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**Datasheet for the decision  
of 14 December 2021**

**Case Number:** T 1572/18 - 3.2.03

**Application Number:** 14182374.0

**Publication Number:** 2843150

**IPC:** E04D13/035, E04D13/03

**Language of the proceedings:** EN

**Title of invention:**

Window frame with fitting for roof window

**Patent Proprietor:**

FAKRO PP Sp. z o.o.

**Opponent:**

VKR-Holding A/S

**Headword:**

**Relevant legal provisions:**

EPC Art. 100(a), 100(b), 100(c), 54, 56

**Keyword:**

Grounds for opposition - insufficiency of disclosure (no) -  
added subject-matter (no)  
Novelty - (yes)  
Inventive step - (yes)

**Decisions cited:**

**Catchword:**



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**Case Number: T 1572/18 - 3.2.03**

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.03**  
**of 14 December 2021**

**Appellant:** VKR-Holding A/S  
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**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on 10 April 2018  
rejecting the opposition filed against European  
patent No. 2843150 pursuant to Article 101(2)  
EPC.**

**Composition of the Board:**

**Chairman** C. Herberhold  
**Members:** R. Baltanás y Jorge  
E. Kossonakou

## **Summary of Facts and Submissions**

I. European patent No. 2 843 150 relates to a window frame with a fitting for a roof window.

II. Opposition was filed against the patent based on Article 100(b) and (c) EPC, and also on Article 100(a) in conjunction with Articles 54 and 56 EPC.

The opponent (hereinafter: "appellant") filed an appeal against the decision of the opposition division to reject the opposition.

III. Requests

The appellant requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed and, in the alternative, that the patent be maintained on the basis of the claims filed with the letter dated 16 November 2018 as an auxiliary request, or on the basis of one of auxiliary requests 2 and 3 filed by letter of 13 October 2021.

IV. Claim 1 as granted, including the numbering of its features as adopted by the parties, reads as follows:

- a)** *A roof window comprising a window sash (4) and a window frame (1) with a fitting for a window sash,*
- b)** *- the window frame (1) having a design enabling the window frame to be immersed in the roof structure,*

- c) *the window frame having the form of a rectangular frame*
- d) *and comprising: a top member (12), a bottom member (13) and two side members (11; 19),*
- e) *- the window frame (1) being equipped with said fitting constituting at least an installation set of the window sash,*
- f) *- the window frame (1) further comprising at least one structural element (2, 8) for connecting the window frame with the roof,*
- g) *said at least one structural element (2, 8) of the window frame protruding beyond the outline of the window frame members (11 or 19, 12, 13),*
- h) *- the window sash (4) comprising a glazing unit (41),*
- i) *the window sash being situated in the opening of the window frame at least when the window is closed,*
- j) *the window sash being opened by rotation around at least one horizontal geometrical axis,*
- k) *- the window sash (4) as well having elements of a locking set for when the window sash is in a closed position,*
- l) *- the window frame (1) mating with shields (6) of gaps between the window frame and the window sash,*
- m) *and the window frame comprising a set of seals (17) in these gaps, **characterised in that:***
- n) *- the at least one structural element (2, 8) of the window frame is located in use on the top surface of the window frame members (11 or 19, 12, 13),*
- o) *while said at least one structural element (2, 8) of the window frame protrudes beyond the outline of the window frame members (11 or 19, 12, 13),*

- p)** - hinges (5, 9) are installed on the at least one structural element (2, 8),
- q)** - and said at least one horizontal geometrical axis is located, in use, slightly above the surface of the window frame.

V. In view of the decision on the appeal, the content of the auxiliary requests is not relevant.

VI. State of the art

The following documents were cited both in the grounds of appeal and in the opposition proceedings and are relevant for this decision:

D10: EP 1 760 220 A1

D11: WO 2007/028392 A1

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

*Unallowable extension of subject-matter and lack of disclosure*

Feature n) constituted an unallowable extension of subject-matter, since the term "top" had a specific meaning in the application as originally filed, namely that of the uppermost part in the direction of the roof inclination, as in "top member" (12) and "top edge" (see originally filed claim 7). Since no disclosure was found in the originally filed application concerning a structural element located at the uppermost part of the roof inclination, the addition of feature n) extended the subject-matter of the invention in an unallowable manner.

Moreover, since the application as filed contained no enabling disclosure of a window frame in which the structural element was on the top surface, i.e. the surface at the uppermost part in relation to the inclination of the roof, the claimed embodiment was not sufficiently disclosed either.

*Novelty, D10*

Feature b) (design enabling immersion) did not define a degree of immersion, let alone a complete immersion. Figure 5 of D10 disclosed a roof window partially immersed in the roof structure.

Features k) (locking set) and m) (seals) would have been regarded as implicitly disclosed in D10 by the skilled reader, who would have unambiguously understood that they were present when reading this document, in particular in view of the roof window construction in Figure 1 and the oval-shaped elements without references in Figures 5 and 8.

Feature n) (structural element on the top surface of the frame members) did not imply that all parts of the window frame members had to be below the structural element, since the patent itself disclosed in Figures 2, 3 and 5 that the top surface of the wall (14) of the window frame was arranged above the structural element (2, 8). The opposed patent thus also concerned a multiple-level top surface of a multi-part frame member where the structural element was located on the top surface of some of these levels, but not above all of them. The same was disclosed by D10, where the structural member (second supporting member 5) was located on the top surface of elements 3 and 4 belonging to the frame member.

Feature o) (structural element protruding beyond the outline of the frame members) had to be understood in the broadest sensible way, and it merely defined a supporting element protruding from the frame member. This was disclosed in paragraph [0025] of D10, since the mounting brackets disclosed there had to be assembled before the roof window was installed, in order to prevent the roof window from falling, thus forming an ensemble with second supporting member (5) corresponding to the claimed structural element. The mounting brackets necessarily protruded in the claimed way in order to be connected to the roof structure. Feature o) did not exclude an integral construction of the structural element and the frame members, or the structural element being composed of different elements.

Feature q) (horizontal axis above the surface of the window frame) was implicitly disclosed in D10, since the skilled reader understood that the shields on the window frame and the sash depicted in Figures 1 and 5 would collide if the horizontal axis of rotation were not above the surface of the window frame, regardless of the position of the hinge. This was common general knowledge before the priority date - see e.g. D11 - and any other hypothetical technical solution for solving this problem was purely speculative.

*Inventive step, D10 combined with common general knowledge*

D10 was concerned with improving thermal performance, as was the case in the opposed patent, and proposed an alternative solution, namely that of providing an extra insulation member (second insulation member 2). The

skilled person, aware of how brackets were attached to a structural element as suggested in paragraph [0025] of D10, would have applied this common general knowledge to solve the problem of providing an alternative way of improving thermal performance by arranging the mounting brackets such that the roof window was immersed in the roof structure and the second insulation member (2) was no longer necessary. In the absence of this second insulation member (2), the second supporting member (5) would be located on the top surface of the remaining frame member elements (3, 4). Removing the second insulating member (2) would not have implied a complete redesign of the window frame; rather, it would be considered normal practice for the person skilled in the art.

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

*Unallowable extension of subject-matter and lack of disclosure*

The patent application as originally filed disclosed that the structural elements (2, 8) were located on the exterior and top side of the window (paragraphs [0003], [0011] and [0014] of the A1 publication, together with Figures 1 and 4). The skilled reader understood that the top surface of the window frame members was the exterior side thereof, which formed the top layer of the roof. The interpretation applied by the appellant was contrived and contrary to the overall disclosure and to the technically meaningful interpretation applied by the skilled reader.

This incorrect interpretation could at best result in the conclusion that the claim lacks clarity, but not in

the conclusion that there is an insufficient disclosure of the invention, since various embodiments of the claimed roof window were disclosed in the patent.

*Novelty, D10*

Feature b) had to be understood as involving a complete immersion of the window frame in the roof structure, in accordance with all of the disclosed embodiments. D10 merely disclosed a partial immersion and thus did not disclose this feature.

Features k) and m) were not disclosed in D10 either, since novelty had to be assessed in a strict manner and the mere fact that some features would normally have been present in a window was not enough to consider them implicitly disclosed.

In the contested patent, the wall (14) surrounding the frame members did not form a top surface within the meaning of feature n), contrary to the top surfaces of fillings (15) and side members (19). The claim had to be interpreted in a technically sensible way, and the feature "*top surface of the window frame members*" could not have been extended to any arbitrary profile arranged on a side of said frame members. D10 disclosed a top surface within the meaning of feature n), and this was the one defined by the top surface of the second insulating member (2). The top surfaces of the first supporting member (3) and the first insulating member (4) were not "top surfaces" within the meaning of feature n). Thus, the second supporting member (5) was not located on the top surface as defined by the second insulating member (2), and D10 did not disclose feature n).

Concerning features g) and o), the second supporting member (5) of D10 did not protrude beyond the outline of the window frame members since it was a part of the frame members. The mounting brackets disclosed in paragraph [0025] were not part of the structural element defined by the second supporting member (5). Moreover, they were not shown in detail, and therefore there was no disclosure of them protruding in the claimed way.

Feature q) was not implicitly disclosed in D10 since in order to prevent the shields colliding when pivoting the sash the skilled reader might have thought of other solutions, such as movable shields.

The subject-matter of claim 1 was thus novel.

*Inventive step, D10 combined with common general knowledge*

Removing the second insulating member (2) known from D10 - as suggested by the appellant - would have gone against the whole aim of improving thermal performance. There was no incentive for the skilled person to do so, plus it would have required a complete re-design of the roof window of D10.

Even if mounting brackets were provided in the roof window of D10, this would result in a window frame protruding from the roof structure as in D10, thus still requiring the insulation disclosed in this document. Moreover, said brackets would not be part of the structural element, would not necessarily protrude within the meaning of features g) and o) and could even have belonged to the roof structure.

The subject-matter of claim 1 thus involved an inventive step.

### **Reasons for the Decision**

1. Main request, unallowable extension of subject-matter and lack of disclosure - Article 100(b) and (c) EPC
- 1.1 In the absence of further submissions from the appellant concerning this point at the oral proceedings, the Board remains of the opinion already advanced in its communication annexed to the summons (point 7.1).
- 1.2 Feature n) reads "*one structural element of the window frame is located in use on the top surface of the window frame members*". When reading this feature in its context, the skilled person will understand that the structural element must be on the external side of the window frame members, i.e. facing the exterior of the roof. This arrangement was originally disclosed on page 1, lines 22 to 27, of the description, which explicitly refers to the "external side of the window". Furthermore, this interpretation is in accordance with the common understanding of the term "top", which includes the "upper end" as well as the "upper surface" (see e.g. the Merriam-Webster dictionary).

Conversely, the skilled person would not interpret feature n) in the way suggested by the appellant, i.e. as the uppermost part in the direction of the roof inclination, since this does not make technical sense. Feature n) explicitly requires that the structural element is located on the top surface of the window

frame members**s**. Therefore, the skilled person would not understand the term "top" as referring to the uppermost portion of the window frame in relation to the roof inclination, since the term "window frame members**s**" in features d) and n) refers not only to the frame member in this particular position, but also to the two side members and the bottom member of the frame (see originally filed page 1, line 24). Even if respective "top surfaces" were considered for each of the frame members in the sense suggested by the appellant, the feature would still not make technical sense when referring to the side and bottom frame members, since their "top surfaces" oriented towards the top of the roof are situated within the frame, such that it is not possible for the structural element to be located on them as defined by feature n).

Thus, the arguments presented by the appellant do not prejudice the maintenance of the patent on the grounds of Article 100(c) EPC.

- 1.3 Since the argument of the appellant concerning the alleged insufficiency of disclosure of the invention is based on the interpretation of feature n) discussed above which has been found unconvincing, this objection cannot succeed. The patent specification contains detailed examples of where to locate the structural element on the top surface of the window frame members when the correct interpretation of feature n) as discussed above is applied (see Figures 2, 3, 5 and 6, and their corresponding descriptions).

The patent thus discloses the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art, and the objection on the grounds of Article 100(b) EPC must be dismissed.

2. Novelty, D10 - Articles 100(a) and 54(2) EPC

2.1 Features a), c), d), e), f), h), i), j), l) and p)

Document D10 discloses:

a roof window comprising a window sash and a window frame with a fitting for a window sash (feature a); see Figure 1 and sash 11),

the window frame having the form of a rectangular frame (feature c); see Figure 1)

and comprising: a top member, a bottom member and two side members (feature d); see first two lines of claim 1),

the window frame being equipped with said fitting constituting at least an installation set of the window sash (11) (feature e); see Figure 1),

the window frame further comprising at least one structural element (3, 5) for connecting the window frame with the roof (feature f); see Figure 5),

the window sash (11) comprising a glazing unit (13) (feature h)),

the window sash (11) being situated in the opening of the window frame at least when the window is closed (feature i); see Figure 1),

the window sash (11) being opened by rotation around at least one horizontal geometrical axis (feature j); see Figure 1),

the window frame mating with shields of gaps between the window frame and the window sash (feature l); see the shields in Figure 1),

hinges being installed on the at least one structural element (feature p); see Figure 1 and second sentence of paragraph [0025]).

This is not disputed by the parties.

## 2.2 Feature b) (design enabling immersion)

Feature b) reads "*the window frame having a design enabling the window frame to be immersed in the roof structure*".

The feature does not define the degree of immersion, and thus it encompasses embodiments in which the window frame is only partially immersed in the roof structure. Whether or not the embodiments of the patent specification disclose a complete immersion is not relevant for the discussion, since the feature has a clear technical meaning by itself and does not require consultation of the description to be interpreted.

Figures 5 and 8 of D10 disclose an L-shaped element arranged on the right side of the window frame, this L-shaped element belonging to the roof. Since a portion of the first supporting member (3) and first insulating member (4) is arranged below the level defined by the L-shaped element, it must be concluded that D10 discloses a partial immersion of the window frame in the roof structure, and thus anticipates feature b).

2.3 Feature k) (locking set)

Even if a locking set is not explicitly disclosed in D10, the skilled person understands when reading this document that such a device must be present, since the nature of a tilting roof window (see Figure 1) is such that it must be suitable for being fixed in its closed position in order to ensure a closure of the space below even when external factors such as the wind act on the sash. Thus, the feature is implicitly disclosed in view of the common general knowledge of the skilled reader consulting D10.

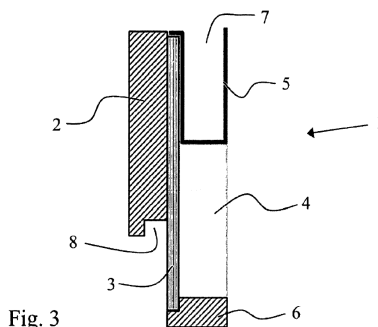
2.4 Feature m) (seals)

Similarly, the common general knowledge of the skilled person must be taken into account when assessing the disclosure of feature m) in D10. In this case, the skilled reader will notice some oval-shaped elements arranged between the sash (11) and the window frame members in Figures 5 and 8. The skilled person observing these oval-shaped elements will be aware of the seals usually provided in the gaps between window frames and window sashes in roof windows. Taking this knowledge into account, the skilled person will understand that the elements drawn between the window frame element (2) and the sash parts in Figures 5 and 8 represent the seals typically arranged in such gaps. Feature m) is thus implicitly disclosed in D10.

2.5 Feature n) (structural element on the top surface of the frame members)

The appellant argued that claim 1 encompassed window frame members having multiple-level top surfaces, with the structural element being located in use on the top

surface of only one or some of these surfaces. Consequently, structural element (5), located on the top surface of elements (3) and (4) and thus on the top of the multiple-level top surface formed by the top surfaces of elements (2), (3) and (4) (see Figure 3 of D10 below), fell under the definition of feature n).



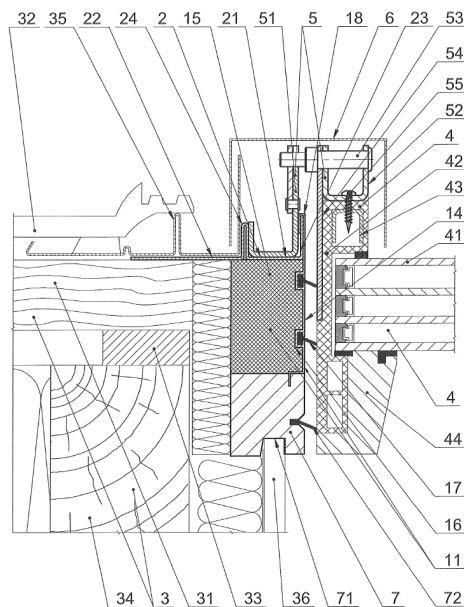
This interpretation was in accordance with the patent specification, in which the window frame member (11) likewise comprised several elements (see e.g. elements (14) and (15) in Figure 2 reproduced below), with the structural element being located in use on only the top surface of element (15) of a multiple-level top surface comprising the top surfaces of elements (15) and (14).

The interpretation of feature n) proposed by the appellant based on the content of the patent specification cannot be accepted, however, for the following reasons:

Feature n) reads "*the at least one structural element of the window frame is located in use on the top surface of the window frame members*".

The very small horizontal top surface of the connecting lip (18) of wall (14) in the contested patent cannot be considered to be the top surface of the window frame member within the meaning of feature n), since it is

technically unsuitable for a structural element to be located on it (see Figure 2, which is reproduced below for convenience). Indeed, it merely forms a part of the "thin wall (14)".

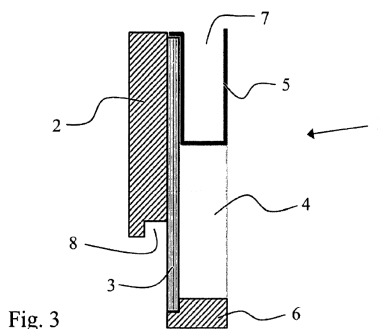


Moreover, if the skilled reader applied the interpretation suggested by the appellant, this would mean that the patent (and also the patent application) would not contain a single embodiment according to the claimed invention, as none of the structural elements in Figures 2, 3 and 5 protrudes beyond the outline of element 14 (see features o) and g) of claim 1 as granted).

It thus cannot be derived from the patent that feature n) comprises multi-level top surfaces, the structural element being located on the top of only a partial surface located at the side of the frame member, such as on the top of elements (3) and (4) in Figure 3 or 5 of D10. Instead, the top surface defined in feature n) needs to be the top surface of the structural element

making up the frame member (see features c) and d)) and not just an upper lip of its side wall.

In view of the above, the top surface of the window frame members within the meaning of feature n) in D10 is the one defined by the top surface of the second insulating member (2), since this defines the external top surface of the window frame. Figure 3 (reproduced below) and Figures 4, 5, 8 and 9 of D10 disclose that the second supporting member (5) is not located on the top surface of the second insulating member (2). In this context, D10 explicitly discloses structural element 5 as being "**outer** side of the frame" (see paragraph [0024]). Consequently, feature n) is not disclosed in D10.



In the context of discussing Figure 3 of D10, it should be added that Figures 3, 5, 8 and 9 of D10 do not clearly and unambiguously disclose that the right leg of the second supporting element (5) is located **above** the top surface of the second insulating member (2), given the schematic nature of the figures (see the discussion on features g) and o) below).

2.6 Features g) and o) (structural element protruding beyond the outline of the frame members)

The second supporting element (5) of D10 does not protrude beyond the outline of the window frame members (see Figures 3, 4, 5, 8 and 9, and also the remarks in the last paragraph of the preceding point).

The Board is also unconvinced by the argument of the appellant as to what is to be considered a structural element within the meaning of claim 1 for the following reasons:

Firstly, the structural element is defined in claim 1 as **a component of the window frame** (see feature f)). Supporting element 5 is also a part of the window frame in D10 (see Figures 5 and 8, and also column 4, lines 53 to 56). Paragraph [0025] discloses that the "*second supporting member 5 can be used for anchoring of mounting brackets (not shown) for installation to a roof structure*". The mounting brackets thus **do not form part of the window frame**, but are additional elements intended to be anchored to the window frame, as reasoned by the opposition division in point 12.3 of its decision. Neither D10 nor the patent gives any indication that a mounting bracket should be considered to be part of the supporting element. In fact, as argued by the respondent, the mounting brackets could even belong to the roof structure and be anchored to the supporting element when the window frame is in place. The argument of the appellant concerning an alleged technical need to attach the mounting brackets to the second supporting member (5) before arranging the roof window in the roof opening is thus not convincing.

Furthermore, there is no evidence that the use of the mounting brackets disclosed in paragraph [0025] - assuming in the appellant's favour that they are considered to be part of a structural element within the meaning of claim 1 - necessarily implies that these brackets would protrude beyond the outline of the window frame members.

2.7 Feature q) (horizontal axis above the surface of the window frame)

The appellant acknowledged during the oral proceedings that other technical solutions besides the arrangement of the horizontal axis above the surface of the window frame could be envisaged for avoiding the collision of the shields when pivoting the sash, even if these solutions would be a matter of speculation and were allegedly not available on the market before the priority date. According to the appellant, only the solution disclosed in D11 (horizontal axis 5 located above the surface of the window frame) was widely available, and therefore the skilled person would have understood that this was the implicit arrangement of the horizontal axis in D10 as well.

This is not persuasive, since a patent document such as D11 cannot prove the common general knowledge of the skilled person. Since other alternatives would be conceivable for the skilled person reading D10, it cannot be concluded - in the absence of other evidence of common general knowledge - that feature q) was implicitly disclosed in this document.

2.8 Conclusion

The subject-matter of claim 1 differs from D10 in features n), g), o) and q), and therefore it is novel (Article 54(2) EPC).

3. Inventive step, D10 combined with common general knowledge - Articles 100(a) and 56 EPC

3.1 The Board agrees with the parties that D10 represents a suitable starting point for assessing the inventive step of the invention in view of the close similarities in terms of construction and purpose.

3.2 With respect to differentiating feature q), it is accepted in the appellant's favour that hinges with a horizontal geometrical axis above the surface of the window frame are an obvious solution to prevent mating shields (see Figure 1 of D10) on the window frame and sash from colliding in view of the disclosure of document D11.

3.3 The technical effect of the further differentiating features, i.e. n), g) and o), is that the roof window can be immersed in the roof structure to a greater extent without using further intermediate connecting elements.

The associated objective technical problem proposed by the appellant is that improved thermal performance is obtained, together with an easier installation. This is reasonable in view of the technical effect and has not been contested by the respondent. This technical problem has no link with the problem discussed in point 3.2 above and can thus be treated separately.

3.4 Obviousness of differentiating features n), g) and o)

The appellant argued that it was obvious to pre-install mounting brackets on the structural element, which led to a combined structural element allowing an immersed arrangement of the window and making the extra insulating member (2) of D10 superfluous. This would lead the person skilled in the art in an obvious way to a roof window falling under the definition of claim 1.

The arguments of the appellant concerning the obviousness of features n), g) and o) cannot be accepted for the following reasons:

Firstly, even if paragraph [0025] of D10 hints at anchoring mounting brackets at the second supporting member (5) for installation to a roof structure, no disclosure is provided in this document as to the construction or location of the mounting brackets. Figures 5 and 8 of D10 imply that the mounting brackets should enable the partial immersion of the first insulating member (4) and the first supporting member (3) in the roof structure, but not that of the second insulating member (2). There is thus no need for the mounting brackets to protrude beyond the outline of the window frame members (feature o)).

Secondly, neither D10 nor the patent suggests that the combination of the structural element and the mounting brackets should be considered a structural element within the meaning of the claim.

Thirdly, the aim of document D10 is to provide a roof window frame with improved insulating properties (see paragraph [0008]). The document discloses that in order to fulfil this aim, "*the amount of insulating material*

*may be increased in regions that affect the insulating properties of the window frame"* (see paragraph [0010], last sentence). Paragraph [0012] discloses that *"to further increase the insulating capabilities of the roof window frame"*, an insulating member can be arranged on a side of the window frame facing the opening. All this is materialised in the provision of a second insulating member (2) facing the opening in the window frame of the particular embodiment.

Removing this second insulating member (2) would thus run against the aim of D10 and its disclosed solution, and the skilled person would need a strong hint in this direction for doing so. However, the appellant did not explain where the skilled person could find this hint. Indeed, the problem formulated by the appellant aims at improving thermal performance, whereas the allegedly obvious omission of element (2) has the exact opposite effect.

Consequently, the skilled person would not arrive in an obvious manner at differentiating features n), g) and o) when starting from D10.

3.5 The subject-matter of claim 1 thus involves an inventive step.

4. Dismissal of the appeal

Since none of the opposition grounds hinders maintenance of the patent as granted, the appeal must be dismissed.

**Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:



C. Spira

C. Herberhold

Decision electronically authenticated