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**Datasheet for the decision
of 18 April 2024**

Case Number: T 1422/21 - 3.2.03

Application Number: 13185073.7

Publication Number: 2851620

IPC: F24C7/08, H05B6/64, G06F3/041

Language of the proceedings: EN

Title of invention:
Touch screen control panel and kitchen appliance comprising
such a control panel

Patent Proprietor:
Electrolux Appliances Aktiebolag

Opponent:
BSH Hausgeräte GmbH

Relevant legal provisions:
EPC Art. 108, 113(1), 100(a), 54, 56, 123(2)
EPC R. 99(2), 111(2)
RPBA 2020 Art. 11, 13(2)

Keyword:

Admissibility of appeal - (yes)

Substantial procedural violation - appealed decision
sufficiently reasoned (yes)

Main request - novelty (yes) - Remittal to the department of
first instance (no) - inventive step (no)

Auxiliary request 1a - exceptional circumstances (yes) -
admitted (yes) - inventive step (yes)

Decisions cited:

T 1107/06, T 1473/19



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1422/21 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 18 April 2024

Appellant: Electrolux Appliances Aktiebolag
(Patent Proprietor) St Göransgatan 143
105 45 Stockholm (SE)

Representative: Schröer, Gernot H.
Meissner Bolte Patentanwälte
Rechtsanwälte Partnerschaft mbB
Bankgasse 3
90402 Nürnberg (DE)

Respondent: BSH Hausgeräte GmbH
(Opponent) Carl-Wery-Strasse 34
81739 München (DE)

Representative: BSH Hausgeräte GmbH
Postfach 83 01 01
81701 München (DE)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 28 June 2021
revoking European patent No. 2851620 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman C. Herberhold
Members: M. Olapinski
N. Obrovski

Summary of Facts and Submissions

- I. The appeal was filed by the patent proprietor (appellant) against the opposition division's decision to revoke the patent in suit (the patent).
- II. At the end of the oral proceedings before the Board, the requests were as follows.

The appellant requested that the decision under appeal be set aside and the case be remitted to the opposition division because of an alleged substantial procedural violation due to insufficient reasoning of the decision. It further requested that the decision under appeal be set aside and the patent be maintained as granted (main request) or, in the alternative, in amended form according to one of auxiliary requests 1a, filed during the oral proceedings before the Board, or 2 to 11, filed with the statement of grounds of appeal, or auxiliary requests 12 to 15 and 15a, filed on 9 February 2024. The appellant also requested that the case be remitted to the opposition division for further prosecution should the Board come to the conclusion that D1 did not disclose specifically Features M1.4, M1.6, M1.7 and M1.8 of claim 1 as granted. As a further auxiliary measure, the appellant requested that the case be remitted for further prosecution on the basis of auxiliary requests 2 to 8.

The respondent requested that the appeal be rejected as inadmissible for lack of substantiation or dismissed for substantive reasons.

- III. In the present decision, reference is made to the following documents:

D1: WO 2013/006981 A1
D2: US 2009/0015761 A1
D4: US 6,016,134
D6: US 2013/0025579 A1

IV. Claim 1 as granted (main request) reads (with feature denominations in square brackets according to the decision under appeal):

"[M1.1] Touchscreen control panel (3) configured to be implemented with a kitchen appliance (1), preferably with a home kitchen appliance or a commercial kitchen appliance, and operable from a front or top side of the appliance (1), wherein the touchscreen control panel (3) comprises

- [M1.2] a cover plate (4) with a transparent section (4a),
- [M1.3] a transparent touchsensitive layer (5) arranged and attached within the transparent section (4a) to the back side of the cover plate (4),
- [M1.4] a bracket frame (6) implemented at the back side of the cover plate (4) and surrounding at least partially the transparent section (4a), and
- [M1.5] a display unit (7) comprising a display screen (9) adapted to display information relevant for operating the appliance (1),
- [M1.6] wherein the bracket frame (6) is adapted to retain the display unit (7) at the back side of the cover plate (4), in such a way that the display unit (7) is in alignment with the touchsensitive layer (5),
- [M1.7] and comprising a housing (8) accommodating therein at least the display unit (7), wherein the housing (8) and bracket frame (6) comprise corresponding fixing elements configured such that the

housing (8) is or can be removably connected, to the bracket frame (6),

- [M1.8] wherein the display (9) is at least partially accommodated within and attached to the housing (8), such that a display surface of the display screen (9) is visible through a cutout window provided in the housing (8), and

- [M1.9] wherein the bracket frame (6) and housing (8) are configured such that the display surface (9) is arranged at a predefined distance from the touchsensitive layer (5)."

V. Claim 1 of auxiliary request 1a differs from claim 1 as granted (main request) by the additional feature:

"- [M1.10] the transparent section (4a) is implemented as or as a part of an inlay (4), wherein the inlay (4) is received in a cutout of the bracket frame (6), wherein the shape of the cutout corresponds to the shape of the inlay."

VI. The appellant's arguments can be summarised as follows.

Admissibility of the appeal

The appeal was admissible. The statement of grounds of appeal clearly set out the reasons why the decision had to be set aside.

Substantial procedural violation

The decision under appeal was insufficiently reasoned, this justifying setting aside the decision and remitting the case to the opposition division.

Main request - novelty, D1

The subject-matter of claim 1 was novel over D1 because D1 did not disclose Features M1.1, M1.4 and M1.6 to M1.9.

Request for remittal

Should the Board agree with the appellant's feature analysis, specifically with regard to Features M1.4, M1.6, M1.7 and M1.8 of claim 1 as granted, the appellant requested that the case be remitted to the opposition division for further prosecution before inventive step was discussed.

Main request - inventive step, D1

With the appellant's understanding of the claim features, the subject-matter of claim 1 as granted involved an inventive step.

Auxiliary request 1a

Admittance - auxiliary request 1a was filed to replace auxiliary request 1 in response to, and *prima facie* overcame, new objections raised during the oral proceedings.

Inventive step - the subject-matter of claim 1 of auxiliary request 1a involved an inventive step when starting from D1 because neither D1, nor the common general knowledge, nor D6 suggested modifying the safety glass cover of D1.

Adaptation of the description - the appellant requested that the case be remitted to the opposition division so

the appellant would have sufficient time to consider and file the necessary adaptations of the description.

VII. The respondent's arguments can be summarised as follows.

Admissibility of the appeal

The statement of grounds of appeal did not substantiate the reasons why the decision should be set aside, and the appeal was thus not admissible.

Substantial procedural violation

The content and reasoning of the decision under appeal were fully understandable and sufficiently detailed on the points at issue in the opposition proceedings. The impugned decision thus did not involve a substantial procedural violation.

Main request - novelty, D1

The subject-matter of claim 1 lacked novelty over D1 because all its features were known from D1.

Request for remittal

Inventive step of claim 1 as granted was sufficiently discussed, and a decision should be reached without remitting the case to the department of first instance in view of procedural economy.

Main request - inventive step, D1

The subject-matter of claim 1 as granted did not involve an inventive step starting from D1 in combination with common general knowledge, D2 or D4.

Auxiliary request 1a

Admittance - the respondent had no objection against the admittance of auxiliary request 1a.

Inventive step - the subject-matter of claim 1 of auxiliary request 1a did not involve an inventive step when starting from D1 because the additional Feature M1.10 was known from D1 or at least obvious in view of the common general knowledge or D6.

Adaptation of the description - the respondent requested that the case be remitted to the opposition division so the respondent would have sufficient time to consider and discuss the necessary adaptations of the description.

Reasons for the Decision

1. Admissibility of the appeal

The respondent requested that the appeal be rejected as inadmissible for lack of substantiation. The Board does not share this view. It is clear from the statement of grounds of appeal why the appellant requested that the decision be set aside (see the detailed reasoning on novelty and inventive step, points C.I and II).

As the patent as granted had been found to be new but to lack inventive step in the decision under appeal, this being the only ground prejudicing maintenance of the patent as granted, it is sufficient for the

proprietor to attack the decisive lack-of-inventive-step reasoning in the opposition division's decision.

Hence, the appeal fulfils the requirements of Article 108 and Rule 99(2) EPC.

2. Substantive procedural violation due to insufficient reasoning of the decision under appeal

2.1 The appellant submitted that the decision under appeal was insufficiently reasoned on the assessment of the claim features of the main request (Rule 111(2) EPC). This represented a substantial procedural violation which justified setting aside the decision and remitting the case to the opposition division.

2.2 According to the appellant, the decision did not identify all relevant claim elements of granted claim 1 in document D1, in particular:

- (a) which of the "aspects" described in D1 was considered to disclose a touch control panel (Feature M1.1)
- (b) which element in D1 represented the "bracket frame" of Feature M1.4
- (c) which were the "corresponding fixing elements" of the bracket frame and housing according to Feature M1.7
- (d) why a "cutout" in the functional sense sufficed for prejudicing the claimed feature
- (e) the decision did not address Features M1.2, M1.3 and M1.5 to M1.7 at all.

2.3 The Board does not share the appellant's allegations.

The content and reasoning in the decision under appeal are fully understandable to the parties, as is set out in the following, and thus sufficient for Rule 111(2) and Article 113(1) EPC.

The individual elements of D1 were already identified in the notice of opposition. For example, the safety glass pane ("Sicherheitsglasscheibe" 5) in D1 was identified as the "cover plate" of claim 1, the sensor means ("Sensormittel" 6) as the transparent "touchsensitive layer", the frame ("Rahmen", page 9, lines 2 to 6 and 21 to 24; the context of these passages in D1 discloses the reference numeral 3) as the "bracket frame", the monitor ("Monitor" 9) as the display unit, and the cover ("Deckel 8) together with the attachment for accommodating the monitor ("mit daran angebrachter Aufnahme zur Unterbringung des Monitors 9") as the "housing" (see pages 6 to 10 of the notice of opposition). Regarding feature M1.4, the appellant referred to the "frame in D1 (3 in Fig. 1)" in its reply to the notice of opposition. Hence, there was a common understanding of which element of D1 allegedly represented which claim feature.

According to the minutes of the oral proceedings before the opposition division, the appellant only challenged the presence of Features M1.1, M1.4, M1.8 and M1.9 in D1 (point 3.1), and only those features were subsequently discussed vis-à-vis the opponent's objection and feature association.

Accordingly, as to points (b), (c) and (e), it was clear to the parties which elements of D1 were discussed as representing the features of granted claim 1. Furthermore, as only the disclosure of Features M1.1, M1.4, M1.8 and M1.9 was challenged by

the patent proprietor, it was sufficient to address only these features in detail, this being the opposition division's approach (see II.13, i) to vi)).

As to point (a), it was clear - from the absence of references to Figures 5 and 6 and the corresponding passages of D1 in the opponent's submissions - that the claim features were found in the "first aspect" of D1. The decision under appeal addresses the proprietor's argument that in D1 a use with a "kitchen appliance" (claim 18) was only disclosed in combination with the "second aspect" (claims 12 to 15) by arguing, firstly, that claim 1 merely required *suitability* for integration with a kitchen appliance, not a panel that is actually used with a kitchen appliance. Secondly, the decision reasons (see point II.13, i)) that, based on the passage of page 12 on Figures 5 and 6, the "second aspect" was also disclosed in combination with all features of the "first aspect" - so that the features of the "first aspect" were also disclosed for use with a kitchen appliance - and thus was suitable for this as required in Feature M1.1.

As to point (d), the opposition division had set out in its preliminary opinion that it considered that a "cutout window" was implicitly disclosed in view of a *functional* understanding of this feature in the sense of transparency, as also reasoned in the decision under appeal (see II.13, iii)). This opinion was challenged neither in the appellant's letter of 24 July 2020 nor at the oral proceedings, as far as can be seen from the minutes (point 3.1.4). Hence, there was no need to provide further reasons why this understanding of a "cutout window" was reasonable.

2.4 In summary, the Board does not see a substantial procedural violation in the reasoning of the decision under appeal. Hence, it decided to reject the appellant's request that the decision be set aside and the case be remitted to the department of first instance.

3. Main request - novelty, D1

The opposition division came to the conclusion that D1 disclosed all features of claim 1 apart from Feature M1.9. In the appellant's view, D1 did not disclose Features M1.1, M1.4 and M1.6 to M1.8 either. The respondent submitted that the subject-matter of claim 1 lacked novelty over D1 as it also disclosed Feature M1.9. In the following, the novelty of claim 1 is analysed feature by feature in view of the parties' submissions.

3.1 Feature M1.1

Claim 1 concerns a touchscreen control panel "configured to be implemented" with a kitchen appliance and "operable from a front or top side" when implemented with a kitchen appliance.

The subject-matter of claim 1 does not include a kitchen appliance as confirmed by the parties. Accordingly, Feature M1.1 defines the touchscreen control panel by reference to an external entity. Such features are generally understood to limit the subject-matter of the claim only in so far as the claimed entity must be suitable for the claimed purpose (unless the interaction is in some way standardised - which is not the case for the implementation of touchscreen

control panels with kitchen appliances). Accordingly, claim 1 merely requires that the claimed touchscreen control panel is generally suitable for being implemented with a kitchen appliance and for being operated from a front or top side.

The appellant's argument that Feature M1.1 related to a specific configuration, notably in size and shape, for being implemented in a given kitchen appliance (as suggested by the corresponding shapes of the touchscreen control panel 3 in Figures 1 and 2 of the patent) is thus not convincing.

D1 discloses, according to a "first aspect" of the invention, a control unit with a touchsensitive screen, i.e. a "touchscreen control panel" as required in claim 1 (Figure 1, claim 1; see page 8, lines 7 to 8). The control unit of D1 is indeed designed as a separate unit for an industrial food processing machine. D1 does not disclose it integrated with a kitchen appliance. However, it is not decisive for the general suitability of the panel for this purpose whether it is disclosed for this purpose (as in the "second aspect" of D1, page 12 and claim 18) or whether the skilled person would have used it accordingly.

As nothing to the contrary is apparent or has been submitted, the Board concludes that the touchscreen control panel of D1 is suitable for being implemented with a kitchen appliance and operated from a front or top side of the appliance.

Accordingly, Feature M1.1 is known from D1.

3.2 Features M1.2 and M1.3

It was common ground that D1 also discloses a cover plate ("Sicherheitsglasscheibe" 5) with a transparent section (11; page 9, lines 24 to 30) and a transparent touchsensitive layer ("durchsichtige Sensormittel" 6) arranged and attached within the transparent section to the back side of the cover plate (page 10, lines 17 to 25; page 9, lines 30 to 34; Figure 2), as required by Features M1.2 and M1.3.

3.3 Feature M1.5

Likewise, D1 undisputedly discloses a display unit ("Monitor" 9, Figure 1) comprising a display screen (9') adapted to display information for operating the appliance, as set out by the respondent (page 10, lines 19 to 20; page 11, lines 4 to 9).

3.4 Feature M1.4

Feature M1.4 requires "a bracket frame implemented at the back side of the cover plate and surrounding at least partially the transparent section". The respondent submitted that the frame ("Rahmen") 3 in D1 (Figures 1 and 3) represented the claimed "bracket frame".

3.4.1 According to the appellant, a "bracket frame" had to be a frame "shaped as a bracket", i.e. "angularly, with a front portion and side portions, such that it formed a bracket (frame)", as shown in Figure 2.

In the Board's view, the term "bracket frame" is not clearly defined in the patent. The patent does not specify any structure or function connected with the term "bracket". But as D1 discloses that the frame 3 in D1 has a cross-sectional U-shape (shown in Figure 3;

alternatively, an L-shape; paragraph bridging pages 8 and 9), it also qualifies as being "shaped angularly, with a front portion and side portions" and thus "forms a bracket (frame)" as meant by the appellant. The fact that the frame 3 is disclosed as part of the outer housing of the touchscreen control unit in D1 (page 8, lines 27 to 30) does not disqualify it as a "bracket frame".

- 3.4.2 The appellant further argued that the frame 3 in D1 did not fulfil the requirements "implemented at the back side of the cover plate" and "surrounding at least partially the transparent section" (Feature M1.4). It submitted that both features had to be fulfilled at the same time as shown in Figure 2 of the patent: the frame extended backwards from the back side of the cover plate and, at the same time, also surrounded sidelong the transparent section of the cover plate, which was inserted as an inlay in a corresponding cutout of the bracket frame.

More specifically, in the variant of D1 where the cover plate was attached in front of the frame (page 9, lines 2 to 21; Figures 1 and 3), the frame did not surround the at least partially transparent section. In the alternative variant, where the cover plate was provided inside the frame and fixed to the back side of the frame's front leg from behind (page 9, lines 21 to 24), the frame was not "implemented at the back side of the cover plate".

- 3.4.3 The Board, however, does not agree with the appellant's interpretation of the expressions "implemented at the back side" and "surrounding" in Feature M1.4.

The expression "implemented at the back side of the cover plate" does not refer to a direction (of backward extension) but to a location. It is thus not decisive whether the bracket frame extends backward or forward, beyond the cover plate or not. It only matters whether it is attached or located at the back side of the cover plate. This is the case in Figure 2 of the patent, which displays thin support jaws on the upper and lower edges behind the cutout for the cover glass inlay. It is also fulfilled for the cover plate in D1, at least in the variant of being attached to the front face of the frame 3, albeit not in the variant where the glass is fixed to the front leg from inside the frame.

In fact, the term "surrounding" is used in the patent in a less restrictive manner than argued by the appellant. It is true that Figure 2 of the patent shows an embodiment in which the cover glass is provided as an inlay (see paragraphs [0023] and [0024]) in a cutout of the bracket frame, and the bracket frame thus at least partially surrounds the transparent section from the sides. However, in the embodiment of Figures 4 and 5, the cover plate 4 and the transparent section 4a are formed by the glass pane of a cooking hob (paragraphs [0077] to [0082]; claim 13). In this case, the bracket frame 6 is completely below the transparent section. In this context, the Board does not share the appellant's view that the bracket frame in this embodiment was somewhat recessed into the glass pane as allegedly visible in Figure 5. The skilled person would not have understood the schematic figure in this way, and the patent states that the bracket frame is "glued to the lower side of the glass pane" (paragraph [0080]). Accordingly, the bracket frame in this embodiment does not "surround" the transparent section from the sides according to the understanding submitted by the

appellant. This narrow understanding is thus not in accordance with the disclosure of the patent itself.

Indeed, Figure 5 of the patent discloses that the bracket frame is wider than the transparent section 4a. In the Board's view, it may thus be considered to "surround" the transparent section in a top view, i.e. meaning that the vertical projection of the transparent section is within the clearance of the bracket frame. Hence, the patent does not require that the frame extends forward beyond the back side of the transparent section. It uses the terms "frame, surround, border and/or encircle" synonymously (paragraph [0009]). Being in close proximity of and having a shape and size encircling the transparent section are therefore sufficient to fulfil the claim feature.

This is also the case in D1 for the variant of the cover plate fixed to the front face of the frame 3. The claimed "transparent section" can be identified as area 10/11 where the sensor means 6 is provided (page 9, lines 17 to 21 and 24 to 34) and which is the area adjacent to the monitor's display area 9' (page 10, lines 17 to 21), which is *within* the clearance of the frame. Accordingly, the frame 3 in D1 surrounds the transparent section of the cover plate in the same sense as in the patent.

Therefore, in the variant of a frontal cover plate shown in Figures 1 and 3, D1 discloses Feature M1.4.

3.5 Feature M1.6

Feature M1.6 further requires that "the bracket frame is adapted to retain the display unit at the back side

of the cover plate, in such a way that the display unit is in alignment with the touchsensitive layer".

According to the appellant, it was the back cover 8 in D1, not the frame 3, which "retained" the display unit.

However, in the Board's view, the frame 3 "retains" the monitor in the same way as disclosed in the patent. According to paragraph [0014], "retain" is used in the patent to mean "receive and/or hold" the display and applies "in the assembled state" (paragraph [0016]). More specifically, the display unit is accommodated in or mounted to the "housing" and only received in the bracket frame in the last assembly step (paragraphs [0027] and [0028], [0062] to [0067]).

The frame 3 in D1 fulfils the same function as the "bracket frame". In the assembled state, it receives the display 9 at the back side of the cover plate (directly behind, "direkt hinter", page 8, lines 20 to 25). Hence, it "retains" the display device in the same way as in the patent and - in conjunction with the back cover 8 - it provides the claimed alignment between the display unit and the touchsensitive layer (page 9, line 37 to page 10, line 11).

Accordingly, D1 also discloses Feature M1.6.

3.6 Feature M1.7

Feature M1.7 specifies "a housing accommodating therein at least the display unit, wherein the housing and bracket frame comprise corresponding fixing elements configured such that the housing is or can be removably connected, to the bracket frame".

The appellant submitted that D1 did not disclose a separate housing (in addition to the housing formed by the cover plate, frame and back cover) to house the monitor 9 as this could not be directly and unambiguously derived from the schematic box 9, 9' shown in Figure 1. Furthermore, this box did not have a fixing means for connecting to the bracket frame. The back cover 8 had fixing elements but was a separate part (namely a part of the external housing), was not disclosed as part of the monitor's housing and did not house the display unit itself.

The Board does not agree with the appellant's line of argument for the following reasons.

Firstly, the "box" with reference signs 9 and 9' in Figure 1 is not a purely schematic representation of the monitor and its display surface. It shows further structural elements such as a (DVI) connector (terminal block ("Klemmenblock") 16; "DVI-Eingang des Monitors", page 10, line 35 to page 11, line 4) and a flange with fixing elements (cylindrical objects to the right of the box in Figure 1) by which the "box" is attached to the back cover 8. Hence, the skilled person understands that the box represents, schematically, the physical volume of the monitor, including a "housing". As also submitted by the appellant at the oral proceedings, an internal "housing" within the housing of the unit does not imply a complete encapsulation but primarily serves the purpose of internal positioning and attaching the display unit and could be, for example, represented by a kind of circuit board (see point 5.3.3). Hence, the flange with fixing elements discloses the "box" to represent a "housing" of the display device.

Secondly, in the Board's view, it does not matter whether the back cover 8 forms the rear wall of the monitor's housing or whether the housing of the "box" is closed towards the back cover. The back cover is fixedly connected to the monitor at the flanges, and both together thus form a functional unit. Hence, the holes 18 in the back cover 8 can be considered to represent fixing elements of the monitor's housing corresponding to the fixing elements of the bracket frame 3 (threaded bolts, "Gewindebolzen" 29; page 10, lines 5 to 11; Figures 1 and 3), irrespective of the fact that the back cover 8 and the frame 3 also form part of the external housing of the touchscreen device of D1. The "association" of the back cover to the external housing in D1 does not represent a technical limitation and does not exclude other associations such as the association with the internal housing of the monitor.

Accordingly, D1 also discloses Feature M1.7.

Given that the appellant's arguments were found unconvincing, there is no need to address which part of the appellant's line of argument is an amendment subject to admittance by the Board under Article 13(1) RPBA.

3.7 Feature M1.8

It was common ground that D1 does not explicitly disclose a structural "cutout window" in the housing of the display unit shown (as a "box") in Figure 1.

According to the decision under appeal, at least "a transparent surface of the housing 8-9" was necessarily present, through which the display surface 9' could be

observed, and such a transparent section represented a "cutout window" in the functional sense. In the Board's understanding, however, a "cutout window" is a structural feature and cannot be considered merely in functional terms as in the impugned decision.

In view of the possibility of forming part of the housing from a transparent material mentioned in the decision under appeal, as well in view of the possibility that the "housing" did not cover the display surface at all and merely concerned the fixation of the monitor, a structural "window", respectively a "cutout", is also not implicitly required for observing the display surface. The respondent's argument that a transparent housing wall in front of the display device was uncommon does not mean that a cutout window was "inevitable" and, hence, implicit, either.

Accordingly, D1 does not disclose Feature M1.8.

3.8 Feature M1.9

It was common ground that frame 3 together with the back cover 8 defines the position of the monitor 9 and its screen 9' relative to the touchsensitive layer 6 in D1. This is because the cover plate 5 and the touchsensitive layer are fixed to the frame, while the monitor is fixed to the back cover 8, and the frame and back cover have mating fixing elements for lateral alignment (bolts 29 and holes 18, Figures 1 and 3, page 10, lines 5 to 9) and abut each other, thus also providing a defined relative axial alignment. Accordingly, the frame and back cover are configured such that the display surface is arranged at a specific position relative to the touchsensitive layer.

The Board agrees with the opposition division that although a "predefined distance" could be "zero", the expression "arranged at a predefined distance" in Feature M1.9 requires a certain non-zero distance. While the Board understands that the intention of the patent was to prescribe a predefined distance to provide for the thermal separation disclosed in paragraph [0038], the claim does not specify this purpose and is not limited to a heat-producing household appliance for which thermal separation might be an issue. Claim 1 does also not contain any indication of the required magnitude of the predefined distance. Hence, in view of the primacy of the claims (see T 1473/19, Catchword 2), any "predefined distance" suffices to fulfil Feature M1.9.

D1 does not explicitly disclose that the display surface is arranged at a specific non-zero distance from the touchsensitive layer. D1 discloses, as a preferred option, that the monitor lies "directly behind" the glass cover plate which has on its back side the touch sensor ("Bei einer bevorzugten Bedienvorrichtung liegt der Monitor [...] direkt hinter dem Sicherheitsglas, das auf seiner Rückseite das Sensormittel trägt", page 3, lines 26 to 29; and according to the example of Figures 1 to 4: "In der geschlossenen, betriebsbereiten Form [...] ist der Deckel am Rahmen befestigt und der Monitor kommt direkt hinter der Scheibe aus Sicherheitsglas zu liegen bzw. direkt hinter das an der Rückseite der Scheibe angeordnete Sensormittel", page 8, lines 20 to 25).

Although the Board is not convinced that this teaching prescribes direct contact between the touchsensitive layer and the monitor, i.e. "no" or "zero" distance, it

does not unambiguously disclose a predefined distance either. The respondent's submissions as to the commonly known advantages and the practice of keeping a certain distance relate to obviousness and are immaterial for the assessment of novelty.

In the Board's view, the disclosure of a certain "predefined distance" is also not derivable from the fact that the disclosure of "directly behind" in D1 is only optional. The Board notes that the statement in the cited decision T 1107/06 (Reasons 46) referred to by the appellant relates to a different context (allowability of a disclosed disclaimer) and a different factual situation (a specification of a generic term) to the current case and is thus not applicable. Furthermore, the Board is not convinced by the respondent's allegation that D1 disclosed two complementary alternatives, the optional feature "directly behind" and its contrary "not directly behind", which implicitly disclosed a "predefined distance". As set out above, a "predefined distance" is not unambiguously the opposite of "directly behind" (see above regarding "direct contact"). In addition, the contrary of the explicit feature "directly behind" is at least not "directly" disclosed in D1.

Hence, D1 does not disclose, directly and unambiguously, explicitly or implicitly, Feature M1.9.

3.9 In summary, the subject-matter of claim 1 as granted is novel over D1 because D1 does not disclose Features M1.8 and M1.9.

4. Request for remittal

The appellant requested that the case be remitted to the opposition division for further prosecution should the Board come to the conclusion that, in agreement with the appellant, D1 did not disclose "specifically" Features M1.4, M1.6, M1.7 and M1.8 of claim 1 as granted. As set out above, this precondition for the appellant's conditional request for a remittal is not met.

Moreover, the Board agrees with the respondent that inventive step was sufficiently discussed in the written proceedings and should be decided upon without a remittal in view of procedural economy. Hence, the Board did not see special reasons within the meaning of Article 11 RPBA and decided against a remittal.

5. Main request - inventive step starting from D1 in combination with common general knowledge, D2 or D4

5.1 Distinguishing features

The subject-matter of claim 1 differs from the touchscreen control panel of D1 by:

- a) the cutout window of Feature M1.8
- b) a predefined distance between the display screen and the touchsensitive layer according to Feature M1.9

5.2 Interpretation of "cutout"

The appellant submitted that a "cutout window" was to be understood literally as a window that was "cut" out and, hence, was formed by cutting out a clearance from a housing wall (i.e. as in a product-by-process feature). The respondent argued that this understanding

was artificial and not in line with the skilled person's understanding.

In the Board's view, the term "cutout window" is not to be understood as a product-by-process feature. Although the expression "cutout" derives from the activity of cutting, it is also used to refer to an opening or clearance, irrespective of how it is fabricated. In the current case, the skilled person understands from claim 1 that the housing has a clearance for being able to observe the display screen from outside the housing. However, a subtractive manufacturing technique for forming the clearance would be unusual, and there is no indication in the claim or the patent that it was important how the window was manufactured or why it had to be "cut" out. Hence, the Board agrees with the respondent that the term "cutout window" is to be understood as a structural opening or clearance in the housing that serves as a window for observing the display surface, irrespective of how it was made.

5.3 Obviousness of a "cutout window" (Feature M1.8)

5.3.1 It was common ground that the cutout window provided in the housing according to Feature M1.8 allowed observation of the display screen from outside the housing as also expressed in Feature M1.8.

5.3.2 The respondent argued that providing a housing with a cutout window was the most common and obvious type of monitor housing. Moreover, it was simpler, cheaper and provided a better view of the display screen than, for example, a transparent housing covering the display screen.

- 5.3.3 The appellant submitted that the housing comprising the cutout window acted synergistically with the bracket frame to provide the predefined distance of Feature M1.9. Hence, both distinguishing features related to a common problem. Furthermore, it would not have been obvious to provide a cutout window because the housing merely served the purpose of positioning and fixing the display unit. It could thus, for example, consist of a simple support structure that did not even reach or cover the front of the display unit, so that a cutout window was not needed to allow viewing the display screen.
- 5.3.4 Firstly, the Board disagrees with the appellant's allegation that the distinguishing features act synergistically to provide the predefined distance. While the predefined distance is indeed established through the housing and the bracket frame according to Feature M1.9, neither claim 1 nor the patent as a whole establishes a relationship between the more specific distinguishing feature of a cutout window and the predefined distance. It is also not disclosed that the predefined distance related to the wall thickness of the housing or a potential displacement of the display surface behind the front of the housing. Hence, the cutout window is not related to the predefined distance, and the distinguishing features can be dealt with separately.
- 5.3.5 Secondly, the parties' different considerations on obviousness relate to the fact that the nature and structure of the monitor's "housing" is not disclosed in more detail in D1. Hence, the appellant considers the obviousness of a "cutout window" vis-à-vis an open support structure that does not even enclose or necessarily reach the front of the display device. The

respondent, on the other hand, considers the advantages of a "cutout window" vis-à-vis a closed, transparent housing.

In the Board's view, the objective technical problem for the distinguishing feature of a "cutout window" is not only related to the visibility of the display screen but also to the definition of a type of housing left open in D1. Accordingly, the objective technical problem resides in the provision of a concrete embodiment of a housing in D1 that allows viewing the display screen.

The Board agrees with the appellant that the type of housing is not restricted to structures completely enclosing the display device. It would thus have been possible to provide a simple support structure that does not need a cutout window. However, the Board also agrees with the respondent that a housing with a cutout window represents one of the most common, obvious types of housing. Hence, the skilled person would have implemented such a housing as an obvious solution and would thus have arrived at the subject-matter of Feature M1.8 in an obvious way.

5.4 Obviousness of a "predefined distance" according to Feature M1.9

5.4.1 In the Board's view, the provision of a "predetermined distance" between the display surface and the touchsensitive layer according to Feature M1.9 is not limited to the effect of thermal insulation disclosed in the patent in the context of a cooking hob (paragraph [0038]) and referred to by the appellant because claim 1 is not limited to a cooking hob and the

purpose and dimensions of the "predefined distance" are not specified in claim 1 either.

It is, however, acknowledged that a predefined distance generally provides for a physical separation and protection against thermal as well as mechanical influences on the display surface, as submitted by the appellant.

This seems to be in line with the respondent's submissions, according to which the "predetermined distance" could be considered, for example, to serve as a safety gap to avoid damage to the display surface or to prevent image distortions due to uneven or punctiform pressure upon direct contact between the display surface and the touchsensitive layer, for example, during assembly due to axial and angular manufacturing tolerances.

The appellant also referred to the problems of compactness and good visibility. However, in the Board's view, these requirements do not derive from technical effects of Feature M1.9 but relate to technical considerations in D1.

The Board thus concludes that the objective technical problem of the "predefined distance" of Feature M1.9 in view of D1 can be expressed as improved protection of the display surface from thermal or mechanical load.

5.4.2 In the respondent's view, the apparent disadvantages of an assembly with direct contact would have led the skilled person to the provision of a small, predefined distance between the display screen and the touchsensitive layer in view of the common general knowledge.

5.4.3 The appellant submitted that D1 disclosed a thick pressure-resistant safety glass as a cover plate that provided sufficient protection against thermal or mechanical load from outside. Furthermore, D1 envisaged a compact design and high visibility, for which it proposed providing the display surface "directly behind" the touchsensitive layer (page 3, lines 26 to 33). This teaching was irreconcilable with and taught away from providing a predefined distance. Moreover, a planar direct contact provided a uniform pressure distribution and avoided punctiform pressure peaks. It was thus easier to achieve than a uniform, predefined distance, which was necessary to avoid reflections. Providing a predetermined distance as required by Feature M1.9 was thus uncommon and would not have been obvious for the skilled person starting from D1.

5.4.4 In the Board's view, the provision of a predetermined distance according to Feature M1.9 was obvious for the following reasons.

The relative axial position of the display screen 9' relative to the touchsensitive layer 6 in D1 is defined by the structure of the frame and back cover, more specifically by their abutment against each other (possibly with a gasket in between).

The skilled person was aware that manufacturing tolerances could lead to uneven pressure exerted onto the, usually liquid-crystal, display screen during assembly without a gap (direct contact). Angular tolerances could lead to non-parallelism, and uneven surfaces (or dust particles trapped between the surfaces) could lead to punctiform pressure peaks. Hence, the Board does not agree with the appellant that

a uniform planar contact is easily achieved - it would have required an adjustment procedure during assembly, and this would not have ruled out later issues due to, for example, thermal deformation of the cover plate or other mechanical parts in the assembly. The problems associated with manufacturing tolerances upon direct contact are also not attenuated by the use of a safety glass in D1 which - according to the IP69K standard - exhibits high-pressure resistance.

In view of the above issues, it was apparent - from the skilled person's common general knowledge alone - that direct contact during assembly should be avoided by configuring the frame and back cover such that, within the usual manufacturing tolerances, a predefined distance is provided as a safety gap between the display surface and the touchsensitive layer. Contrary to the appellant's submission, such a gap is not uncommon (see D2, paragraph [0024], "typically"). In the Board's view, the advantage of avoiding damage or distorted images far outweighs the possible, negligible disadvantages of such a small gap for the objectives of good visibility and compact design in D1.

It is true that an air gap between the display screen and the touchsensitive layer is also not without issues. Specular reflections at the boundary surfaces with the air gap lead to some loss of light transmission (D4, column 1, lines 24 to 27) and may give rise to interference fringes (see "Newton's rings", D6, column 3, line 10 to 18). However, these effects on the image quality are relatively small compared to potential image distortions due to direct contact. Moreover, there are well-known solutions for reducing these problems, such as antireflective coatings (e.g. D2, paragraph [0024], Figure 6) or

filling the air gap with refractive index-matching materials ("transparent elastic body layers" 2, D4, column 3, lines 4 to 21, Figure 2). Accordingly, the solution of providing a predefined distance between the display surface and the touchsensitive layer, with or without additional antireflective measures according to the common general knowledge, would have been favourable compared to establishing direct contact and, hence, obvious for the skilled person.

5.4.5 Hence, the implementation of Feature M1.9 does not involve an inventive step in view of D1 in combination with the skilled person's common general knowledge.

5.5 It follows from the above that the subject-matter of claim 1 as granted (main request) does not involve an inventive step. Hence, maintenance of the patent as granted is prejudiced by the ground for opposition of Article 100(a) in conjunction with Article 56 EPC.

6. Auxiliary request 1a - inventive step starting from D1

6.1 Admittance

Auxiliary request 1a was filed to replace the previous auxiliary request 1, in which a typing mistake in claim 1 (which was objected to for having an impact on the meaning of the feature concerned) was corrected and in which claim 11 was deleted (which was objected to for being contradictory to the amendment in claim 1 of auxiliary request 1). At least the latter objection was raised for the first time in the oral proceedings before the Board.

The respondent had no objection against the replacement of auxiliary request 1 with auxiliary request 1a.

The Board thus decided that exceptional circumstances within the meaning of Article 13(2) RPBA were given and admitted auxiliary request 1a into the appeal proceedings.

6.2 Distinguishing features

Claim 1 of auxiliary request 1a further specifies that "the transparent section is implemented as or as a part of an inlay, wherein the inlay is received in a cutout of the bracket frame, wherein the shape of the cutout corresponds to the shape of the inlay" (Feature M1.10), as shown in Figure 2 of the patent.

The respondent argued that Feature M1.10 was known from D1 in the variant of the cover plate fixed from behind to the frame's front leg. In that variant, the safety glass was provided as an inlay in the "cutout" represented by the space between the (U- or L-shaped) legs of the frame.

However, even if - for the sake of the argument - the respondent's argument is accepted that the clearance between the side legs of the frame could be considered to represent a "cutout", D1 does not disclose that the shape of the inlay corresponds to the shape of this cutout, i.e. that the safety glass fills the entire "cutout" space within the frame. Moreover, this variant of the cover plate in D1 does not fulfil Feature M1.4, as set out above under point 3.4.3.

Accordingly, Feature M1.10 represents a further distinguishing feature of the subject-matter of claim 1 over D1.

6.2.1 Effects and problem to be solved by Feature M1.10

The respondent submitted that the advantage of Feature M1.10 could be seen in improved stability. However, the Board is not convinced that fixing an inlay in a "cutout" provides more stability than covering (preferably entirely) the front face of the frame with the cover plate as disclosed in D1 (the variant in line with Feature M1.4, see point 3.4.3).

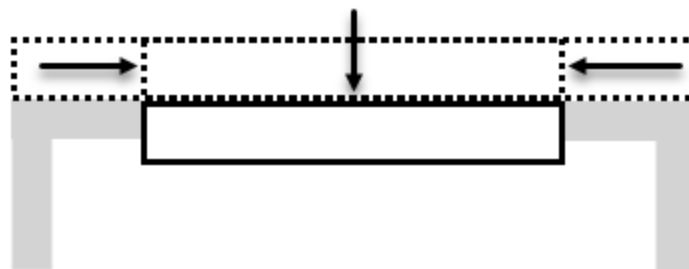
The appellant submitted that Feature M1.10 provided improved compactness and acted synergistically with Feature M1.9 in that it compensated for the increased length of the device due to the predetermined distance. In other words, Feature M1.10 enabled the provision of the predefined distance of Feature M1.9 in spite of the need for compactness. However, the effect of compactness of Feature M1.10 and an association between Features M1.9 and M1.10 are not disclosed in the patent and are also not derivable from current claim 1. In fact, Feature M1.9 was presented and claimed independently from Feature M1.10 in the application as filed. Hence, Features M1.9 and M1.10 do not act synergistically and are to be considered independently of each other.

The appellant submitted that vis-à-vis the variant of the safety glass provided in front of the frame in D1, Feature M1.10 allowed maintaining a front surface without steps (or the corresponding problem of good cleanability) in combination with improved compactness and cost savings (the latter because it required less

of the costly safety glass). The respondent argued along the same lines on the basis of the problem of improved compactness, reduced costs and good cleanability. Hence, although M1.10 in itself does not specify a surface without steps, the Board agrees with the objective technical problem used by the respondent in view of D1.

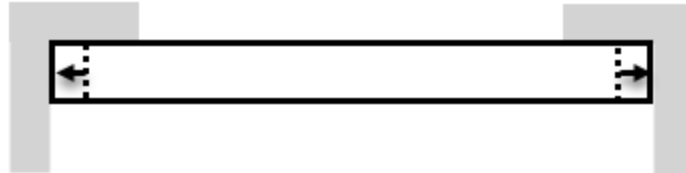
6.3 The respondent submitted the following lines of attack against inventive step of claim 1 in view of Feature M1.10. The attacks are illustrated in the charts below.

6.3.1 Firstly, starting from the variant of the cover plate provided in front of the frame and confronted with the problem of reducing costs and improving compactness but maintaining good cleanability, the skilled person would reduce the size of the cover glass until it fits into the frame's clearance and would insert it in this "cutout" until it is flush with the frame's front face. In this way, the skilled person would have arrived at Feature M1.10 in an obvious way. This is illustrated as follows (grey: frame, dotted line: cover plate before modification, arrows: modification steps, solid line: cover plate after modification):

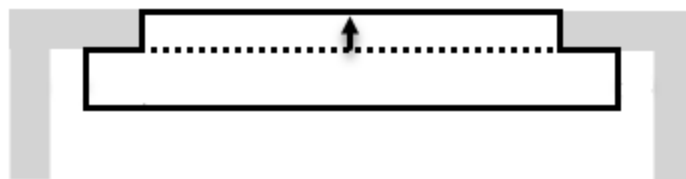


6.3.2 Secondly, starting from the variant of the cover plate fixed inside the frame from behind in D1, it would have been obvious to increase the size of the cover plate as far as possible to increase the available area for

gluing and to improve fixing strength. In that way, the cover plate exhibited a shape corresponding to the internal "cutout" cavity of the frame:



6.3.3 Thirdly, starting from the same embodiment, it would have been obvious, for combining good cleanability with the need for compactness, to extend the front surface of the glass such that it fills the clearance of the frame and is flush with the frame's front face. The front portion of the glass thus represented an inlay in the cutout of the frame with a corresponding shape:



6.3.4 Fourthly, D6 disclosed the front panel ("manifold assembly 10") of an oven with a skin/frame assembly 100, into which a glass panel 210 and a control panel 240 were clamped from behind (Figures 1 and 2; paragraph [0019]). Figure 5 disclosed that the skin/frame assembly comprised a cutout into which the glass panel fitted (Figure 3). The skilled person would have adopted this configuration in the control unit of D1 in view of the problem of compactness and cost efficiency and because D6 disclosed that "the structural frame provides structural support for the skin and the control panel" (abstract).

6.4 None of the four approaches submitted by the respondent for arriving at Feature M1.10 in an obvious manner is convincing for several reasons.

The Board is not convinced that the modifications according to the first to third approaches would have been obvious for the skilled person in view of the general problem and based on common general knowledge alone. It is, for example, not apparent that the general problem of providing compactness and cost efficiency while maintaining good cleanability would have prompted the skilled person to seek a solution by modifying precisely the cover plate. Hence, there is no incentive for the suggested modifications apart from hindsight in the knowledge of the claimed invention.

Furthermore, in the first approach, the resulting cover plate could only be fixed (for example, glued) to the thin rim of the frame. The skilled person would thus not have adopted this modification in view of D1's high stability requirement, in particular to withstand high-pressure cleaning.

As to the fourth approach, D6 does not provide an incentive to apply its configuration to D1 - D6 does not refer to compactness, cost savings or ease of cleaning. Nor does the reference to providing "structural support" in the abstract indicate an advantage of the frame configuration of D6. Furthermore, the presence, structure and number of the alleged cutouts is not clearly discernible from Figure 5, and D6 does not disclose that the glass panel is provided in such a cutout, let alone that it has a "corresponding shape". Hence, even if the skilled person had considered the teaching of D6, they would not have arrived at Feature M1.10.

Finally, all four approaches would have led to a configuration of the cover plate in which the frame is not "implemented at the back side of the cover plate" (see point 3.4.3 above) and could thus not have led the skilled person to the subject-matter of claim 1 of auxiliary request 1a.

6.5 Accordingly, the subject-matter of claim 1 of auxiliary request 1a involves an inventive step in view of document D1 as the closest prior art.

6.6 It follows from the above that the claims of auxiliary request 1a fulfil the requirements of the EPC. The patent can thus be maintained in amended form based on those claims.

6.7 Adaptation of the description

In view of the complex interrelationship of Feature M1.10 in claim 1 of auxiliary request 1a with further features and embodiments in the description, both parties requested that the case be remitted to the opposition division for the adaptation of the description to give the parties sufficient time to consider and file the necessary amendments. The Board agreed to this.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the patent with the following claims and a description to be adapted thereto:
 - Claims 1-11 of auxiliary request 1a filed during the oral proceedings before the Board.

The Registrar:

The Chairman:



C. Spira

C. Herberhold

Decision electronically authenticated