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**Datasheet for the decision
of 16 January 2008**

Case Number: T 0591/06 - 3.2.01

Application Number: 97203949.9

Publication Number: 0850834

IPC: B64D 11/06

Language of the proceedings: EN

Title of invention:

Fully reclinable, pivotable airplane passenger sleeper seat assemblies

Patentee:

The Boeing Company

Opponent:

Airbus SAS

Headword:

-

Relevant legal provisions:

EPC Art. 123(2)

RPBA Art. 12(4)

Relevant legal provisions (EPC 1973):

EPC Art. 56

Keyword:

"Extended subject-matter (main request: yes)"

"Inventive step (auxiliary request: yes)"

"Admissibility of later filed evidence (no)"

Decisions cited:

-

Catchword:

-



Case Number: T 0591/06 - 3.2.01

DECISION
of the Technical Board of Appeal 3.2.01
of 16 January 2008

Appellant: The Boeing Company
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
8 February 2006 concerning maintenance of
European patent No. 0850834 in amended form.

Composition of the Board:

Chairman: S. Crane
Members: C. Narcisi
T. Karamanli

Summary of Facts and Submissions

- I. The European patent No. 0 850 834 was maintained in amended form by the interlocutory decision of the Opposition Division posted on 8 February 2006. An appeal was filed against this decision by the Patentee and by the Opponent respectively on 7 April 2006 and on 13 April 2006 and at the same time the respective appeal fees were paid. The statement of grounds of appeal was filed by the Patentee on 2 May 2006 and by the Opponent on 16 June 2006.
- II. Oral proceedings took place on 16 January 2008. The Patentee requested that the decision under appeal be set aside and that the patent be maintained as granted or in the alternative to maintain the decision of the Opposition Division in full, allowing claims 1 to 9, corresponding to the first auxiliary request filed during the oral proceedings before the Opposition Division of 19 January 2006. The Opponent requested that the decision be set aside and that the patent be revoked.

Granted claim 1 reads as follows:

"A double passenger sleeper seat assembly for use in a vehicle having a plurality of seats separated by at least one aisle, each of said seats having a pivotable seat back and an extendable leg rest, said assembly comprising:

- a first base subassembly (90) affixable to said vehicle along said aisle;
- a second subassembly (95) for supporting each of said seat backs and each of said leg rests, said second

subassembly being rotatably supported on said first subassembly;

- means (120-135) for translating said second subassembly with respect to said first subassembly from a first position to a second position into said aisle;
- means (100-180) for rotating said second subassembly with respect to said first subassembly whereby each of said seat backs and said leg rests being disposable in a substantially horizontal position and each of said leg rests being extendable into said aisle."

Granted claim 8 reads as follows:

"A process for providing a fully reclinable passenger seat arrangement in an airplane by maximizing the use of space within said vehicle, said arrangement including a plurality of double seat units separated by an aisle disposed within said airplane, each of said seats having a pivotable seatback and an extendable leg rest, said process comprising:

- affixing a first base subassembly (90) to said airplane along said aisle;
- rotatably supporting a second subassembly (95) on said first base subassembly, said second subassembly supporting said seat back and said leg rest;
- translating said second subassembly with respect to said first base subassembly from a first position to a second position closer to said aisle;
- rotating said second subassembly with respect to said first base subassembly;
- disposing at least one of said seat backs and at least one of said leg rest in a substantially horizontal position, and;
- extending at least one leg rest into said aisle."

Granted dependent claim 9 reads as follows:

"A process according to claim 8, comprising:

- providing said second subassembly with a first receptacle (235) and a second receptacle (240);
- aligning said first receptacle substantially perpendicular to said second receptacle;
- slidably supporting at least one locking (140,145) pin in said first subassembly;
- providing a release handle (305);
- connecting said release handle to said locking pin;
- inserting said locking pin into said first receptacle when said second subassembly is in said first position using said release handle;
- inserting said locking pin into said second receptacle when said second subassembly is in said second position using said release handle, and;
- rotating said second subassembly with respect to said first base subassembly and projecting said second subassembly into said aisle."

The set of claims according to the first auxiliary request is identical with the granted set of claims except for the fact that claim 9 has been deleted.

III. The Patentee's arguments may be summarized as follows:

The subject-matter of dependent claim 9 does not offend against Article 123(2) EPC. It is apparent from paragraphs [0016] and [0032]-[0034] of the patent specification that the invention includes only one embodiment as shown in figures 1 to 15 and that figures 16 to 18 merely illustrate a simplified form of the

first embodiment. This specific simplification applies when the geometry of some installations, such as the upper deck of the Boeing 747, make it possible to accomplish the reorientation of the present seat without the need to translate the upper seat assembly away from the sidewall. Other possible simplifications are described in paragraph [0053] of the patent specification, stating that under particular circumstances the elimination of both drive motors and drive screws may be desirable. It is thus obvious that according to the invention there is only one main embodiment, however including a number of possible simplifications mentioned in the patent specification and partly shown in figures 16 to 18. Hence it would be evident to the skilled person that the features illustrated in figures 16 to 18, particularly relating to the release handles for inserting the locking pins into the first and second receptacles according to claim 9, could be likewise used in conjunction with the main embodiment of claim 8. The description of the patent thus implicitly discloses to the skilled person the combination of features indicated in claim 9.

The document D7 (DE-A1-37 07 293) was filed late with the statement of grounds of appeal and moreover it is not highly relevant and should therefore be disregarded. The Opponent has given no valid reason for filing document D7 at such a late stage of the procedure and since the statement of grounds of appeal appears to be entirely based on D7 this is clearly a completely new case, whereas the appeal procedure is not to be regarded as the continuation of the opposition procedure. Also, D7 does not disclose any indication relating to a sleeping position of the seats

nor that the leg rest extends into the aisle. In addition, due to the rotation of the double seat the position of the aisle is partly modified according to D7 (figure 4) to permit access to the seats. As a result, the skilled person would not turn his attention to D7 in order to solve the problem of the invention.

The subject-matter of claim 1 as granted according to the main and to the auxiliary request involves an inventive step over the cited prior art D1 (US-A-5 193 765), D2 (US-A-3 394 964) and D3 (US-A-5 333 818). The main advantages of the invention are that a horizontal sleeping position of the double seat is obtained without significantly reducing the seating capacity of the airplane and still allowing the passenger sitting next to the window access to the aisle when the double seat closest to the aisle is fully reclined. None of the prior art documents discloses a reclinable double seat capable of assuming a horizontal sleeping position. In particular, D3 does not show a double seat, while the seats of D1 and D2 cannot be put in a fully reclined position. The skilled person, taking either D1 or D3 as a starting point, would have no incentive to combine any of these documents with D2. In fact, D2 does not even address the main technical problem of the invention, which resides in finding a way of obtaining the above mentioned advantages, and does not propose a solution implying the use of the aisle space when the seat is in its horizontal sleeping position. Specifically, D2 does not disclose that the seat back and the leg rest are disposable in a substantially horizontal position and that the leg rest is extendable into the aisle. Hence,

even the combination of D1 or D3 with D2 would not lead to the subject-matter of claim 1.

IV. The Opponent's arguments may be summarized as follows:

The subject-matter of claim 9 was not disclosed in the original application as filed and thus constitutes an infringement of Article 123 (2) EPC. In fact, the description of the application clearly comprises a first embodiment according to figures 1 to 15 and a second distinct embodiment according to figures 16 to 18. The release handle for inserting the locking pin into the first and second receptacles is disclosed exclusively in figures 16 to 18 as a part of the second embodiment. In the second embodiment, since said second subassembly does not perform a translational movement towards the aisle, another mechanism has necessarily to be provided in order to disengage the locking pins 295 from the receptacles 315 or 325 to allow rotation of the seat. There is no indication in the original application that features from one of the two embodiments may be combined with the other embodiment. Additionally, for the skilled person there would be no need and it would be unreasonable to provide such release handles in the first embodiment shown in figures 1 to 15, given that in the first embodiment the translational movement of the second subassembly already permits disengagement of the locking pins.

Document D7 has been filed with the statement of grounds of appeal in response to the reasons given in the decision under appeal, and particularly on page 6, second paragraph of said decision. Therein the Opposition Division states that "D2 does not teach a

position of the double seater in which the user of the seats can be seated facing the aisle while being translated into said aisle; quite on the contrary the only positions in which a user can be seated are disclosed in figures 4 and 8, that is, either facing forward to the immediate forward seats or to the rearward seats". D7 now shows in particular that the leg rest 21 (figure 2) can be extended into the aisle, such that D7 is relevant to the subject-matter of claim 1 either when considered alone or in combination with D1 or D3. The line of arguments followed in the statement of grounds of appeal is thus similar to that followed before the Opposition Division where the combination of D1 or D3 with D2 was considered. D7 should be admitted into the appeal procedure to take due account of the interest of the public and third parties that only valid patents be granted.

The subject-matter of independent claim 1 does not involve an inventive step over the combination of D1 or D3 with D2. D3 discloses a passenger sleeper seat having a pivotable seat back and an extendible leg rest, said seat comprising a first base subassembly affixable to the vehicle along the aisle, a second subassembly being rotatably supported on said first subassembly and means for translating said second subassembly with respect to said first subassembly. Hence the only differences to the subject-matter of claim 1 are that according to D3 the translational motion is longitudinal and not perpendicular with respect to the aisle and that D3 discloses a single passenger seat. The technical problem which is solved by the present invention is a well known and common problem in the art. Specifically, there always has been

a need for providing a sleeper seat assembly which nevertheless does not significantly reduce the seating capacity of the airplane. Thus, for one thing the use of a double passenger seat would be obvious for the skilled person in order to save available space. Further it would be equally evident that the known disposition of the sleeper seats, which is longitudinal with respect to the aisle, thus commonly leading to a seat pitch of the order of 2 m, is not compatible with the main object of the invention. Consequently, the skilled person would look for other possible seat arrangements and he would necessarily conclude that when the seat is in its sleeping configuration the longitudinal disposition of the seat relatively to the aisle would have to be abandoned. The skilled person would thus naturally be led to consider a rotation of the seat by 90° or less with respect to its usual longitudinal position. This is likewise suggested by the disclosure of D2 which also provides the necessary technical measure to perform this rotation in that it clearly teaches that a translation of the seat into the aisle has first to be accomplished, to avoid interference with the side wall of the passenger cabin, before the seat can be rotated and the leg rest extended into the aisle. A similar reasoning starting from D1 leads to the same conclusion that the subject-matter of claim 1 lacks an inventive step over the cited prior art.

Reasons for the decision

1. The appeals are admissible.

2. The subject-matter of claim 9 is not explicitly derivable from the content of the application as filed since there is no indication that release handles as shown in figures 16 to 18 are applicable to the main embodiment of the invention illustrated in figures 1-15. Further, if the modified embodiment of the invention according to figures 16 to 18 implying the use of release handles is regarded as a simplification resulting from eliminating the translational movement of the second subassembly, the converse, i.e. introducing release handles in the main embodiment of figures 1 to 15, cannot possibly be considered as a simplification. In fact, it is not even apparent how such an embodiment should work, given that in the main embodiment the disengagement of the locking pins from the respective receptacles is already performed by the translational motion of said second subassembly, the release handles thus being completely superfluous. Finally, there is no suggestion whatsoever in the application as filed that the release handles could be used in conjunction with the embodiment of figures 1 to 15. For these reasons the subject-matter of dependent claim 9 extends beyond the content of the application as filed (Article 123(2) EPC), and the Patentee's main request is not allowed.

3. Document D7 was filed by the Opponent with the statement of grounds of appeal. The Opponent's contention that D7 was filed in response to the reasons given by the Opposition Division in the contested

decision cannot be accepted by the Board. Firstly, it is immediately apparent from document D2 and specifically from figures 1 to 8, that the double passenger seat of D2 cannot be fully reclined such as to assume a horizontal sleeping position and that it cannot be rotated such as to face the aisle. Thus the reasons given in the decision under appeal could not have possibly taken the Opponent by surprise and, quite to the contrary, it is reasonable to suppose that the Opponent should have been conscious from the outset of the mentioned differences between D2 and the subject-matter of claim 1. In addition, in the annex (page 4, fourth paragraph) to the summons to the oral proceedings the Opposition Division clearly pointed out the mentioned differences between D2 and the subject-matter of claim 1. These differences were also mentioned at least in part by the Patentee in its letters dated 1 March 2005 (page 3, second paragraph) and 19 December 2005 (fifth paragraph). In conclusion the Opponent could and should have produced document D7 already during the oral proceedings before the Opposition Division. Filing D7 only with the statement of grounds of appeal cannot thus be regarded as a reaction to the reasons given in the contested decision and as a consequence D7 is late filed.

It is acknowledged that D7 discloses a passenger seat, with a leg rest 21 (figure 2), being rotatable by 90° towards the interior of the passenger cabin such as to face a conference table located in the aisle separating passenger seats (figure 4) on opposite sides of the vehicle. In this configuration the conference table completely occupies and blocks the aisle such that the aisle is now repositioned at a different location

(figure 4, reference signs b,c; column 4, lines 5-12) in order to allow the passengers to have access to the seats. Thus, in this configuration the seats do not face the aisle since the aisle is now located at a different position and the leg rest 21 therefore does not extend into the aisle as required by claim 1. In fact, in the configuration shown in figure 4 it would not even be possible to extend the leg rest into its horizontal position since the conference table entirely occupies and fills the space in front of the seat. Finally, there is no disclosure in D7 that the seats can be fully reclined in a horizontal position and hence no mention that these may assume a sleeping configuration. In view of these facts it is clear that D7 does not address the technical problem with which the invention is concerned and fails to disclose the essential features of the invention according to claim 1. Consequently, D7 would not be taken into account by the skilled person looking for a solution to the technical problem of the invention. According to the discretionary power of the Board pursuant to Article 12(4) of the Rules of Procedure of the Boards of Appeal (OJ EPO 2007, 536) not to admit documents which could have been presented in the first instance proceedings into the appeal proceedings it is therefore decided that document D7 is to be disregarded as not being sufficiently relevant.

4. The background of the invention and the associated technical problem underlying the present invention according to claim 1 of the first auxiliary request are discussed at length in the introductory part of the contested patent. In long duration non-stop flights, particularly in first class and business class, there

is an increasing demand for seating allowing the passenger to sleep fully reclined. As a consequence seats have to be installed at a pitch of the order of two meters with the consequence that the seating capacity and the generated revenue of the airplane are noticeably reduced. Moreover, enough space should be provided such that the window seat passenger can gain access to the aisle when the seat closest to the aisle is in a fully reclined position. Thus the main objects of the invention consist in providing a passenger sleeper seat which can assume a normal as well as a relaxing horizontal position and which nevertheless is cost efficient with regard to seating capacity and allows window passengers to have access to the aisle. This problem is solved by a double passenger sleeper seat having the features of claim 1.

As noted by the Patentee, none of the cited documents D1, D2 or D3 actually discloses a double passenger seat capable of being fully reclined. A double seat having the mentioned property definitely gives a contribution to the solution of the posed technical problem, since by this technical measure, by contrast to the single passenger sleeper seat shown in D3, the available space on board the vehicle is much more efficiently used. Even if D1 clearly shows double passenger seats, nevertheless, as apparent from the figures, these are certainly not sleeper seats allowing a horizontal configuration and are not described as such in D1. Consequently, it has to be noted that the first step, implying the provision of a double passenger sleeper seat, which would have to be taken by the skilled person to arrive at the invention of claim 1, either starting from D1 or from D3 as closest prior art

according to the Opponent's arguments, is not disclosed or suggested in the available prior art.

The further feature which undisputedly determines a difference over all the prior art documents is the essence of the invention and relates to the "means for rotating said second subassembly with respect to said first subassembly whereby each of said seat backs and said leg rests being disposable in a substantially horizontal position and each of said leg rests being extendable into said aisle". D2 is the only prior art document disclosing a rotation of the passenger seat by 90° away from its normal longitudinal position which is aligned with aisle of the vehicle. This is rendered possible by allowing the seat first to translate in a direction away from the side wall of the vehicle, the same as is done by the invention. However, according to D2 the rotation of the double seat results in the seat facing either the window (figure 6) or it facing the opposite, backward direction if a further rotation of 90° is accomplished, and means for solidly locking the seat in position are provided only in the forward (normal) or backward position (D2, column 1, lines 15-20). In addition, the double seat of D2 does not include a leg rest and cannot assume a fully reclined configuration. In conclusion, D2 does not contemplate using the aisle space for accommodating an extendable leg rest, let alone seeking for a specific sleeping configuration or arrangement of the seats. In fact, the object of D2 markedly differs from that of the invention and consists in providing a revolving seat which can be revolved readily in opposite directions in order to allow groups of passengers to seat facing each other (D2, column 1, lines 25-29).

5. The Opponent's further argument implying that the essential feature of the invention is merely the result of a choice between two alternatives, namely a longitudinal position of the fully reclined seat, parallel to the aisle, and a transverse position of the same, perpendicular to the aisle, and as such not inventive, cannot be followed by the Board. In fact, on the evidence available the person skilled in the art would not have contemplated at all using the aisle space to allow the seat to assume a horizontal sleeping configuration and to accommodate the extendable leg rest. In particular, since this technical measure is neither disclosed nor suggested by any of the available prior art documents the assumption that the skilled person would have the choice between the mentioned two alternatives is purely theoretical and is not sufficiently corroborated.
6. In view of the foregoing there appears to be no convincing reason why the skilled person starting either from D1 or from D3 as closest prior art should envisage a combination of this prior art with D2, and even if he would combine these documents this would not lead to the subject matter of claim 1 (see point 4). Given that the subject-matter of claim 1 also cannot be considered as being obvious starting from D1 or D3 and taking further into account the general capabilities of the skilled person (see point 5), it is concluded that it involves an inventive step (Article 56 EPC 1973). For the same reasons the subject-matter of related process claim 8 likewise satisfies the requirement of inventive step. Therefore, the decision of the Opposition Division is confirmed.

Order

For these reasons it is decided that:

The appeals are dismissed.

The Registrar:

The Chairman:

A. Vottner

S. Crane