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**Datasheet for the decision
of 27 May 2021**

Case Number: T 0694/17 - 3.2.06

Application Number: 09164001.1

Publication Number: 2270274

IPC: D06F58/04, D06F58/16,
D06F58/24, D06F58/20

Language of the proceedings: EN

Title of invention:
Appliance for drying laundry

Patent Proprietor:
Electrolux Home Products Corporation N.V.

Opponent:
BSH Hausgeräte GmbH

Headword:

Relevant legal provisions:

EPC Art. 83, 56
RPBA Art. 12(4)

Keyword:

Sufficiency of disclosure - (yes)

Inventive step - (yes)

Late-filed evidence - submitted with the statement of grounds
of appeal - admitted (no)

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 0694/17 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 27 May 2021

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
17 January 2017 concerning maintenance of the
European Patent No. 2270274 in amended form.**

Composition of the Board:

Chairman M. Harrison
Members: T. Rosenblatt
E. Kossonakou

Summary of Facts and Submissions

- I. Both the patent-proprietor and the opponent filed appeals against the interlocutory decision of the opposition division, in which the opposition division found that European patent No. 2 270 274 in an amended form met the requirements of the EPC.
- II. The parties were summoned to oral proceedings before the Board of Appeal. With a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA 2020) the parties were informed of the Board's provisional opinion. The Board opined *inter alia* that maintenance of the patent as granted appeared not to be prejudiced by the ground for opposition under Article 100(b) EPC, whereas the ground for opposition under Article 100(a) in combination with Article 54 EPC appeared prejudicial to its maintenance.

In regard to the proprietor's (then) first auxiliary request to dismiss the opponent's appeal, i.e. maintenance of the patent in the amended form which the opposition division considered to meet the requirements of the EPC, the Board was not convinced by the opponent's objection under Article 56 EPC, based on

D1 : EP 1 584 734 A2

and

D5 : WO 2009/077308 A1.

Furthermore, the Board stated that no different conclusion on sufficiency of disclosure than that in regard to the patent as granted could be expected and, with reference to G 3/14, that the additional clarity objections raised under Article 84 EPC in the

opponent's statement of grounds of appeal were not a matter which the Board could examine.

In regard to

D10 : EP 1 411 163 A2,

which the opponent had submitted with its statement of grounds of appeal, the Board intended to hold it inadmissible having regard to Article 12(4) RPBA 2007.

III. Oral proceedings before the Board were held on 27 May 2021 by videoconference.

Towards the end of the oral proceedings the proprietor withdrew its appeal. In the following, the proprietor is thus referred to as respondent and the opponent as appellant.

IV. The appellant requested that the decision under appeal be set aside and the European patent No. 2 270 274 be revoked.

V. The respondent requested that the appeal be dismissed.

VI. Claim 1 considered by the opposition division to meet the requirements of the EPC reads as follows:

"1. A top (119) adapted to be mounted to a cabinet (110) of a laundry drying appliance (100) to match and close from above the cabinet (110), the top forming a moisture condensing module for dehydrating drying air used to dry laundry within a drying drum of the laundry drying appliance,
the top has:
a drying air inlet (510),

a drying air outlet (515),
fluid passageways defined thereinside from said drying
air inlet to said drying air outlet for the passage of
the drying air to be dehydrated and moisture condensing
means arranged inside said fluid passageways, and the
top is formed as a ready-to-mount part ready to be
mounted to the cabinet, and the top has a top surface
and a bottom surface, and wherein said drying air inlet
and said drying air outlet are provided on the bottom
surface. [sic]

characterized in that the moisture condensing means
comprises an evaporator (2115) of a heat pump, and in
that the heat pump is fluidly coupled or couplable to a
compressor (2125), said compressor being either
attached to the top or being accommodated in
correspondence of a basement of the laundry drying
appliance."

VII. The arguments of the appellant may be summarised as
follows:

Article 83 EPC

The patent lacked any definition of a "ready-to-mount"
part and of a "bottom surface". Whether a top could be
qualified as "ready-to-mount" depended on the other
component, to which the top could be mounted but which
was not a feature of the claimed top. The claim defined
no particular feature which specifically corresponded
to the "ready-to-mount" property. Therefore it remained
entirely unclear which features a top should possess in
order to become a "ready-to-mount" top, so as to be
distinguishable from a normal worktop. The passages
referred to by the respondent contained no information
in this regard. Similarly, contrary to the well-known
meaning of a top surface of a worktop, it was entirely

unclear how the "bottom surface" should be identified. In particular in cases where the worktop could comprise other components (e.g. fluid lines) on its underside, the bottom surface of such a worktop remained undefined. Also the Figures, such as Figure 10, gave no clear answer in this regard. For example, the openings in the lower shell part were not situated in a bottom surface as required by the claim.

Article 56 EPC

D1 constituted the closest prior art to the subject-matter of claim 1 and disclosed the features of its preamble. The distinguishing features defined in the characterising portion could be seen to solve, for example, the problem of providing an alternative concept of treating the process air. D5 disclosed the use of a heat pump and arranging part of its components in the upper part, i.e. the top of the laundry device (see page 4, lines 13-22). D5 also referred to a compact arrangement (see page 4, lines 24-30). The skilled person would therefore obviously apply the more efficient heat pump system of D5 and substitute it for the air-air heat exchanger used in the device known from D1. The process air flow in D1 was reversed compared to the process air flow in D5. When mounting the heat pump's components of D5 in the device of D1, the skilled person would therefore obviously have altered the placement of the heat pump's evaporator (6) and its condenser (7). This would have resulted in a final configuration in which the evaporator (6) was installed in the top of the device, whereas the condenser (7) would go to the back. Prompted by the need for easy access to a necessary lint filter installed upstream of the heat exchanger, the skilled person would have recognised that the arrangement of

the heat pump's evaporator in the back of the device of D5 was highly inconvenient. This consideration of the skilled person confirmed the only possible position for installing the evaporator in D1, namely in the device's top instead of in the back of the device's drum where it was inaccessible. In regard to the placement of the heat pump's compressor, the skilled person had only the two obvious possibilities defined in claim 1.

Admittance of D10

D10 was found in the course of parallel proceedings. Despite it being cited in the patent, its relevance could not be easily detected, as was evident also from the fact that it was never considered before during the search, examination or opposition procedures. The relevant information in D10 was only mentioned in subordinate parts of its description and shown in Figure 9. Its filing with the appeal grounds constituted an appropriate response to the unexpected conclusion of the opposition division expressed in paragraph 13.2 of the written decision, according to which the condenser (7) of D5 could not be equated with the condensing means of the heat exchanger of D1. Moreover, amended claim 1 was submitted only during the oral proceedings before the opposition division, so that a further search could anyway not have been conducted earlier. D10 was also highly relevant for the subject-matter of claim 1.

VIII. The arguments of the respondent may be summarised as follows:

Article 83 EPC

The patent's description, for example paragraphs 35, 49 and 57 and its Figures, for example Figures 5B, 10, 22B and 24B, disclosed different embodiments of a top according to claim 1. The claim referred to mounting the top to the cabinet and the description indicated how such a pre-assembled worktop could be mounted to a cabinet. From the Figures, the skilled person would have understood that the bottom surface is the three-dimensionally conformed surface visible from the underside of the worktop, opposite its top surface. The information contained in the patent was sufficiently clear for the skilled person in regard to the questions of how the objected expressions would be understood and, consequently, of how to carry out the claimed invention.

Article 56 EPC

D1 did not provide any pointer to replace the heat exchanger by components of a heat pump. The objective technical problem could not refer to parts of a heat pump nor did the distinguishing features have anything to do with energy consumption or compactness. Instead, an objective technical problem could be seen in providing an alternative solution of the top known from D1. D5 did not point to the claimed solution. Specific positions of the evaporator and the condenser of the heat pump were suggested in D5 (see page 1, line 37 to page 2, line 10 and page 2, lines 24-27). A short air flow path between the drum and the evaporator as well as the evaporator's vertical arrangement in the cabinet

were important for improving condensation efficiency in D5. The application of these components in D1 would have required further modifications, for which the skilled person had no hint.

Admittance of D10

D10 was cited in paragraph 6 of the patent. It was thus available from the beginning of the opposition procedure. Moreover, the corresponding amendment of claim 1 had already been submitted with the letter of 17 October 2016, hence before the oral proceedings during which only a renumbering of requests occurred. Also, the argument of which the appellant was allegedly made aware only in the written impugned decision, was actually submitted in the letter accompanying the submission of the amended claims. D10 was anyway not more relevant for the subject-matter of claim 1 than D5.

Reasons for the Decision

Article 83 EPC

1. The patent discloses the invention defined in claim 1 in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Article 83 EPC).
- 1.1 The Board notes that the subject-matter of claim 1 is based on a combination of granted claims 1, 5 and 7. The objections of the appellant are directed against the expressions "ready-to-mount" and "bottom surface"

which were defined in granted claim 1. The corresponding ground for opposition against the claim as granted was rejected by the opposition division in the impugned decision. After the proprietor's withdrawal of its appeal and therewith its request for maintenance of the patent as granted, the objection against sufficiency of disclosure concerning the two expressions still applies against the subject-matter of claim 1 found allowable by the opposition division.

- 1.2 It was neither argued that the amendments leading to present claim 1 would have overcome these objections, nor has it been argued that the amendments raised other objections under Article 83 EPC. The Board can also not see that either would be the case.

As set out in the Board's communication pursuant to Article 15(1) RPBA 2020, the additional objections under Article 84 EPC raised against the above cited expressions in the appeal grounds of the appellant are not a matter which the Board could examine in the present appeal proceeding (G 3/14, OJ EPO 2015, 102). The appellant did not submit any further argument in this regard.

- 1.3 Despite a lack of precise definitions in the patent in regard to the two criticised expressions in claim 1, the skilled person will understand from the patent as a whole how to carry out the claimed invention.

- 1.3.1 Paragraphs 35, 49 and 57 disclose in particular how the top is assembled with certain components prior to the top's installation in this pre-assembled state on the cabinet. In the context of the description of a first embodiment of the invention, paragraph 49 specifically discloses that "[t]he top 119, once assembled, forms a

unit that is ready to be mounted to the cabinet 110, simply by placing it in the correct alignment, so that the openings 510 and 515 matches the outlet 310 of the return air duct 305 and, respectively, the intake 210 of the air circulation fan 205." A similar statement is found in paragraph 57 in regard to a second embodiment. These two embodiments provide sufficiently clear and complete guidance to the skilled person in regard to the question on how to carry out a "ready-to-mount" top.

The appellant did not provide any reason why the skilled person would not be able to extend this teaching to other tops.

The expression "ready-to-mount" top is indeed broad. Contrary to what was argued by the respondent, the claim does not imply any specific plug-in or other convenient mounting features for the top, let alone for its connection to an (undefined) cabinet. However, the mere fact that the expression is broad does not prevent a skilled person from carrying out the invention.

- 1.3.2 Similarly, the Board finds that the patent provides sufficient information for the skilled person in regard to the feature "bottom surface" of the top and how this aspect of the invention is to be carried out. As is apparent from e.g. Figures 5B, 10, 22B or 24B the skilled person would have no difficulties in carrying out the invention in respect of a top presenting a "bottom surface" and on which bottom surface a drying air inlet and outlet are provided according to claim 1. The expression does not exclude that such bottom surface, visible as the underside of the top in the Figures, is a three-dimensionally shaped surface. Again, the breadth of the expression "bottom surface"

does not prevent a skilled person from carrying out the invention in regard to this aspect.

- 1.4 The Board therefore concludes that the requirement of Article 83 EPC is met.

Article 56 EPC

2. The subject-matter of claim 1 is not obvious having regard to the prior art on file.
- 2.1 The parties agree that the worktop of the condenser dryer shown in Figures 1 and 2 of D1 can be considered as the closest prior art to the top defined by claim 1. The features in the preamble of claim 1 are anticipated by this known worktop.
- 2.2 The respondent contested that certain of the features of the claim's preamble were disclosed in D1 but the corresponding arguments did not convince the Board. The reasons for the Board's conclusion in this regard are, however, not relevant for the outcome of the appeal, because the features in the characterising portion are indisputably not known from D1 and are also not rendered obvious by the prior art on file, as will be seen in the following.
- 2.3 The top disclosed in D1 comprises a heat exchanger integral therewith, together with fluid passageways for guiding the process and cooling air from respective air inlets through the heat exchanger to respective air outlets (see paragraph 9 and Figures of D1). Underneath the heat exchanger there is a tank for collecting the condensed humidity of the process air (paragraph 14 of D1). The integrated moisture condensing system of the top of D1 is thus based on an air-air heat exchanger.

The features distinguishing claim 1 over D1 constitute an alternative moisture condensing means, based on a heat pump which comprises *inter alia* an evaporator (which acts as the moisture condensing means for the process air exiting the dryer drum), and the compressor of the heat pump which may be either attached to the top or accommodated in the basement of the dryer.

A particular technical effect cannot be attributed to such a top. There is no indication that the evaporator of a heat pump is necessarily more efficient than an air-air moisture condensing means, nor is the resulting arrangement necessarily more compact than the top known from D1. Having regard to the different technical problems considered by the parties, the Board concludes that an objective technical problem may only be seen in the provision of an alternative concept for treating the process air (i.e. the air used for drying the laundry in the drum of the dryer).

- 2.4 It is undisputed that D1 does not point to the use of a heat pump instead of an air-air heat exchanger for dehydrating the process air.
- 2.5 D5 discloses a laundry drying device including a heat pump. In order to increase the efficiency of such a drying appliance compared to the prior art from which D5 starts, the evaporator of the heat pump is placed at least partially, preferably entirely, between the rear wall and the back of the drum (page 1, line 34 to page 2, line 2, and page 2, lines 12 to 27 Figure 2). Moreover, the evaporator 6 is arranged so that the process air flows upwards through it, thereby facilitating the drainage of the condensate downwards and rinsing lint out of the evaporator's process air channels. The condenser 7 of the heat pump is installed

over the drum, underneath the top of the laundry appliance.

- 2.6 Although D5 discloses a heat pump system which can be considered as constituting an alternative to the moisture condensing means used in D1, it does not render the subject-matter of claim 1 obvious. When following the teaching of D5, the skilled person would arrange the moisture condensing means provided by the heat pump's evaporator close to the drum's process air outlet and in an orientation suitable for vertical air flow and gravity draining of condensate (cf. paragraph 2.5 above). The drum's process air outlet is schematically illustrated in D1 as being through the front of the drum, without showing any detail of the exact position of the outlet or passageways from such outlet to the top. Applying the teaching of D5 to the device known from D1, the skilled person would thus be prompted to install the evaporator in the front of the drum of D1 and the condenser of the heat pump of D5 would have to be mounted over the drum, in place of the moisture condensing means of D1. The evaporator's arrangement in the top would then constitute a further modification of the structure of D5, for which the Board cannot find a pointer.

The appellant's argument that such modification would obviously follow from the direction of process air in D1, which was reversed compared to D5, does not convince the Board. The specific positions of the heat pump's condenser 7 and evaporator 6 according to D5 are chosen on purpose, namely to reduce the energy consumption in a laundry dryer. An installation of the evaporator 6 over the drum, in place of the air-air heat exchanger of D1, would present the skilled person with the need to re-design the entire structure of the

moisture condensing system of D1, taking into account the considerations from D5 in regard to the reduction of energy consumption. This goes beyond common design practice. Ignoring the considerations which led in D5 to the specific positions of the evaporator and of the condenser would go against the teaching of D5, which can only be seen as being based on hindsight knowledge of the invention.

The appellant's argument in regard to the inaccessibility of the heat pump's evaporator when installed in the back of the drum of D1, making removal of lint from it impossible, is not persuasive either. Lint is drained according to D5 specifically by the evaporator's orientation in which process air flows vertically upwards through it. Lint is thereby removed with the condensate flowing downwards. The problem identified by the appellant would therefore not occur if the evaporator of D5 were mounted in D1 with a vertical process air flow direction and not horizontally in the top.

2.7 The Board therefore concludes that the subject-matter of claim 1 is not rendered obvious when starting from D1 in combination with the teaching of D5.

2.8 No other objections under Article 56 EPC were maintained or raised against the subject-matter of claim 1, besides objections based on D10, which the Board decided to hold inadmissible (see below). The Board therefore concludes that the requirement of Article 56 EPC is met.

D10 - Article 12(4) RPBA 2007

3. The Board decided to hold D10 inadmissible according to Article 12(4) RPBA 2007 for the following reasons.
 - 3.1 D10 was submitted together with the statement setting out the grounds of appeal. However, it is already mentioned in the patent in paragraph 6, so that it could and indeed should have been filed during the opposition procedure.
 - 3.2 The Board is not convinced by the appellant's arguments about the relevance of D10 being somewhat hidden and never becoming prominent during the search, examination and opposition procedures. The fact that it was not cited in search or examination by the entrusted division is not relevant. Opposition proceedings are precisely the opportunity to bring up any available evidence which may stand against the patent, irrespective of whether the search or examining division had considered such evidence. Furthermore, the number of documents cited in the patent in suit is not particularly high. Paragraph 6 deals with prior art exploiting heat pumps (i.e. precisely the issue at hand with the request under consideration) to dehydrate the process air and cites three documents on this topic. The use of heat pumps within the context of the present invention also constitutes subject-matter defined in the dependent claims of the patent and which were opposed with the notice of opposition. Not least in view of the low number (three) of documents cited in the patent in this regard, the Board cannot accept that the effort required to consider the relevant content of these documents was an undue burden for the opponent when preparing the notice of opposition. Such activity is, moreover, entirely the responsibility of the

opponent.

3.3 The Board also does not accept the appellant's contention that the subject-matter of the independent claim found allowable by the opposition division had been submitted only during the oral proceedings and that the written reasoning of the opposition division furthermore contained a surprising consideration. In fact, as already mentioned above, amended claim 1 is based on a combination of features from granted claims 1, 5 and 7. A claim comprising this combination of features was already submitted as auxiliary request 5 on 17 October 2016, i.e. one month prior to the oral proceedings before the opposition division. Also, the allegedly unexpected conclusion made by the opposition division in its written decision was already brought to the attention of the opponent previously. In its letter of 17 October 2016 accompanying the submission of auxiliary request 5, the proprietor had pointed out on page 7 thereof that the evaporator 6 of the heat pump known from D5 had to be equated with a moisture condensing means and that this evaporator was to be arranged in the back and not in the top of the machine cabinet. This implies that the proprietor considered the condenser 7 of the heat pump of D5 as not being identifiable with the moisture condensing means of claim 1. Therefore the statement of the opposition division in paragraph 13.2.3 of the impugned decision, which the appellant gives as the justification for the search for new prior art, cannot be considered as unexpected or surprising at all.

3.4 Under these circumstances and irrespective of the potential relevance of D10, the Board concludes that D10 could and should have been submitted during the opposition proceedings, at the latest after the

proprietor's submissions of 17 October 2016. For these reasons, the Board decided to hold D10 inadmissible (Article 12(4) RPBA 2007).

4. Absent any other objection prejudicing maintenance of the patent in accordance with the interlocutory decision of the opposition division, the Board concludes that the appeal of the opponent must be dismissed.

Order

For these reasons it is decided that:

The opponent's appeal is dismissed.

The Registrar:

The Chairman:



D. Grundner

M. Harrison

Decision electronically authenticated