request for oral proceedings.
- V. The appellant has been summoned to oral proceedings scheduled for 29 June 2020.
- VI. In a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA 2020) the Board indicated its preliminary opinion of the case.
- VII. In response to the Board's preliminary opinion (letter dated 21 May 2020), the appellant filed amended claims as the third and fourth auxiliary requests, in replacement of the first and second auxiliary requests,

as well as amended claims as the fifth and sixth auxiliary requests. In addition, the appellant made clear that it would not attend the oral proceedings and that the proceedings could be continued in writing.

VIII. The Board thereupon cancelled the oral proceedings and informed the appellant that the proceedings would be continued in writing.

IX. Claims of the appellant's requests

(a) Main request

Independent apparatus claim 1 as originally filed reads as follows (the feature numbering is introduced by the Board for ease of reference):

- (1.1) An automatic ice maker apparatus arranged for use on a refrigerator or freezer door comprising:
- (1.2) an elongated mold having a curved bottom wall with a first edge on one side of the mold and a second edge on a second side of the mold;
- (1.3) a plurality of transverse partial partition walls within the mold defining a plurality of cavities to contain water to be frozen into ice pieces;
- (1.4) a fill trough extending along the second edge above the mold; and
- (1.5) at least one opening in the fill trough for water to flow into the mold from the fill trough.

Independent apparatus claim 10 as originally filed reads as follows (the feature numbering is introduced by the Board for ease of reference):

- (10.1) A refrigerator freezer having a refrigerated compartment, an insulated door including an inner door

for closing the refrigerated compartment mounted on hinges to the refrigerator freezer, a refrigeration system for cooling the compartment, and an automatic ice maker mounted on the insulated door comprising:
(10.2) an elongated mold having a curved bottom wall with a first edge on one side and a second edge on a second side;

(10.3) a plurality of transverse partial partition walls within the mold to define a plurality of cavities to contain water to be frozen into ice pieces;

(10.4) a fill trough extending along the second edge above the mold;

(10.5) at least one opening in the fill trough for water to flow into the mold from the fill trough; and

(10.6) a fill tube extending to the fill trough for providing water to the mold.

Independent method claim 20 as originally filed reads as follows (the feature numbering is introduced by the Board for ease of reference):

(20.1) A method of making ice in a refrigerator freezer in which an automatic ice maker having a longitudinally extending ice mold is mounted on one of the

refrigerator or freezer compartment doors comprising:

(20.2) operating the refrigerator freezer to provide cooling to the refrigerator and freezer compartments;

(20.3) filling the ice mold with water;

(20.4) preventing spills of water from the ice maker when the refrigerator or freezer compartment door on which the ice maker is mounted is opened or closed;

(20.5) harvesting ice pieces from the ice mold after the water has frozen;

(20.6) wherein the step of preventing spills of water from the ice maker comprises:

(20.7) providing a fill trough extending longitudinally along a top edge of the ice mold on the side of the ice mold positioned away from the one of the refrigerator or freezer compartment doors with side walls extending above the ice mold; and

(20.8) providing at least one opening from the fill trough into the ice mold for water to flow into the ice mold from the fill trough;

(20.9) wherein the fill trough directs water back into the ice mold when the one of the refrigerator or freezer compartment door on which the ice mold is mounted is moved abruptly with water present in the mold.

(b) Third auxiliary request

Claim 1 differs from claim 1 of the main request in that the limitations have been introduced that **"the fill trough is arranged aside the mold and forms a continuous extension of the curved bottom wall at the second edge"** and that **"it extends along substantially the entire length of the elongated mold"**.

Independent claim 9 differs from claim 10 of the main request in that the same limitations have been introduced.

Independent method claim 18 differs from claim 20 of the main request in that the limitations have been introduced that the ice mold is **"an elongated mold having a curved bottom wall with a first edge on one side of the mold and a second edge on a second side of the mold"**, and that the fill trough **"forms a continuous extension of the curved bottom wall at the second edge"** and **"extends along substantially the entire length of**

the elongated mold, whereby it contains water flowing out of the ice mold".

(c) Fourth to sixth auxiliary requests

In the light of the order of the present decision, it is not necessary to reproduce the wording of the claims of the fourth to sixth auxiliary requests.

X. Prior art

(a) The following prior art documents were cited in the search report:

D1: JP S 49 54150 U;
D2: JP 2003 279210;
D3: JP S 60 69469;
D4: JP H 05 99545;
D5: JP S 49 60357 U;
D6: US 2006/086135 A1;
D7: JP H 05 141826; and
D8: JP S 57 83381 U.

Of these, D1 to D6 were cited in the decision under appeal.

(b) In the communication pursuant to Article 15(1) RPBA 2020 the Board referred to the following prior art document:

D9: US 4,649,718

XI. The arguments of the appellant, insofar as relevant for the present decision, can be summarised as follows:

(a) Main request - Novelty

The examination division has decided

- that the subject-matter of claim 1 lacks novelty in light of D1 (figures 3 and 4), D2 (figures 2 and 3), D3 (figure 5), D4 (figure 1), D5 (figure 2) and D6 (figures 20A, 20B and 20C);
- that the subject-matter of claims 10 and 20 lacks novelty in light of D6 (figures 1A, 1B and 2 in combination with figure 20A).

However, none of these documents discloses a "fill trough" as defined in claims 1, 10 and 20. The term "trough" normally means a long shallow, often V-shaped receptacle for the drinking water or feed of domestic animals and can also indicate a conduit, drain, or channel for water, especially a gutter along the eaves of a building (see www.merriam-webster.com). The "fill trough" of the claimed invention resembles such a receptacle. As shown in figure 31 and stated in paragraph 90 of the description, the fill trough 446 is arranged aside the ice mold 436 and forms a continuous extension of its curved bottom wall 437 along the edge 444.

D1 discloses a funnel 12 arranged above an ice mold and vertically spaced from it (figures 3 and 4). Since the funnel does not extend along the edge of the mold, it cannot be seen as a fill trough, i.e. an elongated conduit or channel like a gutter.

Figures 2 and 3 of D2 disclose an ice tray 7 and a service pipe 12 whose end 12A is arranged at one end of the ice tray so as to allow to fill water into it. The ice tray does not comprise any fill trough extending along an edge thereof. Moreover, the ice tray does not have an elongated shape with a curved bottom wall, but

rather a stepped configuration wherein several molds are arranged in series one below the other and are set in fluid communication with each other through waterways (7E, 7F, 7G).

Figure 5 of D3 shows an ice tray 17 having a mouth 17a allowing to receive water from a pipe 2. Hence, similarly to D2, D3 does not disclose a fill trough extending along an edge of the ice tray.

Figure 1 of D4 shows an ice tray 23 having a cover 34 wherein an aperture is formed in order to allow to fill water in. The ice tray features a number of molds that are arranged in fluid communication with each other by way of U-shaped waterways. D4 does not disclose a fill trough extending along an edge of the mold and above it. In addition to this, the ice tray and its molds do not have curved bottom walls.

D5 disclose an ice tray 11 above which a funnel 9 having two apertures 10, 10b is arranged. The funnel does not extend along the edge of the ice mold, thus it cannot be seen as a fill trough, i.e. a conduit, drain, or channel like a gutter.

Figures 20A, 20B and 20C of D6 show a water inlet element 123 configured to direct water from a fill tube to the ice mold. The water inlet element has a funnel structure and does not extend along an edge of the mold to define an elongated channel.

(b) Third auxiliary request - Amendments

The claims have been amended to overcome the objections of lack of novelty raised in the appealed decision as

well as those set out in the Board's communication pursuant to Article 15(1) RPBA 2020.

Claim 1 has been amended by introducing the further limiting feature of original claim 4 ("the fill trough extends along substantially the entire length of the elongated mold") and by specifying that the fill trough is arranged "aside the mold and forms a continuous extension of the curved bottom wall at the second edge". Support for this amendment can be found in paragraph 90 and figures 31 and 32 of the application as originally filed. Claim 9 corresponds to a combination of original claims 10 and 12, whereby the further limitation has been added that the fill trough is arranged "aside the mold and forms a continuous extension of the curved bottom wall at the second edge". Claim 18 corresponds to original claim 20 which has been amended accordingly. In addition, it has been amended to clarify that the ice mold is "an elongated mold having a curved bottom wall with a first edge on one side of the mold and a second edge on a second side of the mold", and to further specify the operation of the fill trough (paragraph 91 of the application).

(c) Third auxiliary request - Novelty

The claimed subject-matter is novel over the cited prior art documents because they fail to disclose a fill trough, let alone a fill trough that is "arranged aside the mold", "forms a continuous extension of the curved bottom wall at the second edge" and "extends along substantially the entire length of the elongated mold".

Even though the water supply funnel disclosed in D1 or D5 might be seen as a fill trough, it is arranged above

the ice mold and vertically spaced from it and thus it is neither arranged aside the ice mold for its entire length, nor does it form a continuous extension of its curved bottom wall.

The water inlet element of D6 might be construed as a fill trough having a funnel structure that is arranged at one of longitudinal ends of the ice mold. However, it does not extend along an edge of the mold to define an elongated channel aside it, and it does not form a continuous extension of the curved bottom wall of the ice mold.

D9 discloses an ice maker, whose structure resembles the structure of the ice maker of the invention, wherein a water supply trough is mounted to the ice maker mold at one of its longitudinal ends. At variance with the claimed invention, the water supply trough is not arranged aside the ice mold for its entire length and it does not form a continuous extension of its curved bottom wall.

Reasons for the Decision

1. Applicable provisions of the EPC
 - 1.1 The application was filed on 17 May 2007, i.e. before entry into force of the EPC 2000 on 13 December 2007.
 - 1.2 According to Articles 1(1) and 6, first sentence of the Decision of the Administrative Council of 28 June 2001 on the transitional provisions under Article 7 of the Act revising the EPC of 29 November 2000 (Special edition No. 4, OJ EPO 2007, English version, 217), Articles 54(1)(2), 84, 111(1) and 114 EPC 1973 as well as Article 123 EPC (2000) apply. Since Rule 29 EPC 1973

is linked to Article 84 EPC 1973, it is to be applied in the present case (by analogy with J 10/07, OJ EPO 2008, 567).

2. Applicable Rules of Procedure of the Boards of Appeal

2.1 The revised version of the Rules of Procedure of the Boards of Appeal (RPBA 2020) came into force on 1 January 2020 (Articles 24 and 25(1) RPBA 2020). Subject to the transitional provisions (Article 25 RPBA 2020), the revised version also applies to appeals pending on the date of the entry into force.

2.2 In the present case the statement of grounds of appeal was filed before 1 January 2020. Thus, Article 12(4) to (6) RPBA 2020 does not apply, and instead Article 12(4) RPBA 2007 applies to the grounds of appeal (Article 25(2) RPBA 2020).

2.3 Since the summons to the oral proceedings has been notified after 1 January 2020, Article 13 RPBA 2020 is to be applied for questions regarding any amendment to the appellant's appeal case in response to the summons.

3. Document D9 - Consideration in the proceedings

3.1 D9 is mentioned in the application as filed (paragraphs 70, 72 to 74 and 83).

3.2 The Board has introduced this prior art document into the appeal proceedings because its content is highly relevant for construing the claims and assessing the question of novelty and possibly inventive step (Article 114(1) EPC 1973).

4. Main request - Novelty

4.1 The appellant challenges the examination division's decision

- that the subject-matter of claim 1 lacks novelty in light of D1, D2, D3, D4, D5 and D6, and
- that the subject-matter of claims 10 and 20 lacks novelty in light of D6.

4.2 The Board shares the appellant's view that D2 and D4 fail to disclose a "curved bottom wall" as required by feature (1.2) of claim 1.

4.3 However, the Board is not persuaded by the appellant's argument that D1, D2, D5 and D6 fail to disclose a "fill trough" as defined in features (1.4) and (1.5) of claim 1:

4.3.1 On a normal reading of the disputed term "fill trough" in the context of claim 1, it simply defines a narrow open box-like vessel adapted to contain water, alternatively a channel, pipe, trunk or conduit for conveying water (see e.g. Oxford English Dictionary). The language of the feature "fill trough" is clear, albeit broad. For instance, claim 1 covers embodiments wherein the trough is arranged right above the mold and/or extends along an end wall of the mold (see e.g. D9, "trough 39" in figures 1 and 4 and column 3, line 49 to column 4, line 3).

4.3.2 Since claim 1 itself imparts a clear and technically sound teaching to the skilled reader, there is no reason for consulting the description and the drawings of the application to give the disputed feature a narrower meaning. The appellant submits that it follows from figure 31 and the teaching in paragraph 90 of the

description that the fill trough is arranged aside the mold, forms a continuous extension of the curved bottom wall at the mold edge and extends substantially along the entire length of the mold. However, this teaching of the application cannot be relied on to read into the claim implicit restrictive features which are not suggested by the explicit wording of the claim.

- 4.3.3 Based on the above interpretation of the feature "fill trough", the water receiver 12 disclosed in D1 forms a fill trough as defined in claim 1. Indeed, it is an elongated open box-like vessel adapted to contain water for filling the ice mold 9 (figures 3 and 4 of D1). In contrast to the trough 446 shown in figure 31 of the application, the trough 12 of D1 is funnel-shaped in cross-section and arranged right above the mold 9, whereby it extends essentially along the mold width. However, this is not excluded by the claim wording.
- 4.3.4 For the same reasons, the elongated water receiver 9 shown in figures 2 to 4 of D5 forms a "fill trough" in the broad sense of claim 1, even though it is arranged above the ice mold 11, but not aside it.
- 4.3.5 The elongated receptacle 7D shown in figures 2 and 3 of D2 is adapted to direct water to the ice mold and extends along a mold edge and above it. Hence, the receptacle 7D anticipates the "fill trough" required in claim 1.
- 4.3.6 The water inlet element 123 disclosed in D6 (figures 4 to 8 and 20a) is an elongated water receptacle adapted to direct water from an ice maker fill tube into the ice mold 116, and thus forms a "fill trough" as defined in broad terms in claim 1. In contrast to the trough 446 shown in figure 31 of the application, the element

123 of D6 extends along an end wall of the mold. However, this is not excluded by the claim wording.

- 4.4 With respect to D3 and D4, the Board agrees with the appellant that these documents fail to disclose a "fill trough" as required by claim 1. In this respect, the examining division refers to item 17a in figure 5 of D3. However, this is the water receiving port of the ice tray 17, which is formed as a lip or mouth, rather than a trough. The examining division refers to items 32 and 34 in figures 1 and 2 of D4 but item 32 is the heat insulating material of the lid 28 covering the ice tray 23, while item 34 is a water inlet formed in the periphery of the lid 28.
- 4.5 The ice maker apparatuses disclosed in D7 and D8 are similar to those disclosed in D4 and D3. For the reasons set out above, they do not anticipate the claimed subject-matter.
- 4.6 The subject-matter of claim 1 is also anticipated by the teaching of D9, see figures 1 and 4 as already mentioned above. Indeed, this document discloses, in the terms of claim 1, an automatic ice maker apparatus (10) which is arranged for use on a refrigerator or freezer door and comprises: an elongated mold (11) having a curved bottom wall (12) with a first edge on one side of the mold and a second edge on a second side of the mold (front and rear wall portions 14 and 15); a plurality of transverse partial partition walls within the mold defining a plurality of cavities to contain water to be frozen into ice pieces; a fill trough (39) extending along the second edge above the mold; and an opening in the fill trough for water to flow into the mold from the fill trough (inlet chute portion 43). This apparatus disclosed in D9 is similar to that

illustrated in figures 3 to 8 of the present application (see paragraphs 70 to 74).

- 4.7 In conclusion, the subject-matter of claim 1 of the main request is anticipated by the teaching of D1, D5, D6 or D9, but not by that of D2, D3, D4, D7 or D8.
- 4.8 For the reasons set above, the Board shares the examining division's view that the subject-matter of claims 10 and 20 of the main request is anticipated by the teaching of D6.
5. Third auxiliary request - Admissibility in the appeal proceedings
 - 5.1 The appellant filed the third auxiliary request after oral proceedings had been arranged.
 - 5.2 The Board exercised its discretion pursuant to Article 13(2) RPBA 2020 to admit this new request into the appeal proceedings for the following reasons.
 - 5.2.1 The claims of the third auxiliary request differ from those of the first auxiliary request filed with the statement of grounds of appeal in that reference numbers have been introduced in all claims and claim 18 comprises the further limitation that the ice mold is "an elongated mold having a curved bottom wall with a first edge on one side of the mold and a second edge on a second side of the mold". These amendments are in response to objections under Article 84 and Rule 29(7) EPC 1973 and Article 123(2) EPC which were raised for the first time in the Board's communication pursuant to Article 15(1) RPBA 2020.

5.2.2 Claims 1, 9 and 18 of the third auxiliary request differ from claims 1, 10 and 20 of the main request on which the appealed decision was based essentially by the added limitations that the fill trough "is arranged aside the mold", "forms a continuous extension of the curved bottom wall at the second edge" and "extends along substantially the entire length of the elongated mold". These amendments were already introduced in the first auxiliary request filed with the statement of grounds of appeal, with the aim of overcoming all objections of lack of novelty raised in the appealed decision. They can be regarded as an appropriate reaction to the appealed decision (Article 12(4) RPBA 2007).

5.3 The amendments to the claims clearly overcome all outstanding objections without introducing new issues.

6. The Board is satisfied that the amendments to the claims are supported by the information in the application documents as originally filed, as indicated by the appellant (see point XI-b) above).

7. Third auxiliary request - Novelty

7.1 The appellant contends that the claim amendments overcome the above objection of lack of novelty in light of D1, D5, D6 and D9. In particular, the appellant submits that these documents fail to disclose the further limiting features introduced in claims 1, 9 and 18, namely

- (a) that the fill trough "is arranged aside the mold",
- (b) that it "forms a continuous extension of the curved bottom wall at the second edge",
- (c) that it "extends along substantially the entire length of the elongated mold".

- 7.2 The Board is satisfied that the fill troughs disclosed in D1, D5, D6 and D9 do not anticipate all of these features:
- 7.2.1 The water receiver 12 shown in figures 3 and 4 of D1 does not realise features (a) to (c).
- 7.2.2 In D5, the water receiver 9 extends along substantially the entire length of the elongated mold 11 (feature (c)), but it does not have features (a) and (b).
- 7.2.3 In D6, the water inlet element 123 is arranged aside the elongated mold (feature (a)), but it neither forms a continuous extension of its curved bottom wall (feature (b)) nor does it extend along substantially its entire length (feature (c)).
- 7.2.4 In D9, the fill trough 39 is arranged aside the elongated mold 11 (feature (a)) but it does not have features (b) and (c).
- 7.3 For the reasons set out above for the main request, the Board is also satisfied that D2, D3, D7 and D8 do not anticipate the claimed subject-matter.
- 7.4 Hence, the subject-matter of claims 1, 9 and 18 is new in the sense of Article 54(1)(2) EPC 1973 in light of the cited prior art.
8. Remittal of the case
- 8.1 In its communication under Article 15(1) RPBA 2020, the Board set out and reasoned its intention to remit the case to the examining division, as follows (point 11):

"Should the appellant file amendments to the claims of the auxiliary requests which overcome the above objections under Article 84 and Rule 29(7) EPC 1973 and Article 123(2) EPC, the Board considers that it would be appropriate to remit the case to the examining division for further prosecution (Article 111(1) EPC 1973).

Even though the Board should normally not remit the case (Article 11 RPBA 2020), special reasons are apparent in the present case for doing so. In particular, the appealed decision only deals with the objection of lack of novelty in light of D1 to D6, and the question of whether or not the claimed invention is inventive has not been addressed in the decision. It is the primary object of the appeal proceedings to review the appealed decision in a judicial manner (Article 12(2) RPBA 2020), not to conduct a complete examination of the application. In addition, since the added feature that the trough "extends along substantially the entire length of the elongated mold" was taken from the description and drawings, an additional search for relevant prior art documents may be necessary. In fact, the examining division submitted that the search report contained only a small number of novelty destroying documents ("novelty overflow", point 11 of the reasons)."

- 8.2 In its response dated 21 May 2020, the appellant agreed that the case should be remitted to the examining division for the reasons pointed out by the Board.
- 8.3 In the absence of any counter-arguments submitted by the appellant, the conclusions reached by the Board in its communication under Article 15(1) RPBA 2020 continue to apply. Hence, the case is remitted to the

examining division for further prosecution on the basis of the amended claims of the third auxiliary request.

9. In light of this conclusion there is no need to consider the fourth to sixth auxiliary requests.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division for further prosecution.

The Registrar:

The Chairman:



C. Spira

G. Patton

Decision electronically authenticated