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Datasheet for the decision of 10 November 2009

Case Number: T 0531/07 - 3.2.08

Application Number: 00830304.2

Publication Number: 1063376

IPC: E05D 3/06

Language of the proceedings: EN

Title of invention:
Hidden hinge, in particular for doors and/or wings of furniture items

Patentee:
Koblenz S.P.A.

Opponent:
CEAM AMADEO S.p.a.

Headword:
-

Relevant legal provisions:
EPC Art. 100(c), 123(2), 123(3), 56

Relevant legal provisions (EPC 1973):
-

Keyword:
"Added subject-matter (no) - after amendments"
"Broadening of claim (no)"
"Inventive step (yes) - after amendments"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0531/07 - 3.2.08

D E C I S I O N
of the Technical Board of Appeal 3.2.08
of 10 November 2009

Appellant: (Opponent)
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Decision under appeal:
Interlocutory decision of the Opposition Division of the European Patent Office posted 7 February 2007 concerning maintenance of European patent No. 1063376 in amended form.

Composition of the Board:

Chairman: T. Kriner
Members: M. Alvazzi Delfrate
E. Dufrasne

Summary of Facts and Submissions

I. In its interlocutory decision, posted on 7 February 2007, the opposition division held that European patent 1063376 as amended according to the second auxiliary request then on file satisfied the requirements of the European Patent Convention ("EPC").

II. Against this decision the following appeals were lodged:

- by the patent proprietor (appellant I) on 30 March 2007 the appeal fee being paid on the same day and the statement of grounds of appeal being filed on 5 June 2007;

- by opponent 1 (appellant II) on 11 April 2007 the appeal fee being paid on 12 April 2007 and the statement of grounds of appeal being filed on 6 June 2007; and

- by opponent 2 (appellant III) on 5 April 2007 the appeal fee being paid on the same day and the statement of grounds of appeal being filed on 13 June 2007.

III. Appellant III withdrew its opposition on 31 October 2008.

IV. Oral proceedings were held before the board on 10 November 2009. At the close of the debate the following requests were made:

Appellant I requested that the decision under appeal be set aside and that the patent be maintained on the

basis of auxiliary request 2, filed with the letter dated 8 October 2009.

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

V. Independent claim 1 underlying the present decision reads as follows:

"A hidden hinge, in particular for doors or for wings of furniture items, comprising fastening elements (1, 2), provided with fixed pivot pins (7', 7") oriented parallel to a vertical direction (Z) and with sliding guides (9', 9"), which can be housed respectively in the thickness of the door (3) and in the thickness of a corresponding fixed door post (4) and which result to be mutually opposite when the door (3) is in closed condition; arms (5', 5") for connecting the door (3) to the door post (4) which are connected to the fastening elements (1, 2) respectively with their first extremity (6', 6") hinged on the fixed pivot pin (7', 7") of one of the fastening elements (1; 2) and with a second extremity (8', 8") engaged in the sliding guide (9", 9') of the other fastening element (2; 1); and a joint (10) interposed at the extremities (6', 8', 6", 8") of the arms (5', 5") which pivotingly connects the arms (5', 5") to each other allowing their relative angular mobility, characterised in that the fastening elements (1, 2) are movable relative to each other at least along one direction defined by at least one of three cartesian axes and in that it comprises adjustment means (16, 17, 18) to vary the position of the fastening elements (1, 2) at least along said direction; one of the fastening elements (1, 2)

comprising a fixed part (21) fastened to the respective door post (4) or door (3) and a movable part embodied by a connecting body (15″; 15′) which bears one of the fixed pivot pins (7′; 7″) articulating one of the arms (5′; 5″), the connecting body (15″; 15′) being housed inside the thickness of the respective door post (4) or door (3) internally relative to the fixed part (21) and being slidably translatable relative to the fixed part (21) along a respective pair of guide rods (26) which is oriented along a first horizontal direction (X) perpendicular to the planar flange of the fixed part (21), so that the two fastening elements (1, 2) are movable relative to each other along the first horizontal direction (X); the adjusting means (16, 17, 18) varying the position of at least the connecting body (15″; 15′) at least along the first horizontal direction (X); also the other of the fastening elements (1; 2) comprises a respective fixed part (21), fastened to the respective door (3) or door post (4), and a respective movable part embodied by another connecting body (15′; 15″) which bears the other of the fixed pivot pins (7″; 7′) articulating the other of the arms (5″; 5′), said other connecting body (15′; 15″) being housed in the thickness of the respective door (3) or door post (4) internally relative to the respective fixed part (21) and being slidingly translatable relative to the respective fixed part (21) along a respective pair of guide rods (27) which is oriented along a further horizontal direction (Y) perpendicular to the first horizontal direction (X), so that the two fastening elements (1, 2) are movable relative to each other along the further horizontal direction (Y), the adjusting means (16, 17, 18) being devised to vary the position of the other connecting body (15′; 15″) along

the further horizontal direction (Y); the fastening elements (1, 2) are movable relative to each other along the vertical direction (Z) and the adjustment means (16, 17, 18) are devised to effect a positional adjustment of the fastening elements (1, 2) along the vertical direction (Z)."

VI. The following documents are relevant for the present decision:

D4: JP-A-5-113068 and translations into German and English (D4A and D4B);
D5: JP-A-6-288139 and translations into German and English (D5A and D5B); and
E10: US-A-4817241

VII. The arguments of appellant II can be summarised as follows:

(a) Art. 100(c) and 123(2) EPC

The patent application as filed did not disclose that the fastening elements resulted in being mutually opposite when the door was in closed condition.

Moreover, the originally filed application did not disclose that the horizontal direction X was perpendicular to the planar flange of the fixed part. Figure 4 could not support this feature, since it merely referred to a single section, and did not show the three dimensions of the hinge.

Additionally, according to paragraph [0023] of the application as filed, the adjustment of the hinge was

obtained by a translation along respective pairs of guide rods, while present claim 1 required merely a single pair of rods for each of the directions.

For each of the reasons above, claim 1 had been amended in such a way that it contained subject-matter extending beyond the content of the application as filed.

(b) Art. 123(3) EPC

According to claim 1 as granted, the first horizontal direction X was perpendicular to a vertical plane which was intermediate between the two fastening elements when the door was in closed position. Since this feature had been omitted from present claim 1, the protection conferred by the patent was extended.

(c) Inventive step.

D4, disclosing a hidden hinge with adjustment mechanisms along two directions corresponding to the X and the Z directions as defined in the patent in suit, could be regarded as representing the most relevant prior art. The hinge of the patent in suit was distinguished from the hinge shown in D4 by the adjustment in the Y direction along guide rods and by each of the arms having an extremity engaged in a sliding guide of a fastening element.

Starting from D4, the principal object to be achieved was therefore an improvement of the adjustment possibilities.

E10 (Figure 2) suggested an adjustment in the Y direction in combination with an adjustment in the Z direction. Moreover, E10 showed elements (30) which could be regarded as guide rods. Therefore, it was obvious for the person skilled in the art to provide an additional adjustment in the Y direction along guide rods in the hinge described in D4, in order to achieve the object above.

The feature pertaining to the sliding guide of the fastening element did not contribute to the solution of the problem underlying the invention and, being known, for example, from D5, would be provided without the need of an inventive step.

Therefore, the subject-matter of claim 1 was obvious in view of D4 in conjunction with E10 and D5.

(d) Art. 100(b) EPC.

The objection under Art. 100(b) EPC raised in the written procedure was withdrawn during the oral proceedings.

VIII. Appellant I relied essentially on the following arguments:

(a) Art. 100(c) and 123(2) EPC

Paragraph [0014] of the patent application as published disclosed that the fastening elements were mutually opposite when the door was in closed condition, since said paragraph described mutually opposite bodies 1 and 2 embodying the fastening elements.

Moreover, Figures 4-6 of the application clearly showed that the horizontal direction X was perpendicular to the planar flange 21 of the fixed part.

Additionally, it was clear from paragraphs [0022]-[0023] and the corresponding Figures 4-6 that each of the respective pairs of guide rods was provided for a translation in a different direction. Therefore, each of the translations along the X and Y directions was originally disclosed in association with a pair of guide rods.

For the reasons above claim 1 did not extend beyond the content of the application as filed.

(b) Art. 123(3) EPC

The feature of the present claim 1, according to which the first horizontal direction X was perpendicular to the planar flange of the fixed part, merely defined in a more precise way what was already recited in claim 1 as granted, i.e. that the first horizontal direction X was perpendicular to a vertical plane which was intermediate between the two fastening elements when the door was in closed position. Therefore, the protection conferred by the patent was not extended by the present claim 1.

(c) Inventive step

Considering D4 as representing the most relevant prior art, the claimed hinge was distinguished therefrom by the adjustment in the horizontal Y direction, by the

use of guide rods for the adjustments in the horizontal directions and by an extremity of each of the arms being engaged in a sliding guide of a fastening element. Providing the hinge shown in D4 with all said features would have required profound modifications of its construction and was not suggested by E10 or D5. In particular it would not have been obvious to consider E10, which, not relating to a hidden hinge, was far removed from the claimed invention. Therefore, the subject-matter of claim 1 involved an inventive step.

Reasons for the Decision

1. The appeals are admissible.

2. *Art. 100(c) and 123(2) EPC*

Paragraph [0014] of the patent application as published (corresponding to the application as filed) describes that the fastening elements are embodied by the bodies 1 and 2, and that these bodies are mutually opposite when the door is in closed condition. Therefore, the patent application unambiguously discloses that the fastening elements "… result to be mutually opposite when the door (3) is in closed condition …".

Figures 4-6 of the patent application show differently oriented sections of the hinge, thus describing its construction in three dimensions. Figure 5 is a view of the hinge of Figure 4 sectioned along the plane V-V and shows, in conjunction with Figure 4, that the planar flange 21 is parallel to the plane V-V. Since Figure 4 shows that the line corresponding to the X direction is

perpendicular to the plane V-V, the application discloses "… a first horizontal direction (X) perpendicular to the planar flange of the fixed part (21) …".

Paragraphs [0022]-[0023] and Figures 4-6 of the published application additionally show that, while the pair of guide rods 27 provide translational movement in the Y direction, the pair of guide rods 26 provide translational movement in the X direction. Therefore, each of the respective pairs of guide rods provides the possibility of a translation in a different direction X or Y.

For the reasons above claim 1 does not extend beyond the content of the application as filed.

3. *Art. 123(3) EPC*

The present claim 1 defines the X direction as being perpendicular to the planar flange of the fixed part (21) of one of the fastening elements (1, 2), which can be housed respectively in the thickness of the door and in the thickness of the corresponding fixed door post. Since the claim further defines the fastening elements as being mutually opposite when the door is in closed position, the planar flange of the fixed part of the fastening element is parallel to a plane intermediate between the two fastening elements in the closed position of the door. In consequence thereof, the X direction is perpendicular to said intermediate plane. Moreover, the X direction being further defined by the claim as horizontal, any plane perpendicular to it has to be vertical.

Accordingly, the wording of the present claim 1 inevitably requires that the X direction is perpendicular to a vertical plane which is intermediate between the two fastening elements when the door is in closed position. Therefore, the protection conferred by the patent is not extended by the present claim 1 when compared with claim 1 as granted.

4. *Inventive step*

4.1 D4 discloses a hidden hinge (see paragraph [0001]) wherein the position of the fastening means can be adjusted in two directions: a vertical direction corresponding to the Z direction according to the patent in suit and a height or width direction corresponding to the X direction according to the patent in suit (see in particular paragraph [0024]).

However, D4 does not disclose a hinge which is adjustable in the horizontal Y direction.

Moreover, the mechanism for varying the position of the fastening means in the horizontal X direction shown in D4 is provided with an adjustment screw 24b, whose rotation causes a swinging movement of element 24a (see paragraph [0025]). Therefore, the horizontal adjustment in the X direction described in D4 is not realised by the movable part being slidingly translatable relative to the fixed part along a respective pair of rods.

Additionally, D4 does not show sliding guides in the fastening elements for engaging an extremity of the arms connecting the door and the door post.

4.2 Starting from D4, the object to be achieved by the present invention can be seen in providing a hidden hinge which is adjustable along the three cartesian axes, thus permitting a vertical and squaring adjustment and the correction of any imperfection in the assembly (see paragraph [0009] of the patent in suit).

According to the present claim 1 this object is achieved by the following features:

- the relative position of the fastening means can also be adjusted in the Y direction;
- the translations along the Y and X horizontal directions are sliding translations along respective pairs of guide rods; and
- the fastening elements are provided with sliding guides in which an extremity of each of the arms for connecting the door to the door post is engaged.

The adjustment possibilities are especially improved by the features pertaining to the movements in the horizontal directions.

4.3 E10 relates to a hinge which, contrary to those shown in D4 and in the patent in suit, is not a hidden hinge. It would thus not be obvious for the person skilled in the art to consult E10 with a view to achieving the object above, since the fastening means shown in E10 are different from those used in a hidden hinge, which need to accommodate the connecting arms when the door is closed. Moreover, even if he considered the teaching of E10, he would find no pointer to a

horizontal adjustment mechanism according to present claim 1, since the adjustment mechanism disclosed in E10 (see in particular column 5, line 23-51) does not involve a sliding translation along guide rods.

D5 shows an adjustment mechanism (see paragraph [0024]), which is neither in the Y direction nor involves a sliding translation along guide rods.

Accordingly, none of the documents D4, E10 or D5 discloses an adjustment in the Y direction along guide rods or renders its provision obvious. For this reason alone, the subject-matter of claim 1 involves an inventive step within the meaning of Art. 56 EPC.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

The case is remitted to the first instance with the order to maintain the patent on the basis of:

-claims 1 to 12 of auxiliary request 2 filed with letter dated 8 October 2009;

- a description to be adapted; and

-Figures 1 to 7 of the patent as granted.

The Registrar: The Chairman:

V. Commare T. Kriner