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**Datasheet for the decision
of 26 February 2013**

Case Number: T 0342/12 - 3.2.08
Application Number: 04388056.6
Publication Number: 1508663
IPC: E05F 1/10, E04D 13/035,
E05D 7/086
Language of the proceedings: EN

Title of invention:

An improved pivot window with at least one auxiliary opening device

Patent Proprietor:

VKR Holding A/S

Opponent:

ROTO FRANK AG

Headword:

-

Relevant legal provisions:

EPC Art. 100(a), 123(2)

Keyword:

"Main request: novelty (no)"

"Auxiliary requests 1 and 2: inventive step (no)"

"Auxiliary request 3: added subject-matter (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0342/12 - 3.2.08

D E C I S I O N
of the Technical Board of Appeal 3.2.08
of 26 February 2013

Appellant: VKR Holding A/s
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 20 December 2011
revoking European patent No. 1508663 pursuant
to Article 101(3) (b) EPC.

Composition of the Board:

Chairman: T. Kriner
Members: M. Alvazzi Delfrate
C. Schmidt

Summary of Facts and Submissions

- I. By decision posted on 20 December 2011 the opposition division revoked European patent No. 1 508 663.
- II. The appellant (patent proprietor) lodged an appeal against this decision on 14 February 2012, paying the appeal fee on the same day. The statement setting out the grounds of appeal was filed on 26 April 2012.
- III. Oral proceedings before the board of appeal took place on 26 February 2013.

The appellant requested that the decision under appeal be set aside and that the patent be maintained as granted (main request) or on the basis of one of auxiliary requests 1 to 3 filed with letters dated 26 April 2012 and 28 January 2013.

The respondent (opponent) requested that the appeal be dismissed.

- IV. Claim 1 of the **main request** reads as follows:

"A window comprising a frame (1;101) and a sash (2;102), said sash being connected with the frame by means of a hinge device (12;112) defining a hinge axis (13) of the window, the frame and the sash each including a first pair (3,4,7,8;103,104,107,108; 206) of mutually opposite members, and a second pair (5,6,9,10;106,110;206) of mutually opposite members, said first and second pair of frame members defining a frame plane, said hinge device connecting a respective frame and sash member of the second pair of frame and

sash members, and a centre line (14) being defined substantially midway between the one and the other of the members of said first pair, the hinge device being mounted in such a position that the hinge axis (13) is situated between said centre line (14) and said one member (3,7;103,107) of said first pair, characterized in that the hinge device (12;112) comprises a set of pivot hinges connecting the frame and sash members directly, such that when the window is open, the two sash members constituting the first pair of sash members are located one on each side of the frame plane and that the window includes at least one auxiliary opening device (120), and that one end (122) of said auxiliary opening device is connected with a frame member (106), and the other end (121) of said auxiliary opening device is connected with a corresponding sash member (110)."

Claim 1 of **auxiliary request 1** differs from claim 1 of the main request by the addition of the feature that:

"the hinge axis (13) is positioned in the interval between $1/3$ and $2/3$ of the distance (d) between the centre line (14) and said one member (3, 7) of said first pair"

Claim 1 of **auxiliary request 2** reads as follows (differences in respect of auxiliary request 1 underlined):

"Use of a window comprising a frame (1;101) and a sash (2;102), said sash being connected with the frame by means of a hinge device (12;112) defining a hinge axis (13) of the window, the frame and the sash each

including a first pair (3,4,7,8;103,104,107,108; 206) of mutually opposite members, and a second pair (5,6,9,10;106,110;206) of mutually opposite members, said first and second pair of frame members defining a frame plane, said hinge device connecting a respective frame and sash member of the second pair of frame and sash members, and a centre line (14) being defined substantially midway between the one and the other of the members of said first pair, the hinge device being mounted in such a position that the hinge axis (13) is situated between said centre line (14) and said one member (3,7;103,107) of said first pair, where the hinge device (12;112) comprises a set of pivot hinges connecting the frame and sash members directly, such that when the window is open, the two sash members constituting the first pair of sash members are located one on each side of the frame plane, where the hinge axis (13) is positioned in the interval between $1/3$ and $2/3$ of the distance (d) between the centre line (14) and said one member (3, 7) of said first pair, where the window includes at least one auxiliary opening device (120), and where one end (122) of said auxiliary opening device is connected with a frame member (106), and the other end (121) of said auxiliary opening device is connected with a corresponding sash member (110) as an emergency exit."

Claim 1 of **auxiliary request 3** reads as follows (differences in respect of auxiliary request 2 underlined):

"Use of a pivot window comprising a frame (1;101) and a sash (2;102) and cladding parts that protect the frame and the sash, said sash being connected with the frame

by means of a hinge device (12;112) defining a hinge axis (13) of the window, the frame and the sash each including a first pair of mutually opposite members constituting the top and bottom member (3,4,7,8; 103,104,107,108), and a second pair (5,6,9,10; 106,110;206) of mutually opposite members, said first and second pair of frame members defining a frame plane, said hinge device connecting a respective frame and sash member of the second pair of frame and sash members, and a centre line (14) being defined substantially midway between the top and the bottom of the members of said first pair, the hinge device being mounted in such a position that the hinge axis (13) is situated between said centre line (14) and said top member (3,7;103,107), characterized in that the hinge device (12;112) comprises a set of pivot hinges connecting the frame and sash members directly, such that when the window is open, the two sash members constituting the first pair of sash members are located one on each side of the frame plane, that one of said cladding parts is mounted on the frame extending from the top member of the frame to the hinge device (12) and another cladding part is mounted on the sash extending from the bottom member of the sash to the hinge device (12), that the hinge axis (13) is positioned in the interval between $1/3$ and $2/3$ of the distance (d) between the centre line (14) and said one member (3, 7) of said first pair, that the window includes at least one auxiliary opening device (120), and that one end (122) of said auxiliary opening device is connected with a frame member (106), and the other end (121) of said auxiliary opening device is connected with a corresponding sash member (110) as an emergency exit."

V. The following documents play a role in the present decision:

D7: DE -A- 3500630;

D8: US -A- 3,918,205;

D10: DE -C- 827 295;

D12: EP -B- 1 038 083;

Appendix 4: print-outs from the internet sites mum.mum.velux.com, www.fakro.com and fakro.en.alibaba.com;

D16 to D19: print-outs from the internet site uk.dst.roto-frank.com; and

A2: print-out of an article from Wikipedia relating to the term "hinge"

VI. The arguments of the appellant can be summarised as follows:

Main request

According to present claim 1 the window comprised a hinge device which in turn comprised a set of pivot hinges. Hence, it was clear that the wording "pivot hinge" referred to a particular type of hinge. Indeed document A2, cited by the respondent, showed that said wording indicated a specific type of hinge, the details of which depended on the technical field, in the case of A2 doors in ancient dry stone buildings. In the field of the patent in suit the person skilled in the art understood under the term "pivot hinge" the hinges exhibiting a sort of banana-shape which were the subject of patent D10. The common use of the wording "pivot hinge" also clearly emerged from documents D16

to D19 and Appendix 4, wherein that wording was used by different window producers. Furthermore, the patent in suit itself made clear in paragraph [0023] that the pivot hinges were those shown in D12, i.e. the same banana-shaped hinges of D10. Hence, pivot hinges were clearly different from the F-shaped hinges shown in D7.

Moreover, it could not be derived from the drawings of D7, which were merely schematic representations, that the axis of the hinge was situated in the upper half of the window.

Furthermore, the drawings of D7 did not disclose that one end of the auxiliary opening device represented by rod 7 was connected to the frame, since only the end connected to the sash was shown. This could not be considered implicit either, since the rod could perform its opening function also when its second end was connected to the roof or another load-bearing structure.

Accordingly the subject-matter of claim 1 was novel over D7.

Auxiliary request 1

As the drawings of D7 were purely schematic representations they could not disclose either that the hinge axis was positioned in the interval between $1/3$ and $2/3$ of the distance between the centre line and said one member of the pair. Accordingly, the subject-matter of claim 1 of auxiliary request 1 was novel also for this reason.

The selection of that interval provided a good balance between the large opening necessary for using the window as an emergency exit on one hand and a satisfactory operability of the window on the other hand. The prior art did not render it obvious to obtain this effect in accordance with claim 1. D7 itself was silent on the exact positioning of the axis of the hinge and its effect. Moreover, D8, column 1, lines 16 to 26, taught against trying to achieve that effect, since it clearly stated that windows with a central axis of the hinge could not be used as emergency exits.

Therefore, the subject-matter of claim 1 involved an inventive step.

Auxiliary request 2

Document D7 did not disclose that the window could be used as an emergency exit. Moreover, as explained above, D8 taught against that use. Therefore, the subject-matter of claim 1 of auxiliary request 2 was novel and involved an inventive step.

Auxiliary request 3

Figure 1 of the application as filed showed - at least to the person skilled in the art - that the frame was provided with a cladding part extending from its top member to the hinge device and that the sash was also provided with a cladding part which extended from its bottom member to the hinge device.

Moreover, claddings were also mentioned in paragraph [0022] of the application. That paragraph made clear

that the use of a pivot hinge rendered it possible to realise an overlap between those cladding parts. Indeed this was the purpose of the introduction of pivot hinges as disclosed in D10. Also for this reason it was clear that the claddings shown in Figure 1 were in accordance with present claim 1.

Therefore, auxiliary request 3 had not been amended in a manner contrary to Article 123(2) EPC.

VII. The arguments of the respondent can be summarised as follows:

Main request

D7 disclosed a window with all the features of claim 1. In particular, the hinge shown in Figures 4 to 6 of that document acted by pivoting around an axis. Thus it was to be considered as a pivot hinge, since this term, having no generally accepted meaning in the field of the patent, was to be construed merely as a hinge performing a pivot movement, in contrast to the movement of a sliding hinge.

Moreover, although no exact measure could be derived from Figures 1 and 2, these drawings clearly showed that the axis of the hinge was situated in the upper half of the window. Therefore, this feature was also disclosed in D7.

It was true that D7 did not explicitly show that the extremity of the rod 7 was connected to the frame. However, that arrangement was implicitly disclosed, since the rod had to exercise a force and a connection

to the roof or another load-bearing structure was never used in the windows to which D7 related.

Accordingly, the subject-matter of claim 1 was not novel over D7.

Auxiliary request 1

The drawings of D7 further disclosed that the axis of the hinge was approximately positioned in the interval according to claim 1. Accordingly, the subject-matter of claim 1 of auxiliary request 1 was not novel either.

Moreover, in the event that the subject-matter of claim 1 was considered to be novel over D7 by virtue of the selection of that interval, it did not involve an inventive step. Starting from D7 and aiming at a good balance between a large opening on one hand and a satisfactory operability of the window on the other hand, it was obvious to try different positions of the hinge in proximity to the position disclosed in D7. Since that position was at least not far removed from the interval defined in claim 1, the claimed subject-matter was obvious.

Auxiliary request 2

Although D7 did not disclose that the window could be used as an emergency exit, this use was obvious, provided that the geometry of the window rendered it possible. This was the case for the window known from D7, since no differences in terms of geometry were present between it and the window stipulated in

claim 1. Hence, the subject-matter of claim 1 did not involve an inventive step.

Auxiliary request 3

Claim 1 of auxiliary request 3 had been amended to stipulate that the frame was provided with a cladding part extending from its top member to the hinge device and that the sash was also provided with a cladding part extending from its bottom member to the hinge device. However, the description did not mention these features. Figure 1, a merely schematic drawing, did not disclose them either. Although that figure showed some kind of protrusions of the sash and the frame it disclosed neither that they were claddings nor that they extended to the hinge device.

Therefore, auxiliary request 3 had been amended in a manner contrary to Article 123(2) EPC.

Reasons for the Decision

1. The appeal is admissible.
2. Main request
 - 2.1 D7 discloses, in particular in Figures 1 and 2, a window comprising a frame (1) and a sash (2), said sash being connected with the frame by means of a hinge device (3) defining a hinge axis of the window, the frame and the sash each including a first pair of mutually opposite members, and a second pair of mutually opposite members, said first and second pair

of frame members defining a frame plane, said hinge device connecting a respective frame and sash member of the second pair of frame and sash members.

2.2 Figures 1 and 2, albeit schematic representations, allow the inference of size ratios. In particular, they clearly show that the axis of the hinge is positioned in the upper half of the window. Hence, D7 discloses also that the hinge axis is situated between a centre line substantially midway between the one and the other of the members of said first pair and said one member of said first pair.

2.3 The appellant argues that the hinges shown in D7 cannot be considered pivot hinges, as these are rather the banana-shaped hinges shown in D10 and D12. It is true that the patent in suit refers to the latter document in paragraph [0022]. However, according to that paragraph the set of hinges may be designed in any suitable manner, as e.g. disclosed in D12. Hence, it does not stipulate that the pivot hinge is the hinge shown in D12. As a matter of fact, nowhere in the whole patent is there a definition of the term "pivot hinge". Nor can such a definition be found in any of the documents D10, D12, D16 to D19 or Appendix 4, although that term is present in some of them. As to A2, it merely shows that in relation to doors in ancient dry stone buildings, i.e. in a context completely different from that of the patent in suit, this term indicates a specific hinge, incidentally not the hinge shown in D10 and D12. Therefore, in the Board's view the term "pivot hinge" indicates merely a hinge which pivots, as opposed for instance to sliding hinges.

Since the hinges shown in D7 pivot, they are pivot hinges. Moreover, as can be seen in the figures, they connect the frame and sash members directly, such that when the window is open, the two sash members constituting the first pair of sash members are located one on each side of the frame plane.

- 2.4 The window depicted in D7 includes at least one auxiliary opening device, represented by the rod 7, which eases the opening of the window. D7 shows that one end of the rod is connected with the hinge, which in turn is connected with the sash member (see Figures 4 to 6). Hence, one end of the auxiliary opening device is connected with the sash member.

It is true that the other end is not explicitly shown in the drawings of D7. However, it is clear that in order to perform its function the rod has to somehow apply a force to a fixed structure. Hence, the person skilled in the art understands that it is connected to the frame, the only fixed structure of the window. The possibility put forward by the appellant of a connection to the roof or another load-bearing structure would be excluded by the person skilled in the art, since roof windows as shown in D7 are usually marketed and delivered as a complete set.

Therefore, the subject-matter of claim 1 lacks novelty in view of D7.

3. Auxiliary request 1

- 3.1 In Figures 1 and 2 of D7 the axis of the hinge is positioned at about 1/3 of the distance between the

centre line and the upper member of the frame. However, as already mentioned above, those drawings are merely schematic representations from which not the exact but merely an approximate position of the different elements can be derived. Accordingly, D7 does not disclose that the hinge axis is positioned in the interval between $1/3$ and $2/3$ of the distance between the centre line and the upper member of the frame. Therefore, the subject-matter of claim 1 is novel.

- 3.2 The object to be achieved starting from D7 by virtue of this distinguishing feature can be seen in the provision of a good balance between a large opening on one hand and a satisfactory operability of the window on the other hand (see paragraph [0019] of the patent in suit).

It is true that D8 discloses that windows with a central axis of the hinge cannot be used as an emergency exit (see column 1, lines 16 to 26). However, the object above is not limited to windows to be used as emergency exits. Moreover, and most importantly, in the window shown in D7 the axis of the hinge is not in a central position. Hence, the teaching of D8 does not dissuade the person skilled in the art from trying to achieve that object starting from D7.

Starting from the approximate position of the hinge axis shown in Figures 1 and 2 of D7, that position has merely to be optimised to achieve the object above. Since such an optimisation belongs to the routine tasks of a person skilled in the art, it does not require any inventive activity to position the hinge axis according to claim 1. Moreover, since the approximate position of

the hinge axis of D7 is in proximity to the lower limit of the interval stipulated by claim 1, it is obvious to try positions within that interval.

Accordingly, the subject-matter of claim 1 of auxiliary request 1 does not involve an inventive step.

4. Auxiliary request 2

Claim 1 of auxiliary request 2 relates to the use as an emergency exit of a window which corresponds to that stipulated in claim 1 of auxiliary request 1. Whether that use is obvious or not depends solely on whether or not the geometry and the construction of the window render it suitable for that purpose. The patent in suit does not mention any requirement for that purpose in addition to the features defined in claim 1 of auxiliary request 1. However, as already demonstrated, it was obvious to arrive at a window with those features starting from D7. Accordingly, it was also obvious to use that window as an emergency exit, if desired. Contrary to the appellant's view, the teaching of D8 column 1, lines 16 to 26 does not constitute a hindrance in this respect because, as already mentioned, it relates to windows wherein the axis of the hinge is in a central position, which is not the case in Figures 1 and 2 of D7. Therefore the subject-matter of claim 1 does not involve an inventive step.

5. Auxiliary request 3

Claim 1 of this request has been amended compared to claim 1 of auxiliary request 2 to stipulate that cladding parts protect the frame and the sash, that one

of said cladding parts is mounted on the frame extending from the top member of the frame to the hinge device, and that another cladding part is mounted on the sash extending from the bottom member of the sash to the hinge device.

The relevant question to be decided in assessing whether or not that amendment adds subject-matter extending beyond the content of the application as filed is whether or not the amendment is directly and unambiguously derivable from the application as filed.

It is undisputed that the application as originally filed does not literally disclose the features introduced in claim 1. In particular, paragraph [0022], cited by the appellant, merely discloses that the use of a pivot hinge makes it possible to establish an overlap between the sash and the frame in the closed position of the window, and that several other parts of a traditional pivoting window, including some of the cladding parts that protect the frame and the sash, may be simply transferred to the window according to the invention. Accordingly, that passage does not link the pivot hinge with the presence of cladding parts and is silent as to the extent of those cladding parts.

It is true that Figure 1 shows some protrusions that may be cladding parts protecting the frame and the sash. However, this drawing is merely a schematic representation. Although size ratios may be inferred from that representation, the exact extension of those protrusions, which seems to be different on the two sides of the window, cannot be derived from it. Hence, also assuming that those protrusions are cladding

parts, it is not - even for the person skilled in the art - clearly and unambiguously derivable from Figure 1 that the cladding part mounted on the frame extends from the top member of the frame to the hinge device and that the cladding part mounted on the sash extends from the bottom member of the sash to the hinge device. Therefore, auxiliary request 3 does not comply with the requirements of Article 123(2) EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

V. Commare

T. Kriner