

Internal distribution code:

- (A) Publication in OJ
(B) To Chairmen and Members
(C) To Chairmen
(D) No distribution

**Datasheet for the decision
of 30 November 2011**

Case Number: T 0161/09 - 3.2.01

Application Number: 01202669.6

Publication Number: 1174340

IPC: B64D 11/04

Language of the proceedings: EN

Title of invention:

Automated galley cart storage system

Patentee:

The Boeing Company

Opponents:

AIRBUS Deutschland GmbH/AIRBUS France SAS/AIRBUS UK
Limited/AIRBUS España S.L./AIRBUS SAS

Headword:

-

Relevant legal provisions:

EPC Art. 123(2)(3)

RPBA Art. 13(1)(3)

Relevant legal provisions (1973):

EPC Art. 56

Keyword:

"Extended subject-matter (no)"

"Extended scope of protection (no)"

"Late-filed line of argumentation (admitted)"

"Inventive step (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0161/09 - 3.2.01

DECISION
of the Technical Board of Appeal 3.2.01
of 30 November 2011

Appellants:
(Opponents) AIRBUS Deutschland GmbH/AIRBUS France
SAS/AIRBUS UK Limited/AIRBUS España
S.L./AIRBUS SAS
Kreetslag 10
D-21129 Hamburg (DE)

Representative: Kietzmann, Lutz
Maiwald Patentanwalts GmbH
Benrather Straße 15
D-40213 Düsseldorf (DE)

Respondent:
(Patent Proprietor) The Boeing Company
100 North Riverside Plaza
Chicago, IL 60606-2016 (US)

Representative: McLeish, Nicholas Alistair Maxwell
Boult Wade Tennant
Verulam Gardens
70 Gray's Inn Road
London WC1X 8BT (GB)

Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
17 November 2008 concerning maintenance of the
European patent No. 1174340 in amended form.

Composition of the Board:

Chairman: G. Pricolo
Members: C. Narcisi
T. Karamanli

Summary of Facts and Submissions

- I. The European patent No. 1 174 340 was maintained in amended form by the decision of the Opposition Division posted on 17 November 2008. Against this decision an appeal was lodged by the Opponents on 15 January 2009 and the appeal fee was paid at the same time. The statement of grounds of appeal was filed on 17 March 2009.
- II. Oral proceedings were held on 30 November 2011. The Appellants (Opponents) requested that the decision be set aside and that the patent be revoked. The Respondent (Patentee) requested that the appeal be dismissed.

Claim 1 as upheld by the Opposition Division has the following wording:

"An aircraft galley occupying an area of passenger-level floor space on-board an aircraft, the galley having a volume and comprising a galley cart storage system (10) for use with rectangular galley carts (22) having a lower end supported by a number of wheels, the storage system comprising:

(a) a rectangular upright enclosure (12) having a rigid frame formed of upright corner posts (16); the enclosure further including a front opening (20) sized to accept a galley cart, a back side, and two sides;

(b) a lift assembly (14) comprising:

- (i) a motor (30) located adjacent the enclosure;
- (ii) a drive screw (32) located in the enclosure and oriented vertically, the drive screw being connected to the motor (30) such that rotary

motion of the motor causes like rotation of the drive screw; and

(iii) a lifting bracket (34) within the enclosure and threadingly connected to the drive screw (32); the lifting bracket including a cart interface member adapted to engage the lower end of a first galley cart (22);

wherein activation of the motor (30) causes rotation of the drive screw (32) and corresponding movement of the lifting bracket (34) along the drive screw (32) to move a galley cart (22) within the enclosure (12) vertically between a lower and upper position;

characterized in that the enclosure (12) is sized so as to accommodate two galley carts (22) in an upright stack and in that the lift assembly (14) is operative so as to lift a first galley cart (22) to the upper position so as to store the first and second galley carts in said upright stack within the enclosure (12) and within the galley volume."

III. The Appellants' submissions may be summarized as follows:

The subject-matter of claim 1 includes amendments which go beyond the content of the application as originally filed, for neither the feature "An aircraft galley occupying an area of passenger-level floor space on-board an aircraft, the galley having a volume and comprising a galley cart storage system" nor the further feature "so as to store the first and second galley carts in said upright stack within the enclosure and within the galley volume" were originally disclosed. Claim 1 as filed was directed to "a galley cart storage system" (see published patent application,

hereinafter designated as EP-A) and not to "an aircraft galley occupying an area of passenger-level floor space", according to present claim 1. EP-A states that the galley cart storage system of the invention is intended "for use in on-board galleys of commercial jet aircraft or other vehicles" (see EP-A, paragraph [0001]), yet an aircraft galley "comprising a galley cart storage system" cannot be inferred from this passage of EP-A since according to this passage the cart storage system does not necessarily constitute part of the galley. In the same way, figure 1 of EP-A does not disclose that said cart storage system is located "within the galley volume", for the demarcation of the space inside the galley with respect to the space outside the galley is not clearly indicated in figure 1. Similarly, since paragraph [0002] of EP-A relates to generally known prior art and not specifically to the invention, it cannot be invoked as disclosing the feature "an aircraft galley occupying an area of passenger-level floor space on-board an aircraft". Furthermore, even the statement that the "invention reduces the amount of floor area required to store galley carts, or conversely increases the number of carts stored per galley volume" (see EP-A, paragraph [0007]) does not allow to conclude that the feature "so as to store the first and second galley carts in said upright stack... and within the galley volume" was originally disclosed, for this may be achieved for instance by reducing the galley volume and storing, if necessary, some of the galley carts elsewhere outside the galley.

The requirements of Article 123(3) EPC are not met, given that the "galley cart storage system" forms

merely a constituent of an aircraft galley according to claim 1, and therefore as compared to claim 1 as filed protection has been extended to the aircraft galley itself and possibly even other components comprised by said aircraft galley.

In accordance with a first line of argument, the subject-matter of claim 1 does not involve an inventive step with regard to D1 (EP-A-941 923) and the ordinary capabilities of a person skilled in the art. D1 discloses in figures 17 to 24 an aircraft galley according to the preamble of claim 1. This aircraft galley represents according to D1 a "lower galley embodiment", wherein the "apparatus for compactly storing and retrieving article holders is incorporated in a lower cargo hold of the aircraft" (D1, paragraph [0066]). The skilled person would thus infer from D1 and specifically from figure 17, that there is actually no real separation between the galley and the lower deck according to this "lower galley embodiment" of D1, and hence that the lower compartment of the cargo hold, where the article storing and retrieving apparatus is located, forms part of the galley volume. Additionally, the wording of claim 1 does actually not exclude that the galley may also occupy other space and areas beyond passenger-level floor space. Further, the skilled person would realize that in order to save space, the apparatus illustrated in figure 17 clearly allows to store a galley cart underneath the lift platform 150, which already carries a further galley cart. Figure 24 similarly shows that insertion of a second galley cart below the first galley cart positioned in the upper position is possible, and this would be evident for the skilled person. By implementing these obvious measures

the skilled person would therefore arrive at a space saving arrangement comprising a first and a second galley cart stored in an upright stack. The subject-matter of claim 1 hence lacks an inventive step.

Alternatively, in accordance with a second line of argument, the subject-matter of claim 1 would be obvious for the skilled person in view of D1 and D6. Starting from D1 the skilled person is faced with the problem of finding an alternative space saving and space optimizing solution for the storage of galley carts. The arrangement of D1 particularly intends "to maximize the utilization of passenger space and/or cargo space within the aircraft" (D1, paragraph [0002]). The skilled person would thus look into prior art relating to logistic systems concerning the transport, storage and handling of items within and outside an aircraft, and therefore specifically of galley carts and baggage. D6 discloses a logistic system for transporting and storing baggage in a space saving manner, wherein two baggage containing mobile capsules are stacked one upon the other in an enclosure which is loaded on trailer, the enclosure having lift means for elevating and holding one of the capsules above the other capsule. D6 clearly states that the system may be applied to "luggage, suitcases, boxes and the like" (D6, column 2, lines 64-66) and that it is not limited to baggage handling "and may be used to transport any items and devices" (D6, column 6, lines 28-32). Consequently, the skilled person would apply the general technical teaching of D6 to an aircraft's galley according to D1 and would arrive in an obvious way to the subject-matter of claim 1.

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

Claim 1 meets the requirements of Article 123(2) EPC. As recited in paragraph [0001] of EP-A, the "invention relates to... cart storage systems for use in on-board galleys of commercial jet aircraft or other vehicles" and therefore an aircraft galley comprising a galley cart storage system is disclosed in the application as filed. That the aircraft galley occupies an area of passenger-level floor space is also self-evident from the problem described in paragraph [0002] of EP-A ("large commercial aircraft have galley areas that can occupy a significant-area of passenger-level floor space" and since "known galley systems store food carts at floor level only", "this results in the galley space not being used to its full potential", "thus a need exists for a more efficient aircraft galley in which the optimum use of volumetric space is made") in conjunction with paragraphs [0007] and [0017] of EP-A ("the present invention reduces the amount of floor area required to store galley carts" and "may have a beneficial impact on revenue passenger seating if seats are used to fill the relieved space"). Finally, the feature "within the galley volume" is disclosed in paragraphs [0007] and [0012] of EP-A ("in this way, the galley space is maximized by reducing overcounter work and storage space in favour of additional cart storage space", the "invention thus reduces the amount of floor area required to store galley carts, or conversely increases the number of carts stored per galley volume").

Claim 1 also does not extend the protection conferred by granted claim 1, since any object falling within the

scope of claim 1 as upheld by the Opposition Division evidently falls within the scope of granted claim 1, since further limiting features have been introduced. Thus Article 123(3) EPC is complied with.

The Appellants presented their first line of arguments only at the oral proceedings before the Board. Therefore these submissions should not be admitted into the proceedings in accordance with Article 13(1) and (2) RPBA.

The subject-matter of claim 1 involves an inventive step with respect to D1 considered in conjunction with the skilled person's capabilities. The skilled person trying to improve space saving in a known aircraft galley according to figures 17-24 of D1 would not arrive at the subject-matter of claim 1. It is undisputed that D1 discloses the features of the preamble of claim 1. However, the skilled person would not implement in the known aircraft galley the technical measures according to the characterizing features of claim 1. In particular, the skilled person would not store a galley cart underneath lift platform 150 of lift assembly 75 in the arrangement shown in figures 17 and 24 of D1, for this would run counter to the functioning of the lift assembly and would completely jam and block the assembly. Indeed, a vacant place in the matrix formed by the galley carts has necessarily to be kept directly underneath the platform, such that the platform can be lowered to move a galley cart from a position above to one below the main deck or galley floor. Furthermore, the skilled person would not consider the lower cargo compartment 204 shown in figure 17 as forming part of the "aircraft

galley" since each technical term should be given its normal and usual meaning. Thus, the subject-matter of claim 1 would not be obvious for the skilled person in view of D1.

The subject-matter of claim 1 similarly involves an inventive also in view of D1 and D6. In the first place, the teaching of D1 appears to head in a direction different from that specified by the object of the present invention, which sets about to optimize "airplane galley volume, with little or no impact on normal galley operations" (EP-A, paragraph [0017]). Actually, the apparatus of D1 makes use of alternative spaces outside the galley, in either the cargo hold or the crown space, and has a major impact on normal galley operations, both structurally and functionally, since an aperture is needed in either the ceiling or the deck and since a need is imposed on the users to use the carts one at a time. Even if the skilled person were to take D1 as a starting point, he would definitely not combine D1 with D6 for a number of reasons. D6 belongs to a different technical field implying a method of handling baggage, and is concerned with problems (D6, column 1, lines 30-48) which are different from those considered in D1. Further, the handling apparatus disclosed in D6, especially the capsules, the trailers and the lift assembly, are simply too heavy and not apt for use on a commercial aircraft. Finally, the teachings of D1 and D6 compete against each other and a combination of these documents would require that the features taken from D6 replace a major part of the features of D1, so that nothing of substance would be left. In conclusion it is also noted that even the combination of D1 and D6 would not lead to the claimed feature that the first and second galley

carts are stored in an upright stack "within the enclosure and within the galley volume".

Reasons for the decision

1. The appeal is admissible.

2. The subject-matter of claim 1 as upheld by the Opposition Division does not extend beyond the content of the application as filed and, therefore, the requirements of Article 123(2) EPC are fulfilled. According to paragraph [0001] of EP-A, the "invention relates to... cart storage systems for use in on-board galleys of commercial jet aircraft or other vehicles". In addition, paragraph [0012] of EP-A explicitly states that the galley cart storage system is disposed on board the aircraft in a space obtained by "reducing overcounter work and storage space in favor of additional cart storage space", overcounter work and storage space being clearly located in the aircraft galley (EP-A, paragraph [0002]). It therefore follows that a galley comprising a galley cart storage system is clearly and unambiguously disclosed in the application as filed. Further, the problem described in paragraph [0002] of EP-A essentially resides in that "large commercial aircraft have galley areas that can occupy a significant-area of passenger-level floor space" and since "known galley systems store food carts at floor level only", "this results in the galley space not being used to its full potential", and "thus a need exists for a more efficient aircraft galley in which the optimum use of volumetric space is made". This, in conjunction with the additional fact that "the present

invention reduces the amount of floor area required to store galley carts" and "may have a beneficial impact on revenue passenger seating if seats are used to fill the relieved space" (see paragraphs [0007] and [0017] of EP-A), necessarily implies that the aircraft galley occupies "an area of passenger-level floor space". It is noted here that, contrary to the Appellant's allegation, paragraph [0002] of EP-A does not merely describe known prior art, but describes instead in detail a specific prior art aircraft galley constituting the basis of the invention as well as the problem resulting from this known arrangement. Finally, paragraphs [0007] and [0012] of EP-A disclose the feature "within the galley volume", which may be inferred from the passages reciting "in this way, the galley space is maximized by reducing overcounter work and storage space in favour of additional cart storage space" and "invention thus reduces the amount of floor area required to store galley carts, or conversely increases the number of carts stored per galley volume". Indeed, contrary to the Appellant's allegations, if EP-A states that overcounter work and storage space (within the galley) is reduced in favour of additional cart storage space and that the number of carts stored per galley volume is increased, this means that additional galley carts, i.e. "the first and second galley carts in said upright stack within the enclosure" (see claim 1), are stored within the galley volume.

3. Claim 1 does not extend the protection conferred by granted claim 1 and therefore does not offend Article 123(3) EPC, for, as stated by the Respondent, any object falling within the scope of claim 1 as upheld by

the Opposition Division evidently falls within the scope of protection of granted claim 1, since further limiting features have been introduced. It is further noted that claim 1 as granted conferred protection for a galley cart storage system independently of its location whilst claim 1 under consideration requires the galley cart storage system to be provided at a specific location (galley) of an aircraft.

4. The Board decided under its discretionary power (Article 13(1) RPBA (Rules of Procedure of the Boards of Appeal)) to admit to the proceedings the Appellants' first line of argument, in support of their objection of lack of inventive step, despite these submissions having been made only during the oral proceedings and having been contested as being inadmissible by the Respondent. In the view of the Board these submissions do not alter the legal and factual framework of the proceedings, given that the Appellants' first line of argument is essentially based on D1, as does the second line of argument, which was already presented in the grounds of appeal and does not include any fresh filed evidence. Thus, by submitting the first line of argument at the oral proceedings the Appellants did not amend their case, as set out in the grounds of appeal, in a substantial manner. Accordingly the Board saw no reasons to exercise its discretion not to admit this line of argument or to apply Article 13(3) RPBA.

5. It is undisputed that the subject-matter of claim 1 is new over D1, which discloses the features according to the preamble of claim 1.

6. The subject-matter of claim 1 involves an inventive step in view of D1 and the skilled person's ordinary capabilities or alternatively in view of D1 and D6. To begin with, D1 discloses a galley cart storage system which is not disposed within an aircraft galley. In effect, all arrangements disclosed in D1, including in particular figures 17 to 24, show that in order "to maximize the limited floor space" (D1, paragraph [0003]) the galley cart storage system is disposed outside the aircraft galley. For instance, according to the arrangement illustrated in figures 17 to 24 the galley cart storage system "is incorporated in a lower cargo hold of the aircraft" (D1, paragraph [0066]). Thus, the skilled person would unmistakably derive as a basic technical teaching from D1, that the galley cart storage system is provided outside the aircraft galley volume. The skilled person would therefore, contrary to the Appellant's allegation, not regard figure 17 of D1 as disclosing a galley cart storage system disposed within an aircraft galley volume. Moreover, it would likewise not be obvious for the skilled person to modify the arrangement of D1 in such a manner as to obtain the claimed aircraft galley. As pointed out by the Respondent, D1 heads in a direction very different from that of the present invention, which sets off to optimize galley volume with little or no impact on normal galley operations, and gives no hint or suggestion which would lead the skilled person to locate the galley cart storage system within the galley volume. Even if the skilled person were to envisage as a possible option disposing the cart storage system within the galley volume he would soon turn away from such a solution since, as compared to the arrangement of figures 17 to 24 of D1, it would not lead to any

improvement in maximizing limited passenger-level floor space, given that D1 already maximizes passenger-level floor space by disposing the cart storage system outside the galley and into the cargo hold (figures 17 to 24). Thus no further benefit would result from such a move. In addition, if the skilled person intended to implement this measure, major and even radical changes would have to be made to the arrangement of figures 17 to 24 of D1. For instance, no apertures in the deck would be needed any more and similarly the entire matrix-shaped storage system of D1 together with the transverse and longitudinal cart shifting and upward cart lifting assembly would have to be scrapped. Consequently, the skilled person would not seriously envisage to depart from the arrangement illustrated in figure 17 of D1, which already maximizes limited passenger-level floor space, and would not favour an arrangement involving radical modifications and scarcely any or no prospect of further increasing revenue generating passenger-level floor space at all.

The same conclusions would be arrived at if the skilled person were acquainted with the disclosure of document D6. In the first place, the technical teaching of D6 would be of no use to the skilled person starting from the arrangement illustrated in figures 17 to 24 of D1, for D6 merely discloses a storage system wherein two baggage containing mobile capsules are stacked one upon the other in an enclosure which is loaded on trailer, the enclosure having lift means for elevating and holding one of the capsules above the other capsule. Thus, the storage system of D6, consisting of several units formed by such enclosures, is entirely different from that of D1, wherein carts are stored within units

formed by a planar two-dimensional matrix and are longitudinally and transversely shifted to occupy different positions in said matrix (D1, paragraph [0078], [0083], [0084]). Upward (or downward lifting) of a cart by means of lift apparatus 75 is performed (in conjunction with longitudinal and/or transversal shifting) exclusively to lift selected carts to or from the aircraft galley or to move carts from one matrix unit to a different one (D1, paragraph [0074]). Therefore according to the storage system of D1 it would not be possible to store galleys in an upright stack since this would impair the longitudinal or transversal transfer of any selected cart, by means of transfer platform 208 (D1, paragraph [0084], figure 24), from one place to another place within a given matrix unit or to a separate matrix unit, with the additional use of lift platform 150 (D1, paragraphs [0083], [0084]). It would likewise impede lifting down a cart from the galley into the lower cargo hold. In other words, the storage system of figures 17 to 24 is conceived to retrieve and store any selected cart arranged according to a planar matrix pattern, but definitely not carts disposed in an upward stack according to a three dimensional pattern. In addition, D6 is not even remotely related to aircraft galleys and galley cart storage systems and, the same as D1, does not suggest in any way that the galley cart storage system be disposed within the galley volume. For the mentioned reasons the subject-matter of claim 1 involves an inventive step (Article 56 EPC 1973).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

A. Vottner

G. Pricolo